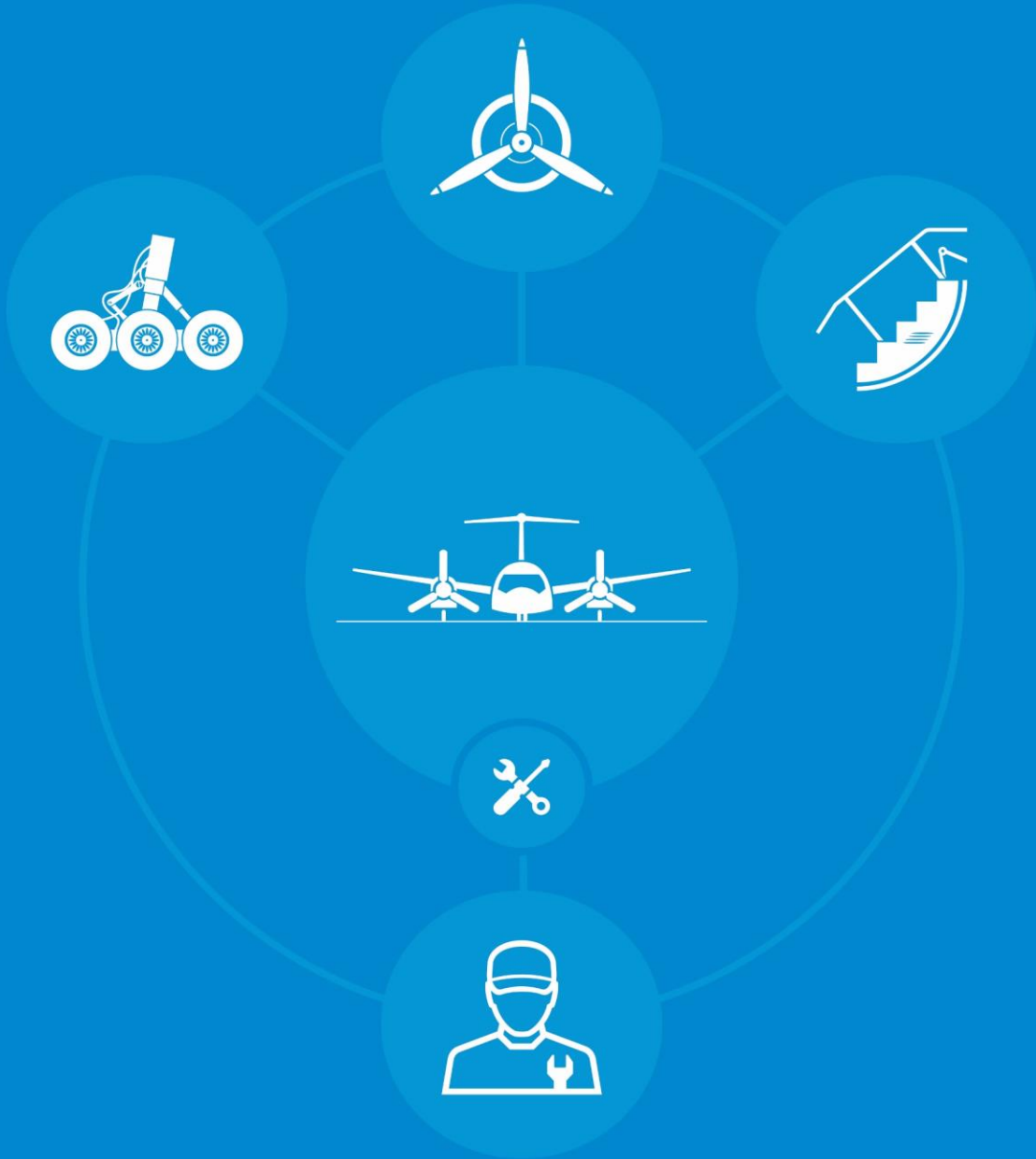




**EASA**  
European Aviation Safety Agency



Continuing Airworthiness  
(IR + AMC/GM)

**eRules**

# Easy Access Rules for Continuing Airworthiness (Regulation (EU) No 1321/2014)

Published January 2017

## **EASA eRules: aviation rules for the 21st century**

Rules and regulations are the core of the European Union civil aviation system. The aim of the **EASA eRules** project is to make them **accessible** in an efficient and reliable way to stakeholders.

**EASA eRules** will be a comprehensive, single system for the drafting, sharing and storing of rules. It will be the single source for all aviation safety rules applicable to European airspace users. It will offer easy (online) access to all rules and regulations as well as new and innovative applications such as rulemaking process automation, stakeholder consultation, cross-referencing, and comparison with ICAO and third countries' standards.

To achieve these ambitious objectives, the **EASA eRules** project has been broken down in 10 modules. Module 1, 'Continuing Airworthiness', was completed in 2016. The first deliverable, 'Easy Access Rules for Continuing Airworthiness (Regulation (EU) No 1321/2014)', is published in PDF format. In 2017, Module 2 will include Initial Airworthiness and Aerodromes rules as well as new database functionalities. Online access to the database is planned for 2018.

The **EASA eRules** system is developed and implemented in close cooperation with Member States and aviation industry to ensure that all its capabilities are relevant and effective.

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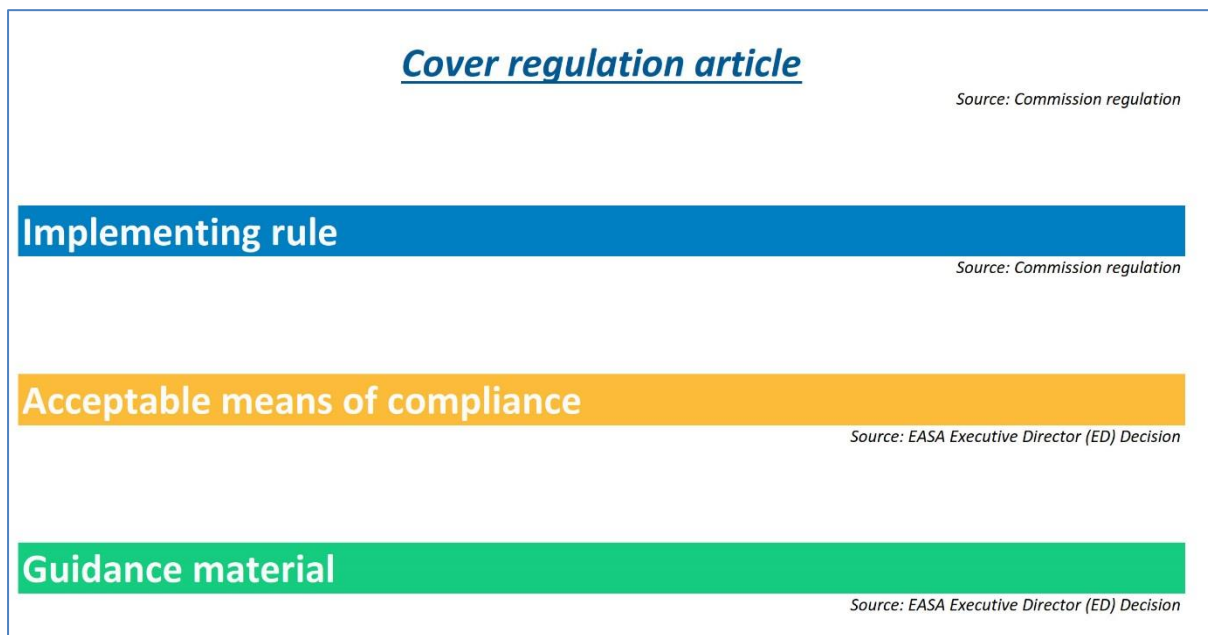
## **DISCLAIMER**

This version is issued by the European Aviation Safety Agency (EASA) in order to provide its stakeholders with an updated and easy-to-read publication. It has been prepared by putting together the officially published regulations with the related acceptable means of compliance and guidance material (including the amendments) adopted so far. However, this is not an official publication and EASA accepts no liability for damage of any kind resulting from the risks inherent in the use of this document.

## NOTE FROM THE EDITOR

The content of this document is arranged as follows: the cover regulation (recitals and articles) with the implementing rule (IR) points appear first, followed by the related acceptable means of compliance (AMC) and guidance material (GM) paragraph(s).

All elements (i.e. cover regulation, IRs, AMC, and GM) are colour-coded and can be identified according to the illustration below. The source, in italics, is indicated below the point or paragraph title(s).



*Note: In some instances (e.g. 145.A.30 Personnel requirements), the source is indicated at the level of point paragraph (e.g. [145.A.30\(a\)](#)).*

## GENERAL AVIATION (GA) ALLEVIATIONS

In the context of the 'General Aviation Road Map Project', the current simpler and lighter regulatory requirements for the General Aviation community (GA alleviations) **are written in violet.**



This document will be updated regularly to incorporate further amendments.

The format of this document has been adjusted to make it user-friendly and for reference purposes. Any comments should be sent to [erules@easa.europa.eu](mailto:erules@easa.europa.eu).

## INCORPORATED AMENDMENTS

### COMMISSION REGULATIONS (IMPLEMENTING RULES (IRs))

Incorporated Commission Regulation	Affected Part	Regulation amendment	Applicability date <sup>2</sup>
<a href="#">Regulation (EU) No 1321/2014</a>	Annex I (Part-M)	Recast	06/01/2015
	Annex II (Part-145)		
	Annex III (Part-66)		
	Annex IV (Part-147)		
<a href="#">Regulation (EU) 2015/1088</a>	Annex I (Part-M)	First amending Regulation	27/07/2015
	Annex II (Part-145)		
	Annex IV (Part-147)		
<a href="#">Regulation (EU) 2015/1536</a>	Annex I (Part-M)	Second amending Regulation	25/08/2016
	Annex II (Part-145)		
	Annex III (Part-66)		
	Annex Va (Part-T)		

### ED DECISIONS (AMC/GM)

Incorporated ED Decision	Affected AMC/GM	AMC/GM Issue No, Amendment No	Applicability date
<a href="#">ED Decision 2015/029/R</a>	AMC/GM to Annex I (Part-M)	Issue 2 (Recast)	18/12/2015
	AMC/GM to Annex II (Part-145)		
	AMC/GM to Annex III (Part-66)		
	AMC/GM to Annex IV (Part-147)		
<a href="#">ED Decision 2016/011/R</a>	AMC/GM to Annex I (Part-M)	Issue 2, Amendment 1	25/08/2016
	AMC/GM to Annex II (Part-145)		
	AMC/GM to Annex III (Part-66)		
	AMC/GM to Annex Va (Part-T)	Issue 1	

*Note: To access the official versions, please click on the hyperlinks provided above.*

<sup>2</sup> This is the date of application (i.e. the date from which an act or a provision in an act produces its full legal effects) as defined in the relevant cover regulation article. Some provisions of the regulations though may be applicable at a later date (deferred applicability). Besides, there may be some opt-outs (derogations from certain provisions) notified by the Member States.

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## COVER REGULATION

### **COMMISSION REGULATION (EU) No 1321/2014 of 26 November 2014 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks**

*Regulation (EU) No 1321/2014*

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC<sup>3</sup>, and in particular Article 5(5) and 6(3) thereof,

Whereas:

- (1) Commission Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks<sup>4</sup> has been substantially amended several times<sup>5</sup>. Since further amendments are to be made, it should be recast in the interests of clarity.
- (2) Regulation (EC) No 216/2008 establishes common essential requirements to provide for a high uniform level of civil aviation safety and environmental protection; it requires the Commission to adopt the necessary implementation rules to ensure their uniform application; it establishes the European Aviation Safety Agency (hereinafter referred to as the 'Agency') to assist the Commission in the development of such implementing rules.
- (3) It is necessary to lay down common technical requirements and administrative procedures to ensure the continuing airworthiness of aeronautical products, parts and appliances subject to Regulation (EC) No 216/2008.
- (4) Organisations and personnel involved in the maintenance of products, parts and appliances should be required to comply with certain technical requirements in order to demonstrate their capability and means of discharging their obligations and associated privileges; the Commission is required to lay down measures to specify conditions of issuing, maintaining, amending, suspending or revoking certificates attesting such compliance.
- (5) The need to ensure uniformity in the application of common technical requirements in the field of continuing airworthiness of aeronautical parts and appliances requires that common procedures be followed by competent authorities to assess compliance with these requirements; the Agency should develop certification specifications to facilitate the necessary regulatory uniformity.
- (6) It is necessary to recognise the continuing validity of certificates issued before entry into force of Regulation (EC) No 2042/2003, in accordance with Article 69 of Regulation (EC) No 216/2008.

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<sup>3</sup> OJ L 79, 19.3.2008, p. 1.

<sup>4</sup> OJ L 315, 28.11.2003, p. 1.

<sup>5</sup> See Annex V.

- (7) Article 5 of Regulation (EC) No 216/2008 dealing with airworthiness was extended to include the elements of operational suitability evaluation into the implementing rules for type-certification.
- (8) The European Aviation Safety Agency (the 'Agency') found that it was necessary to amend Commission Regulation (EU) No 748/2012<sup>6</sup> in order to allow the Agency to approve operational suitability data as part of the type-certification process.
- (9) The operational suitability data should include mandatory training elements for type rating training of maintenance certifying staff. Those elements should be the basis for developing type training courses.
- (10) The requirements related to the establishment of certifying staff type rating training courses need to be amended to refer to the operational suitability data.
- (11) The Agency prepared draft implementing rules on the concept of operational suitability data and submitted them as an opinion<sup>7</sup> to the Commission in accordance with Article 19(1) of Regulation (EC) No 216/2008.
- (12) The measures provided by this Regulation are in accordance with the Opinion of the European Aviation Safety Agency Committee<sup>8</sup> established by Article 65(1) of Regulation (EC) No 216/2008,

HAS ADOPTED THIS REGULATION:

### **Article 1 Subject-matter and scope**

*Regulation (EU) 2015/1536*

This Regulation establishes common technical requirements and administrative procedures to ensure:

- (a) the continuing airworthiness of aircraft, including any component for installation thereto, which are:
  - (i) registered in a Member State, unless their regulatory safety oversight has been delegated to a third country and they are not used by an EU operator; or
  - (ii) registered in a third country and used by an EU operator, where their regulatory safety oversight has been delegated to a Member State;
- (b) compliance with the essential requirements set out in Regulation (EC) No 216/2008 for continuing airworthiness of aircraft registered in a third country and components for installation thereon for which their regulatory safety oversight has not been delegated to a Member State that are dry leased-in by a licence air carrier in accordance with Regulation (EC) No 1008/2008 of the European Parliament and the Council<sup>9</sup>.

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<sup>6</sup> OJ L 224, 21.8.2012, p. 1.

<sup>7</sup> Opinion No 07/2011 of the European Aviation Safety Agency of 13th December 2011, available at <http://easa.europa.eu/agency-measures/opinions.php>

<sup>8</sup> Opinion of the European Aviation Safety Agency Committee, 23 September 2003.

<sup>9</sup> Regulation (EC) No 1008/2008 of the European Parliament and of the Council of 24 September 2008 on common rules for the operation of air services in the Community (OJ L 293, 31.10.2008, p. 3).



## Article 2 Definitions

*Regulation (EU) 2015/1536*

Within the scope of Regulation (EC) No 216/2008, the following definitions shall apply:

- (a) 'aircraft' means any machine that can derive support in the atmosphere from the reactions of the air other than reactions of the air against the earth's surface;
- (b) 'certifying staff' means personnel responsible for the release of an aircraft or a component after maintenance;
- (c) 'component' means any engine, propeller, part or appliance;
- (d) 'continuing airworthiness' means all of the processes ensuring that, at any time in its operating life, the aircraft complies with the airworthiness requirements in force and is in a condition for safe operation;
- (e) 'JAA' means 'Joint Aviation Authorities.';
- (f) 'JAR' means 'Joint Aviation Requirements.';
- (g) 'commercial air transport (CAT) operation' means an aircraft operation to transport passengers, cargo or mail for remuneration or other valuable consideration;
- (h) 'maintenance' means any one or combination of the following activities: overhaul, repair, inspection, replacement, modification or defect rectification of an aircraft or component, with the exception of pre-flight inspection;
- (i) 'organisation' means a natural person, a legal person or part of a legal person. Such an organisation may be established at more than one location whether or not within the territory of the Member States;
- (j) 'pre-flight inspection' means the inspection carried out before flight to ensure that the aircraft is fit for the intended flight;
- (k) 'ELA1 aircraft' means the following manned European light aircraft:
  - (i) an aeroplane with a maximum take-off mass (MTOM) of 1200 kg or less that is not classified as complex motor-powered aircraft;
  - (ii) a sailplane or powered sailplane of 1200 kg MTOM or less;
  - (iii) a balloon with a maximum design lifting gas or hot air volume of not more than 3400 m<sup>3</sup> for hot air balloons, 1050 m<sup>3</sup> for gas balloons, 300 m<sup>3</sup> for tethered gas balloons;
  - (iv) an airship designed for not more than four occupants and a maximum design lifting gas or hot air volume of not more than 3400 m<sup>3</sup> for hot air airships and 1000 m<sup>3</sup> for gas airships;
- (ka) 'ELA2 aircraft' means the following manned European Light Aircraft:
  - (i) an aeroplane with a Maximum Take-off Mass (MTOM) of 2000 kg or less that is not classified as complex motor-powered aircraft;
  - (ii) a sailplane or powered sailplane of 2000 kg MTOM or less;
  - (iii) a balloon;
  - (iv) a hot air ship;
  - (v) a gas airship complying with all of the following characteristics:
    - 3 % maximum static heaviness,

- non-vectored thrust (except reverse thrust),
  - conventional and simple design of structure, control system and ballonet system, and
  - non-power assisted controls;
- (vi) a Very Light Rotorcraft;
- (l) 'LSA aircraft' means a light sport aeroplane which has all of the following characteristics:
- (i) a Maximum Take-off Mass (MTOM) of not more than 600 kg;
  - (ii) a maximum stalling speed in the landing configuration (VS0) of not more than 45 knots Calibrated Airspeed (CAS) at the aircraft's maximum certificated take-off mass and most critical centre of gravity;
  - (iii) a maximum seating capacity of no more than two persons, including the pilot;
  - (iv) a single, non-turbine engine fitted with a propeller;
  - (v) a non-pressurised cabin;
- (m) 'principal place of business' means the head office or the registered office of the undertaking within which the principal financial functions and operational control of the activities referred to in this Regulation are exercised;
- (n) 'critical maintenance task' means a maintenance task that involves the assembly or any disturbance of a system or any part on an aircraft, engine or propeller that, if an error occurred during its performance, could directly endanger the flight safety;
- (o) 'commercial specialised operations' means those operations subject to the requirements of Part-ORO, Subpart-SPO set out in Annex III to Commission Regulation (EU) No 965/2012<sup>10</sup>;
- (p) 'limited operations' means the operations of other-than-complex motor-powered aircraft for:
- (i) cost-shared flights by private individuals, on the condition that the direct cost is shared by all the occupants of the aircraft, pilot included and the number of persons sharing the direct costs is limited to six;
  - (ii) competition flights or flying displays, on the condition that the remuneration or any valuable consideration given for such flights is limited to recovery of direct costs and a proportionate contribution to annual costs, as well as prizes of no more than a value specified by the competent authority;
  - (iii) introductory flights, parachute dropping, sailplane towing or aerobatic flights performed either by a training organisation having its principal place of business in a Member State and approved in accordance with Commission Regulation (EU) No 1178/2011<sup>11</sup>, or by an organisation created with the aim of promoting aerial sport or leisure aviation, on the condition that the aircraft is operated by the organisation on the basis of ownership or dry lease, that the flight does not generate profits distributed outside of the organisation, and that whenever non-members of the organisation are involved, such flights represent only a marginal activity of the organisation;

<sup>10</sup> Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1).

<sup>11</sup> Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 311, 25.11.2011, p. 1).

For the purpose of this Regulation, ‘limited operations’ are not considered as CAT operations or commercial specialised operations;

- (q) ‘introductory flight’ means ‘introductory flight’ as defined in Article 2(9) of Regulation (EU) No 965/2012;
- (r) ‘competition flight’ means ‘competition flight’ as defined in Article 2(10) of Regulation (EU) No 965/2012;
- (s) ‘flying display’ means ‘flying display’ as defined in Article 2(11) of Regulation (EU) No 965/2012.

### **Article 3 Continuing airworthiness requirements**

*Regulation (EU) 2015/1536*

1. The continuing airworthiness of aircraft referred to in [Article 1\(a\)](#) and components for installation thereon shall be ensured in accordance with the provisions of Annex I.
2. Organisations and personnel involved in the continuing airworthiness of aircraft referred to in [Article 1\(a\)](#) and components for installation thereon, including maintenance, shall comply with Annex I and where appropriate the provisions specified in [Articles 4 and 5](#).
3. By way of derogation from paragraph 1, the continuing airworthiness of aircraft referred to in [Article 1\(a\)](#) holding a permit to fly, shall be ensured on the basis of the specific continuing airworthiness arrangements as defined in the permit to fly issued in accordance with Annex I (Part-21) to Commission Regulation (EU) No 748/2012.
4. Maintenance programmes approved in accordance with the requirements applicable before 27 July 2015 shall be deemed to have been approved in accordance with the requirements set out in this Regulation.
5. The continuing airworthiness of aircraft referred to in [Article 1\(b\)](#) and components for installation thereon shall be ensured in accordance with the provisions of Annex Va.

### **Article 4 Maintenance organisation approvals**

*Regulation (EU) 2015/1536*

1. Maintenance organisation approvals shall be issued in accordance with the provisions of [Annex I, Subpart F](#), or [Annex II](#).
2. Maintenance approvals issued or recognised by a Member State in accordance with the JAA requirements and procedures and valid before the entry into force of Regulation (EC) No 2042/2003 shall be deemed to have been issued in accordance with this Regulation.
3. Personnel qualified to carry out and/or control a continued airworthiness non-destructive test of aircraft structures and/or components, on the basis of any standard recognised by a Member State prior to the entry into force of Regulation (EC) No 2042/2003 as providing an equivalent level of qualification, may continue to carry out and/or control such tests.
4. Certificates of release to service and authorised release certificates issued before the date of entry into force of Regulation (EC) No 1056/2008 by a maintenance organisation approved under the Member State requirements shall be deemed equivalent to those required under points [M.A.801](#) and [M.A.802](#) of [Annex I \(Part-M\)](#) respectively.

## **Article 5 Certifying staff**

*Regulation (EU) No 1321/2014*

1. Certifying staff shall be qualified in accordance with the provisions of [Annex III \(Part-66\)](#), except as provided for in points [M.A.606\(h\)](#), [M.A.607\(b\)](#), [M.A.801\(d\)](#) and [M.A.803](#) of [Annex I \(Part-M\)](#) and in point [145.A.30\(j\)](#) and [Appendix IV to Annex II \(Part-145\)](#).
2. Any aircraft maintenance licence and, if any, the technical limitations associated with that licence, issued or recognised by a Member State in accordance with the JAA requirements and procedures and valid at the time of entry into force of Regulation (EC) No 2042/2003, shall be deemed to have been issued in accordance with this Regulation.
3. Certifying staff holding a licence issued in accordance with [Annex III \(Part-66\)](#) in a given category/sub-category are deemed to have the privileges described in point [66.A.20\(a\)](#) of the same Annex corresponding to such a category/sub-category. The basic knowledge requirements corresponding to these new privileges shall be deemed as met for the purpose of extending such licence to a new category/sub-category.
4. Certifying staff holding a licence including aircraft which do not require an individual type rating may continue to exercise his/her privileges until the first renewal or change, where the licence shall be converted following the procedure described in point [66.B.125](#) of [Annex III \(Part-66\)](#) to the ratings defined in point [66.A.45](#) of the same Annex.
5. Conversion reports and Examination credit reports complying with the requirements applicable before Regulation (EU) No 1149/2011 applied shall be deemed to be in compliance with this Regulation.
6. Until such time as this Regulation specifies requirements for certifying staff:
  - (i) for aircraft other than aeroplanes and helicopters;
  - (ii) for components;the requirements in force in the relevant Member State shall continue to apply, except for maintenance organisations located outside the European Union where the requirements shall be approved by the Agency.

## **Article 6 Training organisation requirements**

*Regulation (EU) No 1321/2014*

1. Organisations involved in the training of personnel referred to in [Article 5](#) shall be approved in accordance with [Annex IV \(Part-147\)](#) to be entitled:
  - (a) to conduct recognised basic training courses; and/or
  - (b) to conduct recognised type training courses; and
  - (c) to conduct examinations; and
  - (d) to issue training certificates.
2. Any maintenance training organisation approval issued or recognised by a Member State in accordance with the JAA requirements and procedures and valid at the time of entry into force of Regulation (EC) No 2042/2003 shall be deemed to have been issued in accordance with this Regulation.
3. Type training courses approved before the approval of the minimum syllabus of certifying staff type rating training in the operational suitability data for the relevant type in accordance with Regulation (EU) No 748/2012 shall include the relevant elements defined in the mandatory part

of that operational suitability data not later than 18 December 2017 or within two years after the operational suitability data was approved, whichever is the latest.

## Article 7

Regulation (EU) No 1321/2014

Regulation (EC) No 2042/2003 is repealed.

References to the repealed Regulation shall be construed as references to this Regulation and shall be read in accordance with the correlation table in Annex VI.

## Article 8 Entry into force

Regulation (EU) 2015/1536

1. This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.
2. By way of derogation from paragraph 1, Member States may elect not to apply:
  - (a) for the maintenance of piston-engine non-pressurised aeroplanes of 2000 kg MTOM and below not involved in commercial air transport, until 28 September 2014, the requirement to have certifying staff qualified in accordance with [Annex III \(Part-66\)](#) contained in the following provisions:
    - points [M.A.606\(g\)](#) and [M.A.801\(b\)2](#) of [Annex I \(Part-M\)](#),
    - points [145.A.30\(g\) and \(h\)](#) of [Annex II \(Part-145\)](#);
  - (b) for the maintenance of ELA1 aeroplanes not involved in commercial air transport, until 28 September 2016 :
    - (i) the requirement for the competent authority to issue aircraft maintenance licences in accordance with [Annex III \(Part-66\)](#), as new or as converted pursuant to point [66.A.70](#) of the same Annex;
    - (ii) the requirement to have certifying staff qualified in accordance with [Annex III \(Part-66\)](#) contained in the following provisions:
      - points [M.A.606\(g\)](#) and [M.A.801\(b\)2](#) of [Annex I \(Part-M\)](#),
      - points [145.A.30\(g\) and \(h\)](#) of [Annex II \(Part-145\)](#);
  - (c) for aircraft registered in a third country and dry leased-in by air carriers licenced in accordance with Regulation (EC) No 1008/2008, until 25 August 2017, the requirements of Annex Va.
- 2a. By way of derogation from paragraph 1, the requirements for aircraft used for commercial specialised operations and CAT other than those by air carriers licenced in accordance with Regulation (EC) No 1008/2008, set out in Regulation (EU) No 965/2012, as amended by Regulation (EU) No 379/2014<sup>12</sup>, shall apply from 21 April 2017.

Until that time:

- The provisions of Annex I, point [M.A.201\(f\)](#) shall apply to complex motor-powered aircraft used by operators requested by a Member State to hold a certificate for

<sup>12</sup> Commission Regulation (EU) No 379/2014 of 7 April 2014 amending Commission Regulation (EU) No 965/2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 123, 24.4.2014, p. 1).

- commercial operations other than licence air carriers in accordance with Regulation (EC) No 1008/2008 and to commercial ATOs;
- The provisions of Annex I, point [M.A.201\(h\)](#) shall apply to other than complex motor-powered aircraft, used by operators requested by a Member State to hold a certificate for commercial operations other than licence air carriers in accordance with Regulation (EC) No 1008/2008 and to commercial ATOs;
  - The provisions of Annex I, point [M.A.306\(a\)](#) shall apply to aircraft used by licence air carriers in accordance with Regulation (EC) No 1008/2008 and aircraft used by operators requested by a Member State to hold a certificate for commercial operations;
  - The provisions of Annex I, point [M.A.801\(c\)](#) shall apply to ELA1 not used by licence air carriers in accordance with Regulation (EC) No 1008/2008 and not used by commercial ATOs;
  - The provisions of Annex I, point [M.A.803\(b\)](#) shall apply to non-complex motor-powered aircraft of 2730 kg MTOM and below, sailplane, powered sailplane or balloon, not used by licence air carriers in accordance with Regulation (EC) No 1008/2008, or by operators requested by a Member State to hold a certificate for commercial operations, or by commercial ATOs;
  - The provisions of Annex I, point [M.A.901\(g\)](#) shall apply to ELA1 aircraft not used by licence air carriers in accordance with Regulation (EC) No 1008/2008, or by operators requested by a Member State to hold a certificate for commercial operations, or by commercial ATOs.
3. When a Member State makes use of the provisions of paragraph 2 it shall notify the Commission and the Agency.
  4. For the purpose of time limits contained in points [66.A.25](#), [66.A.30](#) and [Appendix III of Annex III \(Part-66\)](#) related to basic knowledge examinations, basic experience, theoretical type training and examinations, practical training and assessment, type examinations and on the job training completed before Regulation (EU) No 1149/2011 applied, the origin of time shall be the date by which Regulation (EU) No 1149/2011 applied.
  5. The Agency shall submit an opinion to the Commission including proposals for a simple and proportionate system for the licensing of certifying staff involved in the maintenance of ELA1 aeroplanes as well as aircraft other than aeroplanes and helicopters.
  6. By way of derogation from paragraph 1:
    - (a) competent authorities or, where applicable, organisations may continue to issue certificates, previous issue, as laid down in [Appendix III to Annex I \(Part-M\)](#) or Appendix II and [Appendix III to Annex IV \(Part-147\)](#) to Regulation (EU) No 1321/2014, in force prior to 27 July 2015, until 31 December 2015.
    - (b) certificates issued before 1 January 2016 remain valid until they are changed, suspended or revoked.

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## Article 9 Agency measures

*Regulation (EU) No 1321/2014*

1. The Agency shall develop acceptable means of compliance (hereinafter called 'AMC') that competent authorities, organisations and personnel may use to demonstrate compliance with the provisions of the Annexes to this Regulation.
2. The AMC issued by the Agency shall neither introduce new requirements nor alleviate the requirements of the Annexes to this Regulation.
3. Without prejudice to Articles 54 and 55 of Regulation (EC) No 216/2008, when the acceptable means of compliance issued by the Agency are used, the related requirements of the Annexes to this Regulation shall be considered as met without further demonstration.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

*Regulation (EU) No 1321/2014*

Done at Brussels, 26 November 2014.

*For the Commission  
The President  
Jean-Claude JUNCKER*

# ANNEX I (PART-M)

## GENERAL

### M.1

Regulation (EU) 2015/1536

For the purpose of this Part, the competent authority shall be:

1. for the oversight of the continuing airworthiness of individual aircraft and the issue of airworthiness review certificates the authority designated by the Member State of registry;
2. for the oversight of a maintenance organisation as specified in [Section A, Subpart F](#) of this [Annex \(Part-M\)](#):
  - (i) the authority designated by the Member State where that organisation's principle place of business is located;
  - (ii) the Agency if the organisation is located in a third country;
3. for the oversight of a continuing airworthiness management organisation as specified in [Section A, Subpart G](#) of this [Annex \(Part-M\)](#):
  - (i) the authority designated by the Member State where that organisation's principle place of business is located if the approval is not included in an air operator's certificate;
  - (ii) the authority designated by the Member State of the operator if the approval is included in an air operator's certificate;
  - (iii) the Agency if the organisation is located in a third country;
4. for the approval of maintenance programmes,
  - (i) the authority designated by the Member State of registry; or
  - (ii) if agreed with the Member State of registry prior to the approval of the maintenance programme:
    - (a) the authority designated by the State where the operator has its principal place of business or is established or residing; or
    - (b) the authority responsible for the oversight of the continuing airworthiness management organisation managing the continuing airworthiness of the aircraft, or with which a limited contract in accordance with [M.A.201\(i\)\(3\)](#) has been made by the owner.

### AMC M.1

ED Decision 2015/029/R

A competent authority may be a ministry, a national aviation authority or any aviation body designated by the Member State and located within that Member State. A Member State may designate more than one competent authority to cover different areas of responsibility, as long as the designation decision contains a list of the competencies of each authority and there is only one competent authority responsible for each given area of responsibility.



## SECTION A — TECHNICAL REQUIREMENTS

### SUBPART A — GENERAL

#### **M.A.101 Scope**

*Regulation (EU) No 1321/2014*

This Section establishes the measures to be taken to ensure that airworthiness is maintained, including maintenance. It also specifies the conditions to be met by the persons or organisations involved in such continuing airworthiness management.

## SUBPART B — ACCOUNTABILITY

### M.A.201 Responsibilities

Regulation (EU) 2015/1088

- (a) The owner is responsible for the continuing airworthiness of an aircraft and shall ensure that no flight takes place unless:
1. the aircraft is maintained in an airworthy condition, and;
  2. any operational and emergency equipment fitted is correctly installed and serviceable or clearly identified as unserviceable, and;
  3. the airworthiness certificate remains valid, and;
  4. the maintenance of aircraft is performed in accordance with the maintenance programme as specified in point [M.A.302](#).

Regulation (EU) No 1321/2014

- (b) When the aircraft is leased, the responsibilities of the owner are transferred to the lessee if:
1. the lessee is stipulated on the registration document; or
  2. detailed in the leasing contract.

When reference is made in this Part to the 'owner', the term owner covers the owner or the lessee, as applicable.

Regulation (EU) No 1321/2014

- (c) Any person or organisation performing maintenance shall be responsible for the tasks performed.

Regulation (EU) 2015/1536

- (d) The pilot-in-command or, in the case of air carriers licenced in accordance with Regulation (EC) No 1008/2008, the operator shall be responsible for the satisfactory accomplishment of the pre-flight inspection. This inspection must be carried out by the pilot or another qualified person but need not be carried out by an approved maintenance organisation or by [Part-66](#) certifying staff.

Regulation (EU) 2015/1536

- (e) In the case of aircraft used by licenced air carriers in accordance with Regulation (EC) No 1008/2008, the operator is responsible for the continuing airworthiness of the aircraft it operates and shall:

- (1) ensure that no flight takes place unless the conditions defined in point (a) are met;
- (2) be approved, as part of its air operator certificate, as a continuing airworthiness management organisation pursuant to [M.A. Subpart G](#) (CAMO) for the aircraft it operates; and
- (3) be approved in accordance with [Part-145](#) or establish a contract in accordance with [M.A.708\(c\)](#) with such organisation.

Regulation (EU) 2015/1536

- (f) For complex motor-powered aircraft used for commercial specialised operations, or CAT other than those by air carriers licenced in accordance with Regulation (EC) No 1008/2008, or commercial ATOs, the operator shall ensure that:

- (1) no flight takes place unless the conditions defined in paragraph (a) are met;
- (2) the tasks associated with continuing airworthiness are performed by an approved CAMO. When the operator is not CAMO approved itself then the operator shall establish a written contract in accordance with Appendix I with such an organisation, and
- (3) the CAMO referred to in (2) is approved in accordance with [Part-145](#) for the maintenance of the aircraft and components for installation thereon, or it has established a contract in accordance with [M.A.708\(c\)](#) with such organisations.

*Regulation (EU) 2015/1536*

- (g) For complex motor-powered aircraft not included in point (e) or point (f), the owner shall ensure that:

- (1) no flight takes place unless the conditions defined in paragraph (a) are met;
- (2) the tasks associated with continuing airworthiness are performed by an approved CAMO. When the owner is not CAMO approved itself then the owner shall establish a written contract in accordance with Appendix I with such an organisation, and
- (3) the CAMO referred to in (2) is approved in accordance with [Part-145](#) for the maintenance of the aircraft and components for installation thereon, or it has established a contract in accordance with [M.A.708\(c\)](#) with such organisations.

*Regulation (EU) 2015/1536*

- (h) For other than complex motor-powered aircraft, used for commercial specialised operations, or CAT other than those by licenced air carriers in accordance with Regulation (EC) No 1008/2008, or commercial ATOs, the operator shall ensure that:

- (1) no flight takes place unless the conditions defined in point (a) are met;
- (2) the tasks associated with continuing airworthiness are performed by an approved CAMO. When the operator is not CAMO approved itself then the operator shall establish a written contract in accordance with Appendix I with such an organisation, and
- (3) the CAMO referred to in point (2) is approved in accordance with [Part-M Subpart F](#) or [Part-145](#) for the maintenance of the aircraft and components for installation thereon, or it has established a contract in accordance with [M.A.708\(c\)](#) with such organisations.

*Regulation (EU) 2015/1536*

- (i) For other than complex motor-powered aircraft not included in point (e) or (h), or used for 'limited operations', the owner is responsible for ensuring that no flight takes place unless the conditions defined in point (a) are met. To that end, the owner shall:

- (1) contract the tasks associated with continuing airworthiness to an approved CAMO through a written contract in accordance with Appendix I, which will transfer the responsibility for the accomplishment of these tasks to the contracted CAMO, or;
- (2) manage the continuing airworthiness of the aircraft under its own responsibility, without contracting an approved CAMO, or;
- (3) manage the continuing airworthiness of the aircraft under its own responsibility and establish a limited contract for the development of the maintenance programme and for processing its approval in accordance with point [M.A.302](#) with:
  - an approved CAMO, or
  - in the case of ELA2 aircraft, a [Part-145](#) or [M.A. Subpart F](#) maintenance organisation.

This limited contract transfers the responsibility for the development and, except in the case where a declaration is issued by the owner in accordance with [M.A.302\(h\)](#), processing the approval of the maintenance programme to the contracted organisation.

Regulation (EU) 2015/1536

- (j) The owner/operator shall ensure that any person authorised by the competent authority is granted access to any of its facilities, aircraft or documents related to its activities, including any subcontracted activities, to determine compliance with this Part.

## GM M.A.201 Responsibilities

ED Decision 2016/011/R

Quick summary table

Select your type of operation and your category of aircraft		Complex motor-powered aircraft		Other-than-complex motor-powered aircraft		
		Is a CAMO required for the management of continuing airworthiness?	Is maintenance by a maintenance organisation required?	Is a CAMO required for the management of continuing airworthiness?	Is maintenance by a maintenance organisation required?	
Commercial operations	CAT	Air carriers licensed in accordance with Regulation (EU) No 1008/2008	Yes, a CAMO is required and it shall be part of the AOC <a href="#">(M.A.201(e))</a>	Yes, maintenance by a Part-145 organisation is required <a href="#">(M.A.201(e))</a>	Yes, a CAMO is required and it shall be part of the AOC <a href="#">(M.A.201(e))</a>	Yes, maintenance by a Part-145 organisation is required <a href="#">(M.A.201(e))</a>
		CAT other than air carriers licensed in accordance with Regulation (EC) No 1008/2008	Yes, a CAMO is required <a href="#">(M.A.201(f))</a>	Yes, maintenance by a Part-145 organisation is required <a href="#">(M.A.201(f))</a>	Yes, a CAMO is required <a href="#">(M.A.201(h))</a>	Yes, maintenance by a Subpart F or by a Part-145 organisation is required <a href="#">(M.A.201(h))</a>
	Commercial operations other than CAT	Commercial specialised operations	Yes, a CAMO is required <a href="#">(M.A.201(f))</a>	Yes, maintenance by a Part-145 organisation is required <a href="#">(M.A.201(f))</a>	Yes, a CAMO is required <a href="#">(M.A.201(h))</a>	Yes, maintenance by a Subpart F or by a Part-145 organisation is required <a href="#">(M.A.201(h))</a>
		Commercial training organisations (ATOs)	Yes, a CAMO is required <a href="#">(M.A.201(f))</a>	Yes, maintenance by a Part-145 organisation is required <a href="#">(M.A.201(f))</a>	Yes, a CAMO is required <a href="#">(M.A.201(h))</a>	Yes, maintenance by a Subpart F or by a Part-145 organisation is required <a href="#">(M.A.201(h))</a>
Other than commercial operations including limited operations as defined in <a href="#">Article 2(p)</a>		Yes, a CAMO is required <a href="#">(M.A.201(g))</a>	Yes, maintenance by a <a href="#">Part-145</a> organisation is required <a href="#">(M.A.201(g))</a>	No, a CAMO is not required <a href="#">(M.A.201(i))</a>	No, maintenance by a Subpart F or Part-145 organisation is not required <a href="#">(M.A.201(i))</a>	

## GM M.A.201(e) Responsibilities

ED Decision 2016/011/R

The performance of ground de-icing and anti-icing activities does not require a [Part-145](#) maintenance organisation approval. Nevertheless, inspections required to detect and, when necessary, remove de-icing and/or anti-icing fluid residues are considered maintenance. Such inspections may only be carried out by suitably authorised personnel.

## AMC M.A.201(e)(2) Responsibilities

ED Decision 2016/011/R

1. An air carrier licensed in accordance with Regulation (EC) No 1008/2008 only needs to hold a CAMO approval as part of its air operator certificate (AOC) for the management of the continuing airworthiness of the aircraft listed on its AOC. The approval to carry out airworthiness reviews is optional.
2. [Part-M](#) does not provide for CAMOs to be independently approved to perform continuing airworthiness management tasks on behalf of air carriers licensed in accordance with Regulation (EC) No 1008/2008. The approval of such activity is vested in the (AOC).
3. The operator is ultimately responsible and, therefore, accountable for the airworthiness of its aircraft.

## GM M.A.201(f) Commercial ATO

ED Decision 2016/011/R

'Commercial ATO' refers to 'training organisation(s)', as meant in Article 10a of Regulation (EU) No 1178/2011, which operate aircraft for commercial purposes in order to provide Part-FCL training courses.

## GM M.A.201(i), M.A.302(h) and M.A.901(l)

ED Decision 2016/011/R

### Maintenance programme development and approval (for private aircraft other than complex motor-powered aircraft\*)

\* This means aircraft for which [M.A.201\(e\)](#), (f), (g), and (h) do not apply.

The following table provides a summary of the provisions contained in [M.A.201\(i\)](#), [AMC M.A.201\(i\)\(3\)](#), and [GM M.A.201\(i\)\(3\)](#):

	OPTION 1 (for private aircraft other than complex motor-powered aircraft)	OPTION 2 (for private aircraft other than complex motor-powered aircraft)	OPTION 3 (for ELA2 aircraft not involved in commercial operations)
Development and processing of the approval of the maintenance programme	Performed by the owner	Contracted to a CAMO (whether it is done through a full contract for the continuing airworthiness management of the aircraft or through a limited contract for the development and processing of the maintenance programme)	Contracted to a Part-145 or M.A. Subpart F maintenance organisation (see <a href="#">M.A.201(i)(3)</a> )
Approval/Declaration of the maintenance programme	Direct approval by the NAA  or  Declaration by the owner (only for ELA1 aircraft not involved in commercial operations, see <a href="#">M.A.302(h)</a> )	Direct approval by the NAA  or  Indirect approval by the contracted CAMO  or  Declaration by the owner (only for ELA1 aircraft not involved in commercial operations, see <a href="#">M.A.302(h)</a> )	Direct approval by the NAA  or  Declaration by the owner (only for ELA1 aircraft not involved in commercial operations, see <a href="#">M.A.302(h)</a> )

### Maintenance programme content and airworthiness review (for all aircraft)

The following table provides a summary of the provisions contained in [M.A.302](#) and [AMC M.A.901](#) in relation to the content of the maintenance programme, its approval and its link with the airworthiness review:

	OPTION 1 (for all aircraft)	OPTION 2 (for ELA1 aircraft not involved in commercial operations)
Basic information used for the maintenance programme	Maintenance data from the Design Approval Holder (complying with <a href="#">M.A.302(d)</a> and <a href="#">(e)</a> )	'Minimum Inspection Programme' (see <a href="#">M.A.302(h)2</a> and <a href="#">M.A.302(i)</a> ) (not applicable to airships)
Customisation to a particular aircraft registration	Complying with <a href="#">M.A.302(e)</a> or Using the template in <a href="#">AMC M.A.302(e)</a> (only for other-than-complex motor-powered aircraft)	Using the template in <a href="#">AMC M.A.302(e)</a>
Approval/Declaration of the maintenance programme	Direct approval by NAA or Indirect approval by contracted CAMO or Declaration by the owner (see <a href="#">M.A.302(h)</a> ) (only for ELA1 aircraft not involved in commercial operations, see <a href="#">M.A.302(h)</a> )	Direct approval by NAA Or Indirect approval by contracted CAMO Or Declaration by the owner (see <a href="#">M.A.302(h)</a> ) (only for ELA1 aircraft not involved in commercial operations, see <a href="#">M.A.302(h)</a> )
Performance of Airworthiness Review and issue of Airworthiness Review Certificate	CAMO or NAA	NAA Or CAMO Or Part-145/M.A. Subpart F maintenance organisation (when combined with annual inspection, see <a href="#">M.A.901(l)</a> )

## GM M.A.201(i) Aircraft maintenance programme

ED Decision 2016/011/R

If an owner decides not to make a contract in accordance with [M.A.201\(i\)](#), the owner is fully responsible for the proper accomplishment of the corresponding tasks. As a consequence, it is recommended that the owner properly self-assesses his/her own competence to accomplish them or otherwise seeks the proper expertise.

## AMC M.A.201(i)(3) Responsibilities

ED Decision 2016/011/R

The limited contract for the development and, when applicable, processing of the approval of the aircraft maintenance programme should cover the responsibilities related to [M.A.302\(d\)](#), [M.A.302\(e\)](#) and [M.A.302\(g\)](#).

In the case of ELA1 aircraft not involved in commercial operations, the limited contract between the owner and the CAMO/maintenance organisation should cover the following aspects:

- Whether the maintenance programme will be based on the 'Minimum Inspection Programme' described in [M.A.302\(i\)](#);

- The obligation for the CAMO/maintenance organisation to develop and propose to the owner a maintenance programme which:
  - identifies the owner and the specific aircraft, engine, and propeller (as applicable);
  - includes all mandatory maintenance information and any additional tasks derived from the evaluation of the recommendations issued by the Design Approval Holder;
  - does not go below the requirements of the Minimum Inspection Programme; and
  - is customised to the particular aircraft type, configuration and operation, in accordance with [M.A.302\(h\)3](#).
- Whether the maintenance programme is going to be approved by the competent authority or the owner is going to issue a declaration for the maintenance programme.
  - In the case of approval by the competent authority, whether indirect approval by the CAMO is permitted or not.
  - In the case of declaration by the owner, a statement in the contract making clear that the owner assumes full responsibility for any deviations introduced to the maintenance programme proposed by the CAMO/maintenance organisation.

## M.A.202 Occurrence reporting

*Regulation (EU) No 1321/2014*

- (a) Any person or organisation responsible in accordance with point [M.A.201](#) shall report to the competent authority designated by the State of Registry, the organisation responsible for the type design or supplemental type design and, if applicable, the Member State of operator, any identified condition of an aircraft or component which endangers flight safety.
- (b) Reports shall be made in a manner established by the Agency and contain all pertinent information about the condition known to the person or organisation.
- (c) Where the person or organisation maintaining the aircraft is contracted by an owner or an operator to carry out maintenance, the person or the organisation maintaining the aircraft shall also report to the owner, the operator or the continuing airworthiness management organisation any such condition affecting the owner's or the operator's aircraft or component.
- (d) Reports shall be made as soon as practicable, but in any case within 72 hours of the person or organisation identifying the condition to which the report relates.

## AMC M.A.202(a) Occurrence reporting

*ED Decision 2015/029/R*

Accountable persons or organisations should ensure that the type certificate (TC) holder receives adequate reports of occurrences for that aircraft type, to enable it to issue appropriate service instructions and recommendations to all owners or operators.

Liaison with the TC holder is recommended to establish whether published or proposed service information will resolve the problem or to obtain a solution to a particular problem.

An approved continuing airworthiness management or maintenance organisation should assign responsibility for co-ordinating action on airworthiness occurrences and for initiating any necessary further investigation and follow-up activity to a suitably qualified person with clearly defined authority and status.



In respect of maintenance, reporting a condition which endangers flight safety is normally limited to:

- serious cracks, permanent deformation, burning or serious corrosion of structure found during scheduled maintenance of the aircraft or component.
- failure of any emergency system during scheduled testing.

## **AMC M.A.202(b) Occurrence reporting**

*ED Decision 2015/029/R*

The reports may be transmitted by any method, i.e. electronically, by post or by facsimile.

Each report should contain at least the following information:

- reporter or organisation's name and approval reference if applicable,
- information necessary to identify the subject aircraft and/or component,
- date and time relative to any life or overhaul limitation in terms of flying hours/cycles/landings etc., as appropriate,
- details of the occurrence.

AMC 20-8 General Acceptable Means of Compliance for Airworthiness of Products, Parts and Appliances provides further guidance on occurrence reporting.

## SUBPART C — CONTINUING AIRWORTHINESS

### M.A.301 Continuing airworthiness tasks

Regulation (EU) 2015/1536

The aircraft continuing airworthiness and the serviceability of both operational and emergency equipment shall be ensured by:

1. the accomplishment of pre-flight inspections;
2. the rectification in accordance with data specified in point [M.A.304](#) and/or point [M.A.401](#), as applicable, of any defect and damage affecting safe operation taking into account, the minimum equipment list (MEL) and configuration deviation list, when applicable;
3. the accomplishment of all maintenance, in accordance with the [M.A.302](#) aircraft maintenance programme;
4. for all complex motor-powered aircraft or aircraft used by licenced air carriers in accordance with Regulation (EC) No 1008/2008, the analysis of the effectiveness of the [M.A.302](#) approved maintenance programme;
5. the accomplishment of any applicable:
  - (i) airworthiness directive;
  - (ii) operational directive with a continuing airworthiness impact;
  - (iii) continued airworthiness requirement established by the Agency;
  - (iv) measures mandated by the competent authority in immediate reaction to a safety problem;
6. the accomplishment of modifications and repairs in accordance with point [M.A.304](#);
7. for non-mandatory modifications and/or inspections, for all complex motor-powered aircraft or aircraft used by licenced air carriers in accordance with Regulation (EC) No 1008/2008, the establishment of an embodiment policy;
8. maintenance check flights when necessary.

### AMC M.A.301(1) Continuing airworthiness tasks

ED Decision 2016/011/R

1. With regard to the pre-flight inspection it is intended to mean all of the actions necessary to ensure that the aircraft is fit to make the intended flight. These should typically include but are not necessarily limited to:
  - (a) a walk-around type inspection of the aircraft and its emergency equipment for condition including, in particular, any obvious signs of wear, damage or leakage. In addition, the presence of all required equipment including emergency equipment should be established.
  - (b) an inspection of the aircraft continuing airworthiness record system or the operators technical log as applicable to ensure that the intended flight is not adversely affected by any outstanding deferred defects and that no required maintenance action shown in the maintenance statement is overdue or will become due during the flight.

- (c) a control that consumable fluids, gases etc. uplifted prior to flight are of the correct specification, free from contamination, and correctly recorded.
  - (d) a control that all doors are securely fastened.
  - (e) a control that control surface and landing gear locks, pitot/static covers, restraint devices and engine/aperture blanks have been removed.
  - (f) a control that all the aircraft's external surfaces and engines are free from ice, snow, sand, dust etc. and an assessment to confirm that, as the result of meteorological conditions and de-icing/anti-icing fluids having been previously applied on it, there are no fluid residues that could endanger flight safety. Alternatively to this pre-flight assessment, when the type of aircraft and nature of operations allow for it, the build-up of residues may be controlled through scheduled maintenance inspections/cleanings identified in the approved maintenance programme.
2. Tasks such as oil and hydraulic fluid uplift and tyre inflation may be considered as part of the pre-flight inspection. The related pre-flight inspection instructions should address the procedures to determine where the necessary uplift or inflation results from an abnormal consumption and possibly requires additional maintenance action by the approved maintenance organisation or certifying staff as appropriate.
  3. In the case of air carriers licensed in accordance with Regulation (EC) No 1008/2008, the CAMO should publish guidance to maintenance and flight personnel and any other personnel performing pre-flight inspection tasks, as appropriate, defining responsibilities for these actions and, where tasks are contracted to other organisations, how their accomplishment is subject to the quality system of [M.A.712](#). It should be demonstrated to the competent authority that pre-flight inspection personnel have received appropriate training for the relevant pre-flight inspection tasks. The training standard for personnel performing the pre-flight inspection should be described in the operator's continuing airworthiness management exposition.

## AMC M.A.301(2) Continuing airworthiness tasks

*ED Decision 2016/011/R*

1. The operator should have a system to ensure that all defects affecting the safe operation of the aircraft are rectified within the limits prescribed by the approved minimum equipment list (MEL), configuration deviation list (CDL) or maintenance data, as appropriate. Also that such defect rectification cannot be postponed unless agreed by the operator and in accordance with a procedure approved by the competent authority.
2. When deferring or carrying forward a defect rectification, the cumulative effect of a number of deferred or carried forward defects on a given aircraft and any restrictions contained in the MEL should be considered. Whenever possible, deferred defect rectification should be made known to the pilot/flight crew prior to their arrival at the aircraft.
3. In the case of aircraft used by air carriers licensed in accordance with Regulation (EC) No 1008/2008 and of complex motor-powered aircraft, a system of assessment should be in operation to support the continuing airworthiness of an aircraft and to provide a continuous analysis of the effectiveness of the CAMO defect control system in use.

The system should provide for:

- (a) significant incidents and defects: monitor incidents and defects that have occurred in flight and defects found during maintenance and overhaul, highlighting any that appear significant in their own right.

- (b) repetitive incidents and defects: monitor on a continuous basis defects occurring in flight and defects found during maintenance and overhaul, highlighting any that are repetitive.
- (c) deferred and carried forward defects: Monitor on a continuous basis deferred and carried forward defects. Deferred defects are defined as those defects reported in operational service which are deferred for later rectification. Carried forward defects are defined as those defects arising during maintenance which are carried forward for rectification at a later maintenance input.
- (d) unscheduled removals and system performance: analyse unscheduled component removals and the performance of aircraft systems for use as part of the maintenance programme efficiency.

### **AMC M.A.301(3) Continuing airworthiness tasks**

*ED Decision 2015/029/R*

The owner or CAMO as applicable should have a system to ensure that all aircraft maintenance checks are performed within the limits prescribed by the approved aircraft maintenance programme and that, whenever a maintenance check cannot be performed within the required time limit, its postponement is allowed in accordance with a procedure agreed by the appropriate competent authority.

### **AMC M.A.301(4) Continuing airworthiness tasks**

*ED Decision 2016/011/R*

The CAMO managing the continuing airworthiness of the aircraft should have a system to analyse the effectiveness of the maintenance programme, with regard to spares, established defects, malfunctions and damage, and to amend the maintenance programme accordingly.

### **AMC M.A.301(5) Continuing Airworthiness Tasks**

*ED Decision 2015/029/R*

Operational directives with a continuing airworthiness impact include operating rules such as extended twin-engine operations (ETOPS) / long range operations (LROPS), reduced vertical separation minima (RVSM), MNPS, all weather operations (AWOPS), RNAV, etc.

Any other continued airworthiness requirement made mandatory by the Agency includes TC related requirements such as: certification maintenance requirements (CMR), certification life limited parts, airworthiness limitations contained in CS-25 Book 1, Appendix H, paragraph H25.4, fuel tank system airworthiness limitations including Critical Design Configuration Control Limitations (CDCCL) etc.

### **AMC M.A.301(7) Continuing airworthiness tasks**

*ED Decision 2016/011/R*

The CAMO managing the continuing airworthiness of the aircraft should establish and work according to a policy, which assesses non mandatory information related to the airworthiness of the aircraft. Non mandatory information such as service bulletins, service letters and other information that is produced for the aircraft and its components by an approved design organisation, the manufacturer, the competent authority or the Agency.

## M.A.302 Aircraft Maintenance Programme

Regulation (EU) 2015/1536

- (a) Maintenance of each aircraft shall be organised in accordance with an aircraft maintenance programme.
- (b) The aircraft maintenance programme and any subsequent amendments shall be approved by the competent authority.
- (c) When the continuing airworthiness of the aircraft is managed by a continuing airworthiness management organisation approved in accordance with [Section A, Subpart G](#) of this Annex (Part-M) or when there is a limited contract between the owner and this organisation in accordance with point [M.A.201\(i\)\(3\)](#), the aircraft maintenance programme and its amendments may be approved through an indirect approval procedure.
  - (i) In that case, the indirect approval procedure shall be established by the continuing airworthiness management organisation as part of the Continuing Airworthiness Management Exposition and shall be approved by the competent authority responsible for that continuing airworthiness management organisation.
  - (ii) The continuing airworthiness management organisation shall not use the indirect approval procedure when this organisation is not under the oversight of the Member State of Registry, unless an agreement exists in accordance with point [M.1](#), paragraph 4(ii), transferring the responsibility for the approval of the aircraft maintenance programme to the competent authority responsible for the continuing airworthiness management organisation.
- (d) The aircraft maintenance programme must establish compliance with:
  - (i) instructions issued by the competent authority;
  - (ii) instructions for continuing airworthiness:
    - issued by the holders of the type-certificate, restricted type-certificate, supplemental type-certificate, major repair design approval, ETSO authorisation or any other relevant approval issued under Regulation (EU) No 748/2012 and its Annex I (Part-21), and
    - included in the certification specifications referred to in point 21A.90B or 21A.431B of Annex I (Part-21) to Regulation (EU) No 748/2012, if applicable;
  - (iii) additional or alternative instructions proposed by the owner or the continuing airworthiness management organisation once approved in accordance with point [M.A.302](#), except for intervals of safety related tasks referred in point (e), which may be escalated, subject to sufficient reviews carried out in accordance with point (g) and only when subject to direct approval in accordance with point [M.A.302\(b\)](#).
- (e) The aircraft maintenance programme shall contain details, including frequency, of all maintenance to be carried out, including any specific tasks linked to the type and the specificity of operations.
- (f) For complex motor-powered aircraft, when the maintenance programme is based on maintenance steering group logic or on condition monitoring, the aircraft maintenance programme shall include a reliability programme.
- (g) The aircraft maintenance programme shall be subject to periodic reviews and amended accordingly when necessary. These reviews shall ensure that the programme continues to be

valid in light of the operating experience and instructions from the competent authority whilst taking into account new and/or modified maintenance instructions promulgated by the type certificate and supplementary type certificate holders and any other organisation that publishes such data in accordance with Annex I (Part-21) to Regulation (EU) No 748/2012.

(h) In the case of ELA1 aircraft not involved in commercial operations, compliance with points (b), (c), (d), (e), and (g) may be replaced by compliance with all the following conditions:

1. The aircraft maintenance programme shall clearly identify the owner and the specific aircraft to which it refers, including any installed engine and propeller.
2. The aircraft maintenance programme shall either:
  - comply with the ‘Minimum Inspection Programme’, contained in point (i), corresponding to the particular aircraft, or
  - comply with points (d) and (e).

The maintenance programme shall not be less restrictive than the ‘Minimum Inspection Programme’.

3. The aircraft maintenance programme shall include all the mandatory continuing airworthiness requirements, such as repetitive Airworthiness Directives, the Airworthiness Limitation Section (ALS) of the Instructions for Continued Airworthiness (ICA) or specific maintenance requirements contained in the Type Certificate Data Sheet (TCDS).

In addition, the aircraft maintenance programme shall identify any additional maintenance tasks to be performed because of the specific aircraft type, aircraft configuration and type and specificity of operation. The following elements shall be taken into consideration as a minimum:

- Specific installed equipment and modifications of the aircraft.
  - Repairs incorporated in the aircraft.
  - Life Limited components and flight safety critical components.
  - Maintenance recommendations, such as Time Between Overhaul (TBO) intervals, recommended through service bulletins, service letters, and other non-mandatory service information.
  - Applicable operational directives/requirements related to the periodic inspection of certain equipment.
  - Special operational approvals.
  - Use of the aircraft and operational environment.
  - Pilot-owner maintenance (if applicable).
4. If the maintenance programme is not approved by the competent authority (directly or by the [M.A. Subpart G](#) organisation via an indirect approval procedure), the aircraft maintenance programme shall contain a signed statement where the owner declares that this is the aircraft maintenance programme for the particular aircraft registration and he/she declares to be fully responsible for its content and, in particular, for any deviations introduced as regards the Design Approval Holder recommendations.

5. The aircraft maintenance programme shall be reviewed at least annually. This review of the maintenance programme shall be performed either:
- by the person who performs the airworthiness review of the aircraft in accordance with point [M.A.710\(ga\)](#), or
  - by the [M.A. Subpart G](#) organisation managing the continuing airworthiness of the aircraft in those cases where the review of the maintenance programme is not performed in conjunction with an airworthiness review.

If the review shows discrepancies on the aircraft linked to deficiencies in the content of the maintenance programme, the person performing the review shall inform the competent authority of the Member State of registry and the owner shall amend the maintenance programme as agreed with such competent authority.

- (i) In the case of ELA1 aircraft other than airships, not involved in commercial operations, the ‘Minimum Inspection Programme’ referred to in point (h) shall comply with the following conditions:
1. It shall contain the following inspection intervals:
    - For ELA1 aeroplanes and ELA1 Touring Motor Gliders (TMG), every annual or 100 h interval, whichever comes first. A tolerance of 1 month or 10 h may be applied to that interval as long as the next interval is calculated from the date or hours originally scheduled.
    - For ELA1 sailplanes, ELA1 powered sailplanes other than TMG and ELA1 balloons, every annual interval. A tolerance of 1 month may be applied to that interval as long as the next interval is calculated from the date originally scheduled.
  2. It shall contain the following:
    - Servicing tasks as required by the Design Approval Holder's requirements.
    - Inspection of markings.
    - Review of weighing records and weighing in accordance with Commission Regulation (EU) No 965/2012<sup>13</sup>, point NCO.POL.105.
    - Operational test of transponder (if existing).
    - Operational test of the pitot-static system.
    - In the case of ELA1 aeroplanes:
      - Operational checks for power and rpm, magnetos, fuel and oil pressure, engine temperatures.
      - For engines equipped with automated engine control, the published run-up procedure.
      - For dry-sump engines, engines with turbochargers and liquid-cooled engines, an operational check for signs of disturbed fluid circulation.
    - Inspection of the condition and attachment of the structural items, systems and components corresponding to the following areas:

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<sup>13</sup> Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1).



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- For ELA1 aeroplanes:
    - Airframe
    - Cabin and cockpit
    - Landing gear
    - Wing and centre section
    - Flight controls
    - Empennage
    - Avionics and electrics
    - Powerplant
    - Clutches and gearboxes
    - Propeller
    - Miscellaneous systems such as the ballistic rescue system
  - For ELA1 sailplanes and ELA1 powered sailplanes:
    - Airframe
    - Cabin and cockpit
    - Landing gear
    - Wing and centre section
    - Empennage
    - Avionics and electrics
    - Powerplant (when applicable)
    - Miscellaneous systems such as removable ballast, drag chute and controls, and water ballast system
  - For ELA1 hot-air balloons:
    - Envelope
    - Burner
    - Basket
    - Fuel containers
    - Equipment and instruments
  - For ELA1 gas balloons:
    - Envelope
    - Basket
    - Equipment and instruments

Until such time as this Regulation specifies a ‘Minimum Inspection Programme’ for airships, their maintenance programme shall comply with points (d) and (e).

## AMC M.A.302 Aircraft maintenance programme

ED Decision 2016/011/R

NOTE: This AMC is not applicable to those ELA1 aircraft not involved in commercial operations for which the owner has elected to apply the provisions of [M.A.302\(h\)](#). For those cases, refer to [AMC M.A.302\(h\)](#).

1. The term ‘maintenance programme’ is intended to include scheduled maintenance tasks the associated procedures and standard maintenance practises. The term ‘maintenance schedule’ is intended to embrace the scheduled maintenance tasks alone.
2. The aircraft should only be maintained to one approved maintenance programme at a given point in time. Where an owner or operator wishes to change from one approved programme to other, a transfer check or inspection may need to be performed in order to implement the change.
3. The maintenance programme details should be reviewed at least annually. As a minimum revisions of documents affecting the programme basis need to be considered by the owner or operator for inclusion in the maintenance programme during the annual review. Applicable mandatory requirements for compliance with Part-21 should be incorporated into the aircraft maintenance programme as soon as possible.
4. The aircraft maintenance programme should contain a preface which will define the maintenance programme contents, the inspection standards to be applied, permitted variations to task frequencies and, where applicable, any procedure to manage the evolution of established check or inspection intervals.
5. Repetitive maintenance tasks derived from modifications and repairs should be incorporated into the approved maintenance programme.
6. [Appendix I to AMC M.A.302](#) provides detailed information on the contents of an approved aircraft maintenance programme.

## GM M.A.302(a) Aircraft Maintenance Programme

ED Decision 2016/011/R

A maintenance programme may indicate that it applies to several aircraft registrations as long as the maintenance programme clearly identifies the effectivity of the tasks and procedures that are not applicable to all of the listed registrations.

## AMC M.A.302(d) Aircraft maintenance programme

ED Decision 2015/029/R

1. An aircraft maintenance programme should normally be based upon the maintenance review board (MRB) report where applicable, the maintenance planning document (MPD), the relevant chapters of the maintenance manual or any other maintenance data containing information on scheduling. Furthermore, an aircraft maintenance programme should also take into account any maintenance data containing information on scheduling for components.
2. Instructions issued by the competent authority can encompass all types of instructions from a specific task for a particular aircraft to complete recommended maintenance schedules for certain aircraft types that can be used by the owner/operator directly. These instructions may be issued by the competent authority in the following cases:
  - in the absence of specific recommendations of the Type Certificate Holder.

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- to provide alternate instructions to those described in the subparagraph 1 above, with the objective of providing flexibility to the operator.
3. Where an aircraft type has been subjected to the MRB report process, an operator should normally develop the initial aircraft maintenance programme based upon the MRB report.
  4. Where an aircraft is maintained in accordance with an aircraft maintenance programme based upon the MRB report process, any associated programme for the continuous surveillance of the reliability, or health monitoring of the aircraft should be considered as part of the aircraft maintenance programme.
  5. Aircraft maintenance programmes for aircraft types subjected to the MRB report process should contain identification cross reference to the MRB report tasks such that it is always possible to relate such tasks to the current approved aircraft maintenance programme. This does not prevent the approved aircraft maintenance programme from being developed in the light of service experience to beyond the MRB report recommendations but will show the relationship to such recommendations.
  6. Some approved aircraft maintenance programmes, not developed from the MRB process, utilise reliability programmes. Such reliability programmes should be considered as a part of the approved maintenance programme.
  7. Alternate and/or additional instructions to those defined in paragraphs [M.A.302\(d\)\(i\) and \(ii\)](#), proposed by the owner or the operator, may include but are not limited to the following:
    - Escalation of the interval for certain tasks based on reliability data or other supporting information. [Appendix I to AMC M.A.302 and M.B.301\(b\)](#) recommends that the maintenance programme contains the corresponding escalation procedures. The escalation of these tasks is directly approved by the competent authority, except in the case of ALLs (Airworthiness Limitations), which are approved by the Agency.
    - More restrictive intervals than those proposed by the TC holder as a result of the reliability data or because of a more stringent operational environment.
    - Additional tasks at the discretion of the operator

## AMC M.A.302(e) Aircraft maintenance programme

ED Decision 2015/029/R

Except for complex motor-powered aircraft, the aircraft maintenance programme may take the format of the following standard template:

<b>Aircraft Maintenance Programme (for aircraft other than 'complex motor-powered aircraft')</b>			
<b>Aircraft identification</b>			
1	Registration(s):	Type:	Serial No (s):
<b>Basis for the Maintenance Programme</b>			
2	<b>This Aircraft Maintenance Programme complies with (tick one option):</b>  <a href="#">M.A.302(b)</a> , (c), (d), (e) and (g) <input type="checkbox"/> (Complete section 3 below), or  <a href="#">M.A.302(h)</a> <input type="checkbox"/> (Only possible for ELA1 aircraft not used in commercial operations)		
	For Aircraft Maintenance Programmes complying with <a href="#">M.A.302(h)</a> (see above) the following data is used (tick one option):  Design Approval Holder Maintenance Data <input type="checkbox"/> (Complete section 3 below), or  Minimum Inspection Programme as detailed in the latest revision of <a href="#">AMC M.A.302(i)</a> <input type="checkbox"/> , or  Other Minimum Inspection Programme complying with <a href="#">M.A.302(i)</a> <input type="checkbox"/> ( <b>List the tasks in Appendix A to this Aircraft Maintenance Programme</b> )		
<b>Design Approval Holder Maintenance Data (not applicable if using Minimum Inspection Programmes)</b>			
3	<b>Equipment manufacturer and type</b>	<b>Applicable maintenance data reference (at latest revision)</b>	
<b>For aircraft other than balloons</b>			
3a	<b>Aircraft (other than balloons)</b>		
3b	Engine (if applicable)		
3c	Propeller (if applicable)		
<b>For balloons</b>			
3d	<b>Envelope (only for balloons)</b>		
3e	<b>Basket(s) (only for balloons)</b>		
3f	<b>Burner(s) (only for balloons)</b>		
3g	<b>Fuel cylinders (only for balloons)</b>		

<b>Additional maintenance requirements not covered above (applicable to all Aircraft Maintenance Programmes, regardless of whether they are based on Design Approval Holder Data or Minimum Inspection Programmes)</b>			
4	<b>Indicate if any of the following additional maintenance requirements are applicable (when replying 'YES', list the specific requirements in Appendix B to this Aircraft Maintenance Programme)</b>	Yes	No
	Maintenance related to specific equipment and modifications		
	Maintenance related to repairs implemented in the aircraft		
	Maintenance related to life-limited components		
	Maintenance related to Mandatory Continuing Airworthiness Information (ALIs, CMRs, specific requirements in the Type Certificate Data Sheet (TCDS), etc.)		
	Maintenance related to repetitive Airworthiness Directives		
	Maintenance related to specific operational/airspace directives/requirements (altimeter, compass, transponder, etc.)		
5	Maintenance related to the type of operation or to operational approvals such as Reduced Vertical Separation Minima (RVSM), Minimum Navigation Performance Specification (MNPS), Basic Area Navigation (B-NAV).		
	<b>Indicate if there are any specific maintenance recommendations made in Service Bulletins, Service Letters, etc, that are applicable (when replying 'YES', list all the specific recommendations and any deviations in Appendix B to this Aircraft Maintenance Programme)</b>	Yes	No
<b>Pilot-owner maintenance (only for privately operated non-complex motor-powered aircraft of 2 730 kg MTOM and below, sailplanes, powered-sailplanes and balloons)</b>			
6	<p>Does the Pilot-owner perform Pilot-owner maintenance (ref. <a href="#">Part-M, M.A.803</a>)? If yes, enter the name of the pilot-owner(s) or the alternative procedure described in <a href="#">AMC M.A.803</a> point 3:  Pilot-owner name: _____  Licence Number: _____  Signature: _____ Date: _____</p> <p>If yes, list in Appendix B to this Aircraft Maintenance Programme the deviations to the list of Pilot-owner maintenance tasks contained in the <a href="#">AMC to Appendix VIII to Part-M</a> (tasks which are <b>not performed by the Pilot-owner and additional tasks performed</b>)</p>	Yes	No
<b>Record of periodic reviews of the Aircraft Maintenance Programme (in accordance with M.A.302(g) or M.A.302(h)5, as applicable)</b>			
7	<b>Describe whether the review has resulted or not in changes to the Aircraft Maintenance Programme (any changes introduced will be described in field 8 below)</b>	<b>Date and signature</b>	

Revision control of the Aircraft Maintenance Programme			
8	Rev. No	Content of revision	Date and signature
Approval/Declaration of the Maintenance Programme (select the appropriate option)			
9	Declaration by owner: <input type="checkbox"/>	Approval by contracted CAMO (only under 'indirect approval procedure' approved by the competent authority responsible for the Aircraft Maintenance Programme): <input type="checkbox"/>	Approval by Competent Authority: <input type="checkbox"/>
	<b>'I hereby declare that this is the maintenance programme applicable to the aircraft referred to in field 1 and I am fully responsible for its content and, in particular, for any deviations from the Design Approval Holder's recommendations'</b> Signature/Name/Date:	Approval Reference No of the CAMO:  Signature/Name/Date:	Competent Authority:  Signature/Name/Date:
Certification statement			
10	<b>'I will ensure that the aircraft is maintained in accordance with this maintenance programme and that the maintenance programme will be reviewed and updated as required'</b>  Signed by the person/organisation responsible for the continuing airworthiness of the aircraft according to <a href="#">M.A.201</a> : Owner <input type="checkbox"/> - Lessee <input type="checkbox"/> - CAMO <input type="checkbox"/>  Name of owner/lessee or CAMO approval number:  Address:  Telephone/fax:  E-mail:  Signature/Date:		
11	Appendices attached: – Appendix A YES <input type="checkbox"/> NO <input type="checkbox"/> – Appendix B YES <input type="checkbox"/> NO <input type="checkbox"/>		

Appendix A ‘Minimum Inspection Programme’ (only applicable if a Minimum Inspection Programme different from the one described in [AMC M.A.302\(i\)](#) is used) (see Section 2 above)

Detail the tasks and inspections contained in the Minimum Inspection Programme being used.

Appendix B ‘Additional Maintenance Requirements’ and ‘Pilot-owner maintenance’ (include only if applicable) (see Sections 4, 5 and 6 above)

Task Description	References	Interval
<b>Maintenance related to specific equipment and modifications</b>		
<b>Maintenance related to repairs implemented in the aircraft</b>		
<b>Maintenance related to life-limited components</b>		
<b>Maintenance related to Mandatory Continuing Airworthiness Instructions (ALIs, CMRs, specific requirements in the TCDS, etc.)</b>		
<b>Maintenance related to repetitive Airworthiness Directives</b>		
<b>Maintenance related to specific operational/airspace directives/requirements (altimeter, compass, transponder, etc.)</b>		
<b>Maintenance related to the type of operation or operational approvals</b>		



Task Description	Recommended interval	Indicate: 'Adopted', or 'Not adopted', or 'Adopted with deviations'	Alternative inspection/task (if adopted with deviations)	Amended interval (if adopted with deviations)
<b>Maintenance recommendations contained in Service Bulletins, Service Letters, etc.</b> <b>NOTE: List all the applicable maintenance recommendations, even those for which it has been decided not to accomplish the task or to accomplish it with deviations.</b>				
<b>Task Description (Pilot-owner maintenance)</b>				
Pilot-owner maintenance tasks contained in <a href="#">AMC to Appendix VIII to Part-M</a> which are not performed by the Pilot-owner				
Pilot-owner maintenance tasks performed by the Pilot-owner additional to those contained in <a href="#">AMC to Appendix VIII to Part-M</a>				

## AMC M.A.302(f) Aircraft maintenance programme

*ED Decision 2016/011/R*

- Reliability programmes should be developed for aircraft maintenance programmes based upon maintenance steering group (MSG) logic or those that include condition monitored components or that do not contain overhaul time periods for all significant system components.
- Reliability programmes need not be developed for aircraft not considered complex motor-powered aircraft or that contain overhaul time periods for all significant aircraft system components.
- The purpose of a reliability programme is to ensure that the aircraft maintenance programme tasks are effective and their periodicity is adequate.
- The reliability programme may result in the escalation or deletion of a maintenance task, as well as the de-escalation or addition of a maintenance task
- A reliability programme provides an appropriate means of monitoring the effectiveness of the maintenance programme.
- [Appendix I to AMC M.A.302 and M.B.301\(d\)](#) gives further guidance.

## AMC M.A.302(h) Aircraft maintenance programme

*ED Decision 2015/029/R*

NOTE: This AMC is applicable to those ELA1 aircraft not involved in commercial operations for which the owner has elected to apply the provisions of [M.A.302\(h\)](#).

- The aircraft should only be maintained according to one maintenance programme at a given point in time. Where an owner wishes to change from one programme to another because of a change in the type of operation, a transfer check or inspection may need to be performed to implement the change.

2. The maintenance programme may take the format of the standard template provided in [AMC M.A.302\(e\)](#).
3. During the annual review of the maintenance programme, the following should be taken into consideration:
  - The results of the maintenance performed during that year, which may reveal that the current maintenance programme is not adequate.
  - The results of the airworthiness review performed on the aircraft, which may reveal that the current maintenance programme is not adequate.
  - Revisions introduced in the documents affecting the programme basis, such as the [M.A.302\(i\)](#) 'Minimum Inspection Programme' or the Design Approval Holder data.
  - Applicable mandatory requirements for compliance with Part-21, such as Airworthiness Directives, Airworthiness Limitations, Certification Maintenance Requirements and specific maintenance requirements contained in the TCDS.

For the purpose of reviewing the results of the maintenance performed during that year, the airworthiness review staff should request the owner/CAMO to provide the records of all the maintenance performed during that year, including unscheduled maintenance.

When reviewing the results of the maintenance performed during that year and the results of the airworthiness review, attention should be paid as to whether the defects found may have been prevented by introducing in the maintenance programme certain recommendations from the Design Approval Holder which were initially disregarded by the owner.

## GM M.A.302(h) Aircraft maintenance programme

*ED Decision 2016/011/R*

Responsibilities associated to maintenance programmes developed in accordance with [M.A.302\(h\)](#):

- If the owner has contracted an organisation in accordance with [M.A.201\(i\)\(1\)](#) or [M.A.201\(i\)\(3\)](#) (whether it covers the full continuing airworthiness management or it is just for the development of the maintenance programme), this organisation is responsible for developing and proposing to the owner a maintenance programme which:
  - indicates whether the maintenance programme is based on the 'Minimum Inspection Programme' described in [M.A.302\(i\)](#);
  - identifies the owner and the specific aircraft, engine, and propeller (as applicable);
  - includes all mandatory maintenance information and any additional tasks derived from the assessment of the recommendations issued by the Design Approval Holder;
  - justifies any deviations from the recommendations issued by the Design Approval Holder;
  - does not go below the requirements of the Minimum Inspection Programme; and
  - is customised to the particular aircraft type, configuration and operation, in accordance with paragraph [M.A.302\(h\)3](#).

If the maintenance programme is going to be approved by the competent authority, such competent authority is responsible for evaluating the justifications provided in relation to deviations from the recommendations issued by the Design Approval Holder.

However, when issuing a declaration for the maintenance programme, the owner assumes full responsibility for any deviations introduced to the maintenance programme proposed by the contracted organisation. The organisation which developed the maintenance programme is not responsible for such deviations. These deviations do not need to be justified by the owner.

- If the owner has not contracted an organisation in accordance with [M.A.201\(i\)\(2\)](#) and has decided to develop the maintenance programme himself/herself, when issuing a declaration for the maintenance programme, the owner assumes full responsibility for its content, including any deviations introduced to the recommendations issued by the Design Approval Holder. In this case, these deviations do not need to be justified. However, the maintenance programme still needs to comply with the requirements contained in [M.A.302\(h\)](#), in particular with the obligation to not go below the requirements of the ‘Minimum Inspection Programme’ and to comply with the mandatory continuing airworthiness information.

If the maintenance programme is going to be approved by the competent authority, the owner needs to provide to such competent authority the justification for the deviations from the Design Approval Holder recommendations.

- The content of the declared (by the owner) maintenance programme cannot be initially challenged either by the competent authority, the contracted CAMO, or the contracted maintenance organisation. This declared maintenance programme is the basis for adequate planning of maintenance as well as for the airworthiness reviews and the content of the Aircraft Continuing Airworthiness Monitoring (ACAM) inspections in accordance with [M.B.303](#). Nevertheless, the maintenance programme will be subject to periodic reviews at the occasion of the airworthiness review and the competent authority shall be notified in case of discrepancies linked to deficiencies in the content of the maintenance programme, as described in [M.A.302\(h\)5](#), [M.A.710\(ga\)](#), [M.A.710\(h\)](#), [M.A.901\(l\)5](#), and [M.A.901\(l\)7](#). The owner shall amend the maintenance programme accordingly as required by [M.A.302\(h\)5](#).
- When the competent authority is notified of deficiencies linked to the content of the declared maintenance programme for a particular aircraft, the competent authority should contact the owner, request a copy of the maintenance programme (if it was declared) and use the information received for the adequate planning of the ACAM programme. Based on the reported deficiencies and the risks identified, the competent authority will adapt the ACAM programme accordingly. This notification will also allow that the competent authority agrees on the changes required to the maintenance programme as required by [M.A.302\(h\)5](#).
- Although there is no requirement for the owner to send a copy of the declared maintenance programme to the competent authority, this does not prevent the competent authority from requesting a copy to the owner at any time, even if deficiencies have not been reported.
- Since the maintenance programme has to identify the deviations introduced to the recommendations issued by the Design Approval Holder, the airworthiness reviews and ACAM inspections should place emphasis on the inspection of those areas affected by those deviations in order to make sure that the maintenance programme is effective.
- Since the competent authority is not responsible for the content of a declared maintenance programme, the competent authority cannot authorise deviations from its content. In such case, the owner can always declare an amended maintenance programme.

## AMC M.A.302(i) Aircraft maintenance programme

*ED Decision 2015/029/R*

This AMC contains an acceptable ‘Minimum Inspection Programme’ for the following categories of ELA1 aircraft not involved in commercial operations:

- ELA1 aeroplanes;
- ELA1 sailplanes and ELA1 powered sailplanes; and
- ELA1 hot-air balloons.

Although this AMC does not contain an acceptable ‘Minimum Inspection Programme’ for gas balloons, the use of a ‘Minimum Inspection Programme’ is still possible as long as it complies with the requirements established in [M.A.302\(i\)](#).

The ‘Minimum Inspection Programmes’ defined in this AMC already comply with the requirements established in [M.A.302\(i\)](#) and may be used in order to define the basic information for the maintenance programme as required by [M.A.302\(h\)2](#). However, the maintenance programme must be customised as required by [M.A.302\(h\)3](#), which may be done by using the standard template contained in [AMC M.A.302\(e\)](#).

It must be noted that using the ‘1-month’ tolerance permitted by [M.A.302\(i\)1](#) for the annual inspection may result in an expired ARC.

### Minimum Inspection Programme for ELA1 aeroplanes not involved in commercial operations

To be performed every annual/100 h interval, whichever comes first.

A tolerance of one month or 10 h may be applied. However, the next interval shall be calculated from the date/hours originally scheduled (without the tolerance).

Note 1: Use the manufacturer’s maintenance manual to accomplish each task/inspection.

Note 2: Proper operation of backup or secondary systems and components should be included for every instance where a check is performed for improper installation/operation.

ELA1 aeroplanes not involved in commercial operations	
System/component/area	Task & Inspection detail
<b>GENERAL</b>	
General	Remove or open all necessary inspection plates, access doors, fairings, and cowlings. Clean the aircraft and aircraft engine as required.
Lubrication/servicing	Lubricate and replenish fluids in accordance with the manufacturer’s requirements.
Markings	Check that side and under-wing registration markings are correct. If applicable, check that an exemption for alternate display is approved. Identification plate for National Aviation Authority registered aircraft is present. Other identification markings on fuselage are in accordance with local (national) rules.
Weighing	Review weighing record to establish accuracy against installed equipment. Weigh the aircraft as required by the Part-NCO rules.
<b>AIRFRAME</b>	

<b>ELA1 aeroplanes not involved in commercial operations</b>	
<b>System/component/area</b>	<b>Task &amp; Inspection detail</b>
Fabric and skin	Inspect for deterioration, distortion, other evidence of failure, and defective or insecure attachment of fittings. NOTE: When checking composite structures, check for signs of impact or pressure damage that may indicate underlying damage.
Fuselage structure	Check frames, formers, tubular structure, braces, and attachments. Inspect for signs of corrosion.
Systems and components	Inspect for improper installation, apparent defects, and unsatisfactory operation.
Pitot/static system	Inspect for security, damage, cleanliness, and condition. Drain any water from condensation drains.
General	Inspect for lack of cleanliness and loose equipment that might foul the controls.
Tow hooks	Inspect for condition of moving parts and wear. Check service life. Carry out operational test.
<b>CABIN AND COCKPIT</b>	
Seats, safety belts and harnesses	Inspect for poor condition and apparent defects. Check for service life.
Windows, canopies and windshields	Inspect for deterioration and damage, and for function of emergency jettison.
Instrument panel assemblies	Inspect for poor condition, mounting, marking, and (where practicable) improper operation. Check markings of instruments in accordance with the Flight Manual.
Flight and engine controls	Inspect for improper installation and improper operation.
Speed/weight/manoeuvre placard	Check that the placard is correct and legible and accurately reflects the status of the aircraft.
All systems	Inspect for improper installation, poor general condition, apparent and obvious defects, and insecurity of attachment.
<b>LANDING GEAR</b>	
Shock-absorbing devices	Inspect for improper fluid level. Inspect for wear and deformation of rubber pads, bungees, and springs.
All units	Inspect for poor condition and insecurity of attachment.
Retracting and locking mechanism	Inspect for improper operation.
Linkages, trusses and members	Inspect for undue or excessive wear fatigue and distortion.
Hydraulic lines	Inspect for leakage. Check service life.
Electrical system	Inspect for chafing and improper operation of switches.
Wheels	Inspect for cracks, defects, and condition of bearings.
Tyres	Inspect for wear and cuts.

<b>ELA1 aeroplanes not involved in commercial operations</b>	
<b>System/component/area</b>	<b>Task &amp; Inspection detail</b>
Brakes	Inspect for improper adjustment and wear. Carry out operational test.
Floats and skis	Inspect for insecure attachment and apparent defects.
<b>WING AND CENTRE SECTION</b>	
All components	Inspect all components of the wing and centre section assembly for poor general condition, fabric or skin deterioration, distortion, evidence of failure, insecurity of attachment.
Connections	Inspect main connections (e.g. between wings, fuselage, wing tips) for proper fit, play within tolerances, wear or corrosion on bolts and bushings.
<b>FLIGHT CONTROLS</b>	
Control circuit/stops	Inspect control rods and cables. Check that the control stops are secure and make contact.
Control surfaces	Inspect aileron, flap, elevator, air brake and rudder assemblies, hinges, control connections, springs/bungees, tapes and seals. Check and record range of movement and cable tensions, if specified, and check free play.
Trim systems	Inspect trim surfaces, controls, and connections. Check full range of motion.
<b>EMPENNAGE</b>	
All components and systems	Inspect all components and systems that make up the complete empennage assembly for poor general condition, fabric or skin deterioration, distortion, evidence of failure, insecure attachment, improper component installation, and improper component operation.
<b>AVIONICS AND ELECTRICS</b>	
Batteries	Inspect for improper installation, improper charge and spillage and corrosion.
Radio and electronic equipment	Inspect for improper installation and insecure mounting. Carry out ground function test.
Wiring and conduits	Inspect for improper routing, insecure mounting, and obvious defects.
Bonding and shielding	Inspect for improper installation, poor condition, and chafing and wear of insulation.
Antennas	Inspect for poor condition, insecure mounting, and improper operation.
<b>POWERPLANT</b>	
Engine section	Inspect for visual evidence of excessive oil, fuel or hydraulic leaks and sources of such leaks.
Studs and nuts	Inspect for looseness, signs of rotation and obvious defects.
Internal engine	Inspect for cylinder compression (record measures for each cylinder) and for metal particles or foreign matter in oil filter, screens and sump drain plugs. If there is weak cylinder compression, inspect for improper internal condition and improper internal tolerances.

<b>ELA1 aeroplanes not involved in commercial operations</b>	
<b>System/component/area</b>	<b>Task &amp; Inspection detail</b>
Engine mounts	Inspect for cracks, looseness of mounting, and looseness of the engine to mount attachment.
Flexible vibration dampeners	Inspect for poor condition and deterioration.
Engine controls	Inspect for defects, improper travel, and improper safe tying.
Lines, hoses and clamps	Inspect for leaks, improper condition, and looseness.
Exhaust stacks	Inspect for cracks, defects, and improper attachment.
Turbocharger and intercooler	Inspect for leaks, improper condition, and looseness of connections and fittings.
Liquid cooling systems	Inspect for leaks and proper fluid level.
Electronic engine control	Inspect for signs of chafing and proper electronics and sensor installation.
Accessories	Inspect for apparent defects in security of mounting.
All systems	Inspect for improper installation, poor general condition, defects and insecure attachment.
Cowling	Inspect for cracks and defects. Check cowling flaps.
Cooling baffles and seals	Inspect for defects, improper attachment, and wear.
Fuel tanks	Inspect for improper installation and connection.
<b>CLUTCHES AND GEARBOXES</b>	
Filters, screens, and chip detectors	Inspect for metal particles and foreign matter.
Exterior	Inspect for oil leaks.
Output shaft	Inspect for excessive bearing play and condition.
<b>PROPELLER</b>	
Propeller assembly	Inspect for cracks, nicks, binds, and oil leakage.
Propeller bolts	Inspect for proper installation, looseness, signs of rotation, and lack of safe tying.
Propeller control mechanism	Inspect for improper operation, insecure mounting, and restricted travel.
Anti-icing devices	Inspect for improper operation and obvious defects.
<b>MISCELLANEOUS</b>	
Ballistic rescue system	Inspect for proper installation, unbroken activation mechanism, proper securing while on ground, validity of inspection periods of pyrotechnic devices, and parachute packing intervals.
Other miscellaneous items	Inspect installed miscellaneous items that are not otherwise covered by this listing for improper installation and improper operation.
<b>OPERATIONAL CHECKS</b>	

ELA1 aeroplanes not involved in commercial operations	
System/component/area	Task & Inspection detail
Power and revolutions per minute (rpm)	Check that power output, static and idle rpm are within published limits.
Magnetos	Check for normal function.
Fuel and oil pressure	Check they are within normal values.
Engine temperatures	Check they are within normal values.
Engine	For engines equipped with automated engine control (e.g. FADEC), perform the published run-up procedure and check for discrepancies.
Engine	For dry-sump engines and engines with turbochargers and for liquid cooled engines, check for signs of disturbed fluid circulation.
Pitot-static system	Perform operational check.
Transponder	Perform operational check.



**Minimum Inspection Programme for ELA1 sailplanes and ELA1 powered sailplanes not involved in commercial operations**

To be performed:

- every annual/100 h interval (for Touring Motor Gliders (TMG)), whichever comes first; or
- every annual interval (for other than TMGs).

A tolerance of one month or 10 h, as applicable, may be applied. However, the next interval shall be calculated from the date/hours originally scheduled (without the tolerance).

Note 1: Use the manufacturer’s maintenance manual to accomplish each task/inspection.

Note 2: In the case of TMGs, it is acceptable to control the hours of use of the aircraft, engine and propeller as separate entities. Any maintenance check to be done between two consecutive annual/100 h inspections may be performed separately on the aircraft, engine and propeller depending on when each element reaches the corresponding hours. However, at the time of the annual/100 h inspection, all the elements must be covered.

Note 3: Proper operation of backup or secondary systems and components should be included for every instance where a check is performed for improper installation/operation.

ELA1 sailplanes and ELA1 powered sailplanes not involved in commercial operations	
System/component/area	Task & Inspection detail
<b>GENERAL</b>	
General — all tasks	The aircraft must be clean prior to inspection. Inspect for security, damage, wear, integrity, drain/vent holes clear, signs of overheating, leaks, chafing, cleanliness and condition as appropriate to the particular task. Whilst checking composite structures, check for signs of impact or pressure damage that may indicate underlying damage.
Lubrication/servicing	Lubricate and replenish fluids in accordance with the manufacturer’s requirements.
Markings	Check that side and under-wing registration markings are correct. If applicable, check that an exemption for alternate display is approved. Identification plate for National Aviation Authority registered aircraft is present. Other identification markings on fuselage in accordance with local (national) rules.
Weighing:	Review weighing record to establish accuracy against installed equipment. Weigh the aircraft as required by the Part-NCO rules.
<b>AIRFRAME</b>	
Fuselage paint/gel coat, including registration markings	Inspect external surface and fairings, gel coat, fabric covering or metal skin, and paintwork. Check that registration marks are correctly applied.
Fuselage structure	Check frames, formers, tubular structure, skin, and attachments. Inspect for signs of corrosion on tubular framework.
Nose fairing	Inspect for evidence of impact with ground or objects.
Release hook(s)	Inspect nose and Centre of Gravity (C of G) release hooks and controls. Check operational life. Carry out operational test. If more than one release hook or control is fitted, check operation of all release hooks from all positions.

<b>ELA1 sailplanes and ELA1 powered sailplanes not involved in commercial operations</b>	
<b>System/component/area</b>	<b>Task &amp; Inspection detail</b>
Pot pitot/ventilator	Check alignment of probe, check operation of ventilator.
Pitot/static system	Inspect pitot probes, static ports and all accessible tubing for security, damage, cleanliness, and condition. Drain any water from condensation drains.
Bonding/vents drains	Check all bonding leads and straps. Check that all vents and drains are clear from debris.
<b>CABIN AND COCKPIT</b>	
Cleanliness/loose articles	Check under cockpit floor/seat pan and in rear fuselage for debris and foreign items.
Canopy, locks and jettison	Inspect canopy, canopy frame and transparencies for cracks, unacceptable distortion, and discolouration. Check operation of all locks and catches. Carry out an operational test of the canopy jettison system from all positions.
Seat/cockpit floor	Inspect seat(s). Check that all loose cushions are correctly installed and, as appropriate, energy absorbing foam cushions are fitted correctly. Ensure that all seat adjusters fit and lock correctly.
Harness(es)	Inspect all harnesses for condition and wear of all fastenings, webbing, and fittings. Check operation of release and adjustments.
Rudder pedal assemblies	Inspect rudder pedal assemblies and adjusters.
Flight control circuits/stops	Inspect flight controls rods/cables. Check that control stops are secure and make contact. Pay particular attention to wear and security of liners and cables in 'S' tubes. Inspect self-connecting control devices.
Instrument panel assemblies	Inspect instrument panel and all instruments/equipment. Check instrument readings are consistent with ambient conditions. Check marking of all switches, circuit breakers, and fuses. Check operation of all installed equipment, as possible, in accordance with the manufacturer's instructions. Check markings of instruments in accordance with the Flight Manual.
Oxygen system	Inspect oxygen system. Check bottle hydrostatic test date expiry in accordance with the manufacturer's recommendations. Ensure that the bottle is not completely empty (13,8 bars/200 psi minimum) and refill with aviator's oxygen only. Clean masks and regulators with suitable cleaning wipes. Ensure that the oxygen installation is recorded on weight and C of G schedule. CAUTION: OBSERVE ALL SAFETY PRECAUTIONS.
Colour-coding of controls	Ensure that controls are colour-coded and in good condition, as follows: Tow release: yellow Air Brakes: blue Trimmer: green Canopy normal operation: white Canopy jettison: red Other controls: clearly marked but not using any of the above colours.
Equipment stowed in centre section	Check for security and condition. Check validity of any safety equipment. Check the manufacturer's and the NAA's (if required) data plates.
Speed/weight/ manoeuvre placard	Check that the placard is correct and legible and accurately reflects the status of the aircraft.

<b>ELA1 sailplanes and ELA1 powered sailplanes not involved in commercial operations</b>	
<b>System/component/area</b>	<b>Task &amp; Inspection detail</b>
<b>LANDING GEAR</b>	
Front skid/nose wheel and mounts	Inspect for evidence of hard/heavy landings. Check skid wear. Inspect wheel, tyre, and wheel box. Check tyre pressure.
Main wheel and brake assembly	Check for integrity of hydraulic seals and leaks in pipe work. Check life of hydraulic hoses and components if specified by the manufacturer. Remove brake drums, check brake lining wear. Check disk/drum wear. Refit drum. Check brake adjustment. CAUTION: BRAKE DUST MAY CONTAIN ASBESTOS. Check operation of brake. Check level of brake fluid and replenish if necessary. Check tyre pressure. CAUTION: CHECK TYPE OF BRAKE FLUID USED AND OBSERVE SAFETY PRECAUTIONS.
Undercarriage suspension	Check springs, bungees, shock absorbers, and attachments. Check for signs of damage. Service strut if applicable.
Undercarriage retract system and doors	Check retraction mechanism and controls, warning system if fitted, gas struts, doors and linkages/springs, over-centre/locking device. Perform retraction test.
Tail skid/wheel	Inspect for evidence of hard/heavy landings. Check skid wear. Inspect wheel, tyre, and wheel box. Check bond of bonded skids. Check tyre pressure.
Wheel brake control circuit	Inspect wheel brake control rods/cables. If combined with air brake, ensure correct rigging relationship. Check parking brake operation if fitted.
<b>WING AND CENTRE SECTION</b>	
Centre section fairing	Inspect for security, damage, and condition.
Wing attachments	Inspect the wing structural attachments. Check for damage, wear, and security. Check for rigging damage. Check condition of wing attachment pins.
Aileron control circuit/stops	Inspect aileron control rods/cables. Check that control stops are secure and make contact. Inspect self-connecting control devices.
Air brake control circuit	Inspect air brake control rods/cables. Check friction/locking device (if fitted). Inspect self-connecting control devices.
Wing struts/wires	Inspect wing struts for damage and internal corrosion. Re-inhibit wing struts internally every three years or in accordance with the manufacturer's instructions.
Wings including underside registration markings	Check mainplane structure externally and internally as far as possible. Check gel coat, fabric covering, or metal skin. Check that registration marks are correctly applied.
Ailerons and controls	Inspect aileron and flaperon assemblies, hinges, control connections, springs/bungees, tapes, and seals. Ensure that seals do not impair full range of movement.
Air brakes/spoilers	Inspect air brake/spoiler panel(s) operating rods, closure springs, and friction devices as fitted.
Flaps	Check flap system and control. Inspect self-connecting control devices.
Control deflections and free play, and record on worksheets	Check and record range of movements and cable tensions, if specified, and check free play.

<b>ELA1 sailplanes and ELA1 powered sailplanes not involved in commercial operations</b>	
<b>System/component/area</b>	<b>Task &amp; Inspection detail</b>
<b>EMPENNAGE</b>	
Tailplane and elevator	With tailplane de-rigged, check tailplane and attachments, self-connecting and manual control connections. Check gel coat, fabric covering, or metal skin.
Rudder	Check rudder assembly, hinges, attachments, balance weights.
Rudder control circuit/ stops	Inspect rudder control rods/cables. Check that control stops are secure and make contact. Pay particular attention to wear and security of liners and cables in 'S' tubes.
Elevator control circuit/stops	Inspect elevator control rods/cables. Check that control stops are secure and make contact. Inspect self-connecting control devices.
Trimmer control circuit	Inspect trimmer control rods/cables. Check friction/locking device.
Control deflections and free play, and record on worksheets	Check and record range of movements and cable tensions, if specified, and check free play.
<b>AVIONICS AND ELECTRICS</b>	
Electrical installation/fuses	Check all electrical wiring for condition. Check for signs of overheating and poor connections. Check fuses/trips for condition and correct rating.
Battery security and corrosion	Check battery mounting for security and operation of clamp. Check for evidence of electrolyte spillage and corrosion. Check that the battery has the main fuse fitted correctly. It is recommended to carry out battery capacity test on gliders equipped with radio, used for cross-country, controlled airspace, or competition flying.
Radio installations and placards	Check radio installation, microphones, speakers and intercom, if fitted. Check that the call sign placard is installed. Carry out ground function test. Record radio type fitted.
Altimeter datum	Check barometric sub-scale. Maximum error 2 Mb.
Pitot-static system	Perform operational check.
Transponder	Perform operational check.
<b>MISCELLANEOUS</b>	
Removable ballast	Check removable ballast mountings and securing devices (including fin ballast if applicable) for condition. Check that ballast weights are painted with conspicuous colour. Check that provision is made for the ballast on the loading placard.
Drag chute and controls	Inspect chute, packing and release mechanism. Check packing intervals.
Water ballast system	Check water ballast system, wing and tail tanks as fitted. Check filling points, level indicators, vents, dump and frost drains for operation and leakage. If loose bladders are used, check for leakage and expiry date as applicable.
<b>POWERPLANT (when applicable)</b>	
Engine pylons and mountings	Inspect engine and pylon installation. Check engine compartment and fire sealing.

ELA1 sailplanes and ELA1 powered sailplanes not involved in commercial operations	
System/component/area	Task & Inspection detail
Gas strut	Check gas strut.
Pylon/engine stops	Check limit stops on retractable pylons. Check restraint cables.
Electric actuator	Inspect electric actuator, motor, spindle drive, and mountings.
Electrical wiring	Inspect all electrical wiring. Pay special attention to wiring that is subject to bending during extension and retraction of engine/pylon.
Limit switches	Check operation of all limit switches and strike plates. Make sure that they are not damaged by impact.
Fuel tank(s)	Check fuel tank mountings and tank integrity. Check fuel quantity indication system if fitted.
Fuel pipes and vents	Check all fuel pipes especially those subject to bending during extension and retraction of engine/pylon. Check that vents are clear. Make sure that overboard drains do not drain into engine compartment. Check self-sealing.
Fuel cock or shut off valve	Check operation of fuel cock or shut-off valve and indications.
Fuel pumps and filters	Clean or replace filters as recommended by the manufacturer. Check operation of fuel pumps for engine supply or tank replenishment. Check fuel pump controls and indications.
Decompression valve	Inspect decompression valve and operating control.
Spark plugs	Carry out spark plug service. It is recommended to replace spark plugs at annual intervals.
Harnesses and Magneto	Inspect low-tension and high-tension wiring, connectors, spark plug caps. Check magneto to engine timing. Check impulse coupling operation.
Propeller bolts, assembly, mounting, torquing & drive belt	Inspect propeller, hub, folding mechanism, brake, pitch change mechanism, stow sensors.
Doors	Check engine compartment doors, operating cables, rods, and cams.
Safety springs	Check all safety and counterbalance springs.
Extension and retraction	Check that extension and retraction operation times are within limits specified by manufacturer. Check light indications and interlocks for correct operation.
Exhaust	Inspect exhaust system, silencer, shock mounts, and links.
Engine installation	Inspect engine and all accessories. Carry out compression test and record results. Compression test results: No1 (left/front): No2 (right/rear):
Lubrication	Change engine oil and filter. Replenish oil and additive tanks.
Engine instruments	Inspect all engine instruments and controls. Check control unit, mounts, bonding and connections. Carry out internal self-test if fitted.
Flexible vibration dampers	Check for poor condition and deterioration.

ELA1 sailplanes and ELA1 powered sailplanes not involved in commercial operations	
System/component/area	Task & Inspection detail
Engine battery	If separate from airframe battery, inspect battery and mountings. If the main fuse is fitted, check rating and condition. Perform a functional test.
Placards	Check that all placards are in accordance with flight manual and legible.
Oil and fuel leaks	With the engine fully serviced, check the fuel and oil system for leaks.

### Minimum Inspection Programme for ELA1 hot-air balloons not involved in commercial operations

To be performed every annual interval.

A tolerance of one month may be applied. However, the next interval shall be calculated from the date originally scheduled (without the tolerance).

Note 1: Use the manufacturer’s maintenance manual to accomplish each task/inspection.

Note 2: Proper operation of backup or secondary systems and components should be included for every instance where a check is performed for improper installation/operation.

#### 1. Envelope

System/component/area	Task & Inspection detail
Identification (type/serial number/registration plate)	Check for presence and verify type/serial number installed.
Crown ring and line	In place; not corroded; crown line undamaged and has appropriate length.
Vertical/horizontal load tapes	Check joints with the crown ring, top of the envelope and wires. All load tapes undamaged along their entire length. Inspect base horizontal tape and edge of the envelope top. Inspect joint between base horizontal load tape and vertical load tapes.
Envelope fabric	Inspect the envelope fabric panels (including parachute and rotation vents if fitted) for damage, porosity overheating or weakness. Unrepaired damage is within tolerance given by the manufacturer. If substantial fabric porosity is suspected, then a flight test should be performed, but only after a grab test has demonstrated that the balloon is safe to fly. Perform grab test in accordance with the manufacturer’s instructions.
Flying cables	Inspect for damage (particularly heat damage). Kevlar cable — yellow core is not visible
Karabiners	Inspect for damage. Karabiner lock is working properly.
Melting link and Tempilabel	Check maximum temperature indication (flag/‘tell-tale’).
Control system lines	Inspect for damage wear, security of knots. Check proper length. Check lines attachments for damage, wear, security.
Control lines and their attachments	Inspect for damage, wear, security of knots. Check proper length of the lines.
Envelope pulleys	Inspect for damage, wear, free running, contamination, security of attachment.

#### 2. Burner

System/component/area	Task & Inspection detail
Identification (type/serial number)	Check for presence and verify type/serial number installed.
Burner frame	Inspect welds for cracking.
	Inspect tubes for distortion/deformation/cuts/gouges.
	Inspect frame for security of fasteners (heat shields, flexi-corners).
	Inspect frame lugs for wear, cracking.
	Inspect general condition (corrosion, heat shields).
Gimballing	Check stiffness, security of fitting manifolds.
Leak check	Perform leak check of the burner.
Hoses	Inspect all hoses for wear, damage, leak, and lifetime limitation.

System/component/area	Task & Inspection detail
	Inspect condition and correct function of the fuel.
Pressure gauges	Check Pressure gauge reads zero when no pressure applied, lens present.
Pilot valves/flame	Check Shut off, free movement, correct function, lubricate if necessary.
Whisper valves/flame	Check Shut off, free movement, correct function, lubricate if necessary.
Main valves/flame	Check Shut off, free movement, correct function, lubricate if necessary.
Coils	Check for damage, distortion, security of fasteners. Inspect welds for cracking. Check security of jets, tighten or replace as necessary.
Fuel	Check correct type, check dates (if applicable).

### 3. Basket

System/component/area	Task & Inspection detail
Identification (type/serial number)	Check for presence and verify type/serial number installed.
Basket body	Check the general condition of the basket body. Inspect weave for damage, cracks/holes. No sharp objects inside the basket.
Basket wires	Inspect for damage, check eye rings.
Karabiners	Inspect for damage. Karabiner lock is working properly.
Basket floor	Inspect for damage and cracks.
Runners	Inspect for damage.
Rawhide	Inspect for damage, wear and attachments to the floor.
Rope handles	Inspect for damage, security of attachment.
Cylinder straps	Inspect for damage, deterioration.
Padded basket edge trim	Inspect for damage and wear.
Burner rods	Inspect for damage, wear and cracking.
Padded burner rod covers	Inspect for damage and wear.
Basket equipment	Check presence and functionality.
Pilot restraint	Inspect for security and condition.
Fire extinguisher	Check expiration date and protection cover.
First-aid kit	Check for completeness and expiration date.

### 4. Fuel tanks

System/component/area	Task & Inspection detail
Identification (type/serial number)	Check for presence.
Cylinder	Check periodic inspections for each cylinder is valid (date) (e.g. 10 years' inspection).
Cylinder body	Inspect for damage, corrosion.
Liquid valve	Inspect for damage, corrosion, correct operation. Inspect O-ring seals, lubricate/replace as required.
Fixed liquid Level gauge	Inspect for damage, corrosion, correct operation.
Contents Gauge	Inspect for damage, corrosion, freedom of movement.
Vapour valve	Inspect for damage, corrosion, correct operation (including regulator).



System/component/area	Task & Inspection detail
	Inspect Quick Release Coupling for correct operation, sealing.
Padded cover	Inspect for damage.
Pressure relief valve	Does not indicate over pressuring
Assembly	Inspect, leak-test all pressure holding joints using leak detector.
	Functional test

### 5. Additional equipment

System/component/area	Task & Inspection detail
Instruments	Functional check
Quick release	Functional check and inspect the condition of the latch, bridle and ropes for wear and deterioration. Check that the karabiners are undamaged and operate correctly.
Communication/navigation equipment (radio)	Perform operational check.
Transponder	Perform operational check.

## M.A.303 Airworthiness directives

*Regulation (EU) No 1321/2014*

Any applicable airworthiness directive must be carried out within the requirements of that airworthiness directive, unless otherwise specified by the Agency.

## M.A.304 Data for modifications and repairs

*Regulation (EU) No 1321/2014*

Damage shall be assessed and modifications and repairs carried out using as appropriate:

- (a) data approved by the Agency; or
- (b) data approved by a Part-21 design organisation; or
- (c) data contained in the certification specifications referred to in point 21A.90B or 21A.431B of Annex I (Part-21) to Regulation (EU) No 748/2012.

## AMC M.A.304 Data for modifications and repairs

*ED Decision 2015/029/R*

A person or organisation repairing an aircraft or component should assess the damage against published approved repair data and the action to be taken if the damage is beyond the limits or outside the scope of such data. This could involve any one or more of the following options; repair by replacement of damaged parts, requesting technical support from the type certificate holder or from an organisation approved in accordance with Part-21 and finally Agency approval of the particular repair data.

## M.A.305 Aircraft continuing airworthiness record system

Regulation (EU) 2015/1536

- (a) At the completion of any maintenance, the certificate of release to service required by point [M.A.801](#) or point [145.A.50](#) shall be entered in the aircraft continuing airworthiness records. Each entry shall be made as soon as practicable but in no case more than 30 days after the day of the maintenance action.
- (b) The aircraft continuing airworthiness records shall consist of:
1. an aircraft logbook, engine logbook(s) or engine module log cards, propeller logbook(s) and log cards for any service life limited component as appropriate, and,
  2. when required in point [M.A.306](#), the operator's technical log.
- (c) The aircraft type and registration mark, the date, together with total flight time and/or flight cycles and/or landings, as appropriate, shall be entered in the aircraft logbooks.
- (d) The aircraft continuing airworthiness records shall contain the current:
1. status of airworthiness directives and measures mandated by the competent authority in immediate reaction to a safety problem;
  2. status of modifications and repairs;
  3. status of compliance with maintenance programme;
  4. status of service life limited components;
  5. mass and balance report;
  6. list of deferred maintenance.
- (e) In addition to the authorised release document, [EASA Form 1](#) or equivalent, the following information relevant to any component installed (engine, propeller, engine module or service life-limited component) shall be entered in the appropriate engine or propeller logbook, engine module or service life limited component log card:
1. identification of the component; and
  2. the type, serial number and registration, as appropriate, of the aircraft, engine, propeller, engine module or service life-limited component to which the particular component has been fitted, along with the reference to the installation and removal of the component; and
  3. the date together with the component's accumulated total flight time and/or flight cycles and/or landings and/or calendar time, as appropriate; and
  4. the current point (d) information applicable to the component.
- (f) The person responsible for the management of continuing airworthiness tasks pursuant to [Section A, Subpart B](#) of this [Annex \(Part-M\)](#), shall control the records as detailed in this point and present the records to the competent authority upon request.
- (g) All entries made in the aircraft continuing airworthiness records shall be clear and accurate. When it is necessary to correct an entry, the correction shall be made in a manner that clearly shows the original entry.
- (h) An owner or operator shall ensure that a system has been established to keep the following records for the periods specified:

1. all detailed maintenance records in respect of the aircraft and any service life-limited component fitted thereto, until such time as the information contained therein is superseded by new information equivalent in scope and detail but not less than 36 months after the aircraft or component has been released to service; and
2. the total time in service (hours, calendar time, cycles and landings) of the aircraft and all service life-limited components, at least 12 months after the aircraft or component has been permanently withdrawn from service; and
3. the time in service (hours, calendar time, cycles and landings) as appropriate, since last scheduled maintenance of the component subjected to a service life limit, at least until the component scheduled maintenance has been superseded by another scheduled maintenance of equivalent work scope and detail; and
4. the current status of compliance with maintenance programme such that compliance with the approved aircraft maintenance programme can be established, at least until the aircraft or component scheduled maintenance has been superseded by other scheduled maintenance of equivalent work scope and detail; and
5. the current status of airworthiness directives applicable to the aircraft and components, at least 12 months after the aircraft or component has been permanently withdrawn from service; and
6. details of current modifications and repairs to the aircraft, engine(s), propeller(s) and any other component vital to flight safety, at least 12 months after they have been permanently withdrawn from service.

### **AMC M.A.305(d) Aircraft continuing airworthiness record system**

*ED Decision 2015/029/R*

The current status of AD should identify the applicable AD including revision or amendment numbers. Where an AD is generally applicable to the aircraft or component type but is not applicable to the particular aircraft or component, then this should be identified. The AD status includes the date when the AD was accomplished, and where the AD is controlled by flight hours or flight cycles it should include the aircraft or engine or component total flight hours or cycles, as appropriate. For repetitive ADs, only the last application should be recorded in the AD status. The status should also specify which part of a multi-part directive has been accomplished and the method, where a choice is available in the AD.

The status of current modification and repairs means a list of embodied modification and repairs together with the substantiating data supporting compliance with the airworthiness requirements. This can be in the form of a Supplemental Type Certificate (STC), SB, Structural Repair Manual (SRM) or similar approved document.

The substantiating data may include:

- (a) compliance programme; and
- (b) master drawing or drawing list, production drawings, and installation instructions; and
- (c) engineering reports (static strength, fatigue, damage tolerance, fault analysis, etc.); and
- (d) ground and flight test programme and results; and
- (e) mass and balance change data; and
- (f) maintenance and repair manual supplements; and

- (g) maintenance programme changes and instructions for continuing airworthiness; and
- (h) aircraft flight manual supplement.

Some gas turbine engines are assembled from modules and a true total time in service for a total engine is not kept. When owners and operators wish to take advantage of the modular design, then total time in service and maintenance records for each module is to be maintained. The continuing airworthiness records as specified are to be kept with the module and should show compliance with any mandatory requirements pertaining to that module

### **AMC M.A.305(d)(4) and M.A.305(h) Aircraft continuing airworthiness record system**

*ED Decision 2015/029/R*

The term 'service life-limited components' embraces: (i) components subject to a certified life limit after which the components should be retired, and (ii) components subject to a service life limit after which the components should undergo maintenance to restore their serviceability.

The current status of service life-limited aircraft components should indicate:

- (i) for components subject to a certified life limit: the component life limitation, total number of hours, accumulated cycles or calendar time and the number of hours/cycles/time remaining before the required retirement time of the component is reached;
- (ii) for components subject to a service life limit: the component service life limit, the hours, cycles or calendar time since the component has been restored back to their service life and the remaining service (hours, cycles, calendar time) life before the components need to undergo maintenance.

Any action that alters the components' life limit (certified or service) or changes the parameter of the life limit (certified or service) should be recorded.

When the determination of the remaining life requires knowledge of the different types of aircraft/engine on which the component has previously been installed, the status of all service-life limited aircraft components should additionally include a full installation history indicating the number of hours, cycles or calendar time relevant to each installation on these different types of aircraft/engine. The indication of the type of aircraft/engine should be sufficiently detailed with regard to the required determination of remaining life.

Recommendations from the type certificate holder on the procedures to record the remaining life may be considered.

### **AMC M.A.305(h) Aircraft continuing airworthiness record system**

*ED Decision 2015/029/R*

When an owner/operator arranges for the relevant maintenance organisation to retain copies of the continuing airworthiness records on their behalf, the owner/operator will continue to be responsible for the retention of records. If they cease to be the owner/operator of the aircraft, they also remain responsible for transferring the records to any other person who becomes the owner/operator of the aircraft.

Keeping continuing airworthiness records in a form acceptable to the competent authority normally means in paper form or on a computer database or a combination of both methods. Records stored in microfilm or optical disc form are also acceptable. All records should remain legible throughout the required retention period.

Paper systems should use robust material, which can withstand normal handling and filing.

Computer systems should have at least one backup system, which should be updated at least within 24 hours of any maintenance. Each terminal is required to contain programme safeguards against the ability of unauthorised personnel to alter the database.

Continuing airworthiness records should be stored in a safe way with regard to damage, alteration and theft. Computer backup discs, tapes etc., should be stored in a different location from that containing the current working discs, tapes, etc., and in a safe environment. Reconstruction of lost or destroyed records can be done by reference to other records which reflect the time in service, research of records maintained by repair facilities and reference to records maintained by individual mechanics, etc. When these things have been done and the record is still incomplete, the owner/operator may make a statement in the new record describing the loss and establishing the time in service based on the research and the best estimate of time in service. The reconstructed records should be submitted to the competent authority for acceptance. The competent authority may require the performance of additional maintenance if not satisfied with the reconstructed records.

### **AMC M.A.305(h)6 Aircraft continuing airworthiness record system**

*ED Decision 2015/029/R*

For the purpose of this paragraph, a 'component vital to flight safety' means a component that includes certified life limited parts or is subject to airworthiness limitations or a major component such as, undercarriage or flight controls.

### **M.A.306 Aircraft technical log system**

*Regulation (EU) 2015/1536*

- (a) For CAT, commercial specialised operations and commercial ATO operations, in addition to the requirements of [M.A.305](#), the operator shall use a technical log system containing the following information for each aircraft:
1. information about each flight, necessary to ensure continued flight safety, and;
  2. the current aircraft certificate of release to service, and;
  3. the current maintenance statement giving the aircraft maintenance status of what scheduled and out of phase maintenance is next due except that the competent authority may agree to the maintenance statement being kept elsewhere, and;
  4. all outstanding deferred defects rectifications that affect the operation of the aircraft, and;
  5. any necessary guidance instructions on maintenance support arrangements.
- (b) The aircraft technical log system and any subsequent amendment shall be approved by the competent authority.
- (c) An operator shall ensure that the aircraft technical log is retained for 36 months after the date of the last entry.

## AMC M.A.306(a) Aircraft technical log system

ED Decision 2016/011/R

For CAT operations, commercial specialised operations and commercial ATO operations, the aircraft technical log is a system for recording defects and malfunctions during the aircraft operation and for recording details of all maintenance carried out on an aircraft between scheduled base maintenance visits. In addition, it is used for recording flight safety and maintenance information the operating crew need to know.

Cabin or galley defects and malfunctions that affect the safe operation of the aircraft or the safety of its occupants are regarded as forming part of the aircraft log book where recorded by another means.

The aircraft technical log system may range from a simple single section document to a complex system containing many sections but in all cases it should include the information specified for the example used here which happens to use a 5 section document / computer system:

**Section 1** should contain details of the registered name and address of the operator the aircraft type and the complete international registration marks of the aircraft.

**Section 2** should contain details of when the next scheduled maintenance is due, including, if relevant any out of phase component changes due before the next maintenance check. In addition this section should contain the current certificate of release to service (CRS), for the complete aircraft, issued normally at the end of the last maintenance check.

NOTE: The flight crew do not need to receive such details if the next scheduled maintenance is controlled by other means acceptable to the competent authority.

**Section 3** should contain details of all information considered necessary to ensure continued flight safety. Such information includes:

- (i) the aircraft type and registration mark,
- (ii) the date and place of take-off and landing,
- (iii) the times at which the aircraft took off and landed,
- (iv) the running total of flying hours, such that the hours to the next schedule maintenance can be determined. The flight crew does not need to receive such details if the next scheduled maintenance is controlled by other means acceptable to the competent authority.
- (v) details of any failure, defect or malfunction to the aircraft affecting airworthiness or safe operation of the aircraft including emergency systems, and any failure, defect or malfunctions in the cabin or galleys that affect the safe operation of the aircraft or the safety of its occupants that are known to the commander. Provision should be made for the commander to date and sign such entries including, where appropriate, the nil defect state for continuity of the record. Provision should be made for a CRS following rectification of a defect or any deferred defect or maintenance check carried out. Such a certificate appearing on each page of this section should readily identify the defect(s) to which it relates or the particular maintenance check as appropriate.

In the case of maintenance performed by a [Part-145](#) maintenance organisation, it is acceptable to use an alternate abbreviated certificate of release to service consisting of the statement 'Part-145 release to service' instead of the full certification statement specified in [AMC 145.A.50\(b\)](#) paragraph 1. When the alternate abbreviated certificate of release to service is used, the introductory section of the technical log should include an example of the full certification statement from [AMC 145.A.50\(b\)](#) paragraph 1.

- (vi) the quantity of fuel and oil uplifted and the quantity of fuel available in each tank, or combination of tanks, at the beginning and end of each flight; provision to show, in the same units of quantity, both the amount of fuel planned to be uplifted and the amount of fuel actually uplifted; provision for the time when ground de-icing and/or anti-icing was started and the type of fluid applied, including mixture ratio fluid/water and any other information required by the operator's procedures in order to allow the assessment on whether inspections for and/or elimination of de-icing/anti-icing fluid residues that could endanger flight safety are required.
- (vii) the pre-flight inspection signature.

In addition to the above, it may be necessary to record the following supplementary information:

- the time spent in particular engine power ranges where use of such engine power affects the life of the engine or engine module;
- the number of landings where landings affect the life of an aircraft or aircraft component;
- flight cycles or flight pressure cycles where such cycles affect the life of an aircraft or aircraft component.

NOTE 1: Where Section 3 is of the multi-sector 'part removable' type, then such 'part removable' sections should contain all of the foregoing information where appropriate.

NOTE 2: Section 3 should be designed so that one copy of each page may remain on the aircraft and one copy may be retained on the ground until completion of the flight to which it relates.

NOTE 3: Section 3 layout should be divided to show clearly what is required to be completed after flight and what is required to be completed in preparation for the next flight.

**Section 4** should contain details of all deferred defects that affect or may affect the safe operation of the aircraft and should therefore be known to the aircraft commander. Each page of this section should be pre-printed with the operator's name and page serial number and make provision for recording the following:

- (i) a cross reference for each deferred defect such that the original defect can be identified in the particular section 3 sector record page.
- (ii) the original date of occurrence of the defect deferred.
- (iii) brief details of the defect.
- (iv) details of the eventual rectification carried out and its CRS or a clear cross-reference back to the document that contains details of the eventual rectification.

**Section 5** should contain any necessary maintenance support information that the aircraft commander needs to know. Such information would include data on how to contact maintenance if problems arise whilst operating the routes etc.

## AMC M.A.306(b) Aircraft technical log system

*ED Decision 2016/011/R*

The aircraft technical log system can be either a paper or computer system or any combination of both methods acceptable to the competent authority.

In case of a computer system, it should contain programme safeguards against the ability of unauthorised personnel to alter the database.

## M.A.307 Transfer of aircraft continuing airworthiness records

Regulation (EU) No 1321/2014

- (a) The owner or operator shall ensure when an aircraft is permanently transferred from one owner or operator to another that the [M.A.305](#) continuing airworthiness records and, if applicable, [M.A.306](#) operator's technical log are also transferred.
- (b) The owner shall ensure, when he contracts the continuing airworthiness management tasks to a continuing airworthiness management organisation, that the [M.A.305](#) continuing airworthiness records are transferred to the organisation.
- (c) The time periods prescribed for the retention of records shall continue to apply to the new owner, operator or continuing airworthiness management organisation.

### AMC M.A.307(a) Transfer of aircraft continuing airworthiness records

ED Decision 2015/029/R

Where an owner/operator terminates his operation, all retained continuing airworthiness records should be passed on to the new owner/operator or stored.

A 'permanent transfer' does not generally include the dry lease-out of an aircraft when the duration of the lease agreement is less than 6 months. However the competent authority should be satisfied that all continuing airworthiness records necessary for the duration of the lease agreement are transferred to the lessee or made accessible to them.



## SUBPART D — MAINTENANCE STANDARDS

### M.A.401 Maintenance data

*Regulation (EU) No 1321/2014*

- (a) The person or organisation maintaining an aircraft shall have access to and use only applicable current maintenance data in the performance of maintenance including modifications and repairs.
- (b) For the purposes of this Part, applicable maintenance data is:
  - 1. any applicable requirement, procedure, standard or information issued by the competent authority or the Agency,
  - 2. any applicable airworthiness directive,
  - 3. applicable instructions for continuing airworthiness, issued by type certificate holders, supplementary type certificate holders and any other organisation that publishes such data in accordance with Annex I (Part-21) to Regulation (EU) No 748/2012.
  - 4. any applicable data issued in accordance with point [145.A.45\(d\)](#).
- (c) The person or organisation maintaining an aircraft shall ensure that all applicable maintenance data is current and readily available for use when required. The person or organisation shall establish a work card or worksheet system to be used and shall either transcribe accurately the maintenance data onto such work cards or worksheets or make precise reference to the particular maintenance task or tasks contained in such maintenance data.

### AMC M.A.401(b) Maintenance data

*ED Decision 2016/011/R*

- 1. Except as specified in sub-paragraph 2, each person or organisation performing aircraft maintenance should have access to and use:
  - (a) the regulations on continuing airworthiness of aircraft, associated AMC and GM;
  - (b) all applicable maintenance requirements and notices such as competent authority standards and specifications that have not been superseded by a requirement, procedure or directive;
  - (c) all applicable ADs;
  - (d) the appropriate sections of the aircraft maintenance programme, aircraft maintenance manual, repair manual, supplementary structural inspection document, corrosion control document, service bulletins, service sheets modification leaflets, non-destructive inspection manual, parts catalogue, type certificate data sheets as required for the work undertaken and any other specific document issued by the type certificate or supplementary type certificate holder's maintenance data, except that in the case of operator or customer provided maintenance data it is not necessary to hold such provided data when the work order is completed.
- 2. In addition to sub-paragraph 1, for components each organisation performing aircraft maintenance should hold and use the appropriate sections of the vendor maintenance and repair manual, service bulletins and service letters plus any document issued by the type certificate holder as maintenance data on whose product the component may be fitted when

applicable, except that in the case of operator or customer provided maintenance data it is not necessary to hold such provided data when the work order is completed.

## AMC M.A.401(c) Maintenance data

*ED Decision 2015/029/R*

1. Data being made available to personnel maintaining aircraft means that the data should be available in close proximity to the aircraft or component being maintained, for mechanics and certifying staff to perform maintenance.
2. Where computer systems are used, the number of computer terminals should be sufficient in relation to the size of the work programme to enable easy access, unless the computer system can produce paper copies. Where microfilm or microfiche readers/printers are used, a similar requirement is applicable.
3. Maintenance tasks should be transcribed onto the work cards or worksheets and subdivided into clear stages to ensure a record of the accomplishment of the maintenance task. Of particular importance is the need to differentiate and specify, when relevant, disassembly, accomplishment of task, reassembly and testing. In the case of a lengthy maintenance task involving a succession of personnel to complete such task, it may be necessary to use supplementary work cards or worksheets to indicate what was actually accomplished by each individual person. A worksheet or work card system should refer to particular maintenance tasks.
4. The workcard/worksheet system may take the form of, but is not limited to, the following:
  - a format where the mechanic writes the defect and the maintenance action taken together with information of the maintenance data used, including its revision status,
  - an aircraft log book that contains the reports of defects and the actions taken by authorised personnel together with information of the maintenance data used, including its revision status,
  - for maintenance checks, the checklist issued by the manufacturer (i.e., 100H checklist, Revision 5, Items 1 through 95)
5. Maintenance data should be kept up to date by:
  - subscribing to the applicable amendment scheme,
  - checking that all amendments are being received,
  - monitoring the amendment status of all data.

## M.A.402 Performance of maintenance

*Regulation (EU) 2015/1536*

Except for maintenance performed by a maintenance organisation approved in accordance with [Annex II \(Part-145\)](#), any person or organisation performing maintenance shall:

- (a) be qualified for the tasks performed, as required by this part;
- (b) ensure that the area in which maintenance is carried out is well organised and clean in respect of dirt and contamination;
- (c) use the methods, techniques, standards and instructions specified in the [M.A.401](#) maintenance data;

- (d) use the tools, equipment and material specified in the [M.A.401](#) maintenance data. If necessary, tools and equipment shall be controlled and calibrated to an officially recognised standard;
- (e) ensure that maintenance is performed within any environmental limitations specified in the [M.A.401](#) maintenance data;
- (f) ensure that proper facilities are used in case of inclement weather or lengthy maintenance;
- (g) ensure that the risk of multiple errors during maintenance and the risk of errors being repeated in identical maintenance tasks are minimised;
- (h) ensure that an error capturing method is implemented after the performance of any critical maintenance task; and
- (i) carry out a general verification after completion of maintenance to ensure the aircraft or component is clear of all tools, equipment and any extraneous parts or material, and that all access panels removed have been refitted.

### AMC M.A.402(a) Performance of maintenance

*ED Decision 2016/011/R*

1. Maintenance should be performed by persons authorised to issue a certificate of release to service or under the supervision of persons authorised to issue a certificate of release to service. Supervision should be to the extent necessary to ensure that the work is performed properly and the supervisor should be readily available for consultation.
2. The person authorised to issue a certificate of release to service should ensure that:
  - (a) each person working under his/her supervision has received appropriate training or has relevant previous experience and is capable of performing the required task; and
  - (b) each person who performs specialised tasks, such as welding, is qualified in accordance to an officially recognised standard.

### GM M.A.402(a) Performance of maintenance

*ED Decision 2016/011/R*

In the case of limited Pilot-owner maintenance, as specified in [M.A.803](#), any person maintaining an aircraft which they own individually or jointly, provided they hold a valid pilot licence with the appropriate type or class rating, may perform the limited Pilot-owner maintenance tasks in accordance with [Appendix VIII to Annex I \(Part-M\)](#) to Regulation (EU) No 1321/2014.

### AMC M.A.402(c) Performance of maintenance

*ED Decision 2016/011/R*

The general maintenance and inspection standards applied to individual maintenance tasks should meet the recommended standards and practices of the organisation responsible for the type design, which are normally published in maintenance manuals. In the absence of maintenance and inspection standards published by the organisation responsible for the type design, maintenance personnel should refer to the relevant aircraft airworthiness standards and procedures published or used as guidance by the Agency or the competent authority. The maintenance standards used should contain methods, techniques and practices acceptable to the Agency or the competent authority for the maintenance of aircraft and its components.

## AMC M.A.402(d) Performance of maintenance

*ED Decision 2016/011/R*

When performing maintenance, personnel are required to use the tools, equipment and test apparatuses necessary to ensure completion of work in accordance with accepted maintenance and inspection standards. Inspection, service or calibration that is performed on a regular basis should be performed in accordance with the equipment manufacturers' instructions. All tools requiring calibration should be traceable to an acceptable standard.

In this context, 'officially recognised standards' means those standards established or published by an official body, being either a natural or legal person, and which are widely recognised by the air transport sector as constituting good practice.

If the organisation responsible for the type design involved recommends special equipment or test apparatuses, personnel should use the recommended equipment or apparatuses or equivalent equipment accepted by the competent authority.

All work should be performed using materials of such quality and in such a manner that the condition of the aircraft or its components after maintenance is at least equal to its or their original or modified condition (with regard to aerodynamic function, structural strength, resistance to vibration, deterioration and any other qualities affecting airworthiness).

## AMC M.A.402(e) Performance of maintenance

*ED Decision 2016/011/R*

The working environment should be appropriate for the maintenance task being performed such that the effectiveness of personnel is not impaired.

- (a) Temperature should be maintained such that personnel can perform the required tasks without undue discomfort.
- (b) Airborne contamination (e.g. dust, precipitation, paint particles, filings) should be kept to a minimum to ensure aircraft/components surfaces are not contaminated, if this is not possible all susceptible systems should be sealed until acceptable conditions are re-established.
- (c) Lighting should be adequate to ensure each inspection and maintenance task can be performed effectively.
- (d) Noise levels should not be allowed to rise to the level of distraction for inspection staff or if this is not possible inspection staff should be provided with personnel equipment to reduce excessive noise.

## AMC M.A.402(f) Performance of maintenance

*ED Decision 2016/011/R*

Facilities should be provided appropriate for all planned maintenance. This may require aircraft hangars that are both available and large enough for the planned maintenance.

Aircraft component workshops should be large enough to accommodate the components that are planned to be maintained.

Protection from inclement weather means the hangar or component workshop structures should be to a standard that prevents the ingress of rain, hail, ice, snow, wind and dust etc.

## AMC M.A.402(g) Performance of maintenance

ED Decision 2016/011/R

- (a) To minimise the risk of multiple errors and to prevent omissions, the person or organisation performing maintenance should ensure that:
- (1) every maintenance task is signed off only after completion;
  - (2) the grouping of tasks for the purpose of sign-off allows critical steps to be clearly identified; and
  - (3) any work performed by personnel under supervision (i.e. temporary staff, trainees) is checked and signed off by an authorised person.
- (b) To minimise the possibility of an error being repeated in identical tasks that involve removal/installation or assembly/disassembly of several components of the same type fitted to more than one system, whose failure could have an impact on safety, the person or organisation performing maintenance should plan different persons to perform identical tasks in different systems. However, when only one person is available, then this person should perform reinspection of the tasks as described in [AMC2 M.A.402\(h\)](#).

## AMC1 M.A.402(h) Performance of maintenance

ED Decision 2016/011/R

### CRITICAL MAINTENANCE TASKS

The following maintenance tasks should primarily be reviewed to assess their impact on safety:

- (a) tasks that may affect the control of the aircraft, flight path and attitude, such as installation, rigging and adjustments of flight controls;
- (b) aircraft stability control systems (autopilot, fuel transfer);
- (c) tasks that may affect the propulsive force of the aircraft, including installation of aircraft engines, propellers and rotors; and
- (d) overhaul, calibration or rigging of engines, propellers, transmissions and gearboxes.

## AMC2 M.A.402(h) Performance of maintenance

ED Decision 2016/011/R

### INDEPENDENT INSPECTION

- (a) What is an independent inspection

Independent inspection is one possible error-capturing method. It consists of an inspection performed by an 'independent qualified person' of a task carried out by an 'authorised person', taking into account that:

- (1) the 'authorised person' is the person who performs the task or supervises the task and assumes the full responsibility for the completion of the task in accordance with the applicable maintenance data;
- (2) the 'independent qualified person' is the person who performs the independent inspection and attests the satisfactory completion of the task and that no deficiencies have been found. The 'independent qualified person' does not issue a certificate of release to service, therefore he/she is not required to hold certification privileges;

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- (3) the certificate of release to service is issued by the ‘authorised person’ after the independent inspection has been carried out satisfactorily;
  - (4) the work card system should record the identification of each person, the date and the details of the independent inspection, as necessary, before the certificate of release to service is issued.
- (b) Qualifications of personnel performing independent inspections
- (1) When the work is performed by a [Part-M Subpart F](#) organisation, then the organisation should have procedures to demonstrate that the ‘independent qualified person’ has been trained and has gained experience in the specific control systems to be inspected. This training and experience could be demonstrated, for example, by:
    - (i) holding a [Part-66](#) licence in the same subcategory as the licence subcategory or equivalent necessary to release or sign off the critical maintenance task;
    - (ii) holding a [Part-66](#) licence in the same category and specific training in the task to be inspected; or
    - (iii) having received appropriate training and having gained relevant experience in the specific task to be inspected.
  - (2) When the work is performed outside a [Part-M Subpart F](#) organisation:
    - (i) the ‘independent qualified person’ should hold:
      - (A) a [Part-66](#) licence in any category or an equivalent national qualification when national regulations apply; or
      - (B) a valid pilot licence for the aircraft type issued in accordance with European Union regulations or an equivalent national qualification when national regulations apply;
    - (ii) additionally, the ‘authorised person’ should assess the qualifications and experience of the ‘independent qualified person’ taking into account that the ‘independent qualified person’ should have received training and have experience in the particular task. It should not be acceptable that the ‘authorised person’ shows to the ‘independent qualified person’ how to perform the inspection once work has been already finalised.
- (c) How should independent inspection be performed
- Independent inspection should ensure for example correct assembly, locking and sense of operation. When inspecting control systems that have undergone maintenance, the ‘independent qualified person’ should consider the following points independently:
- (1) all those parts of the system that have actually been disconnected or disturbed should be inspected for correct assembly and locking;
  - (2) the system as a whole should be inspected for full and free movement over the complete range;
  - (3) cables should be tensioned correctly with adequate clearance at secondary stops;
  - (4) the operation of the control system as a whole should be observed to ensure that the controls are operating in the correct sense;
  - (5) if different control systems are interconnected so that they affect each other, all the interactions should be checked through the full range of the applicable controls; and

- (6) software that is part of the critical maintenance task should be checked, for example version and compatibility with the aircraft configuration.
- (d) What to do in unforeseen cases when only one person is available
- REINSPECTION:
- (1) Reinspection is subject to the same conditions as the independent inspection is, except that the 'authorised person' performing the maintenance task is also acting as 'independent qualified person' and performs the inspection.
  - (2) For critical maintenance tasks, reinspection should only be used in unforeseen circumstances when only one person is available to carry out the task and perform the independent inspection. The circumstances cannot be considered unforeseen if the person or organisation has not assigned a suitable 'independent qualified person' to that particular task.
  - (3) The certificate of release to service is issued by the 'authorised person' after the reinspection has been performed satisfactorily.
  - (4) The work card system should record the identification of the 'authorised person' and the date and the details of the reinspection, as necessary, before the certificate of release to service is issued.

## GM M.A.402(h) Performance of maintenance

ED Decision 2016/011/R

Several data sources may be used for the identification of critical maintenance tasks, such as:

- information from the design approval holder;
- accident reports;
- investigation and follow-up of incidents;
- occurrence reporting;
- flight data analysis;
- results of audits;
- normal operations monitoring schemes;
- feedback from training; and
- information exchange systems.

## M.A.403 Aircraft defects

Regulation (EU) 2015/1536

- (a) Any aircraft defect that hazards seriously the flight safety shall be rectified before further flight.
- (b) Only the authorised certifying staff, according to points [M.A.801\(b\)1](#), [M.A.801\(b\)2](#), [M.A.801\(c\)](#), [M.A.801\(d\)](#) or [Annex II \(Part-145\)](#) can decide, using [M.A.401](#) maintenance data, whether an aircraft defect hazards seriously the flight safety and therefore decide when and which rectification action shall be taken before further flight and which defect rectification can be deferred. However, this does not apply when the MEL is used by the pilot or by the authorised certifying staff.

- (c) Any aircraft defect that would not hazard seriously the flight safety shall be rectified as soon as practicable, after the date the aircraft defect was first identified and within any limits specified in the maintenance data or the MEL.
- (d) Any defect not rectified before flight shall be recorded in the [M.A.305](#) aircraft maintenance record system or [M.A.306](#) operator's technical log system as applicable.

### AMC M.A.403(b) Aircraft defects

*ED Decision 2015/029/R*

An assessment of both the cause and any potentially hazardous effect of any defect or combination of defects that could affect flight safety should be made in order to initiate any necessary further investigation and analysis necessary to identify the root cause of the defect.

### AMC M.A.403(d) Aircraft defects

*ED Decision 2015/029/R*

All deferred defects should be made known to the pilot/flight crew, whenever possible, prior to their arrival at the aircraft.

Deferred defects should be transferred on to worksheets at the next appropriate maintenance check, and any deferred defect which is not rectified during the maintenance check, should be re-entered on to a new deferred defect record sheet. The original date of the defect should be retained.

The necessary components or parts needed for the rectification of defects should be made available or ordered on a priority basis, and fitted at the earliest opportunity.



## SUBPART E — COMPONENTS

### M.A.501 Installation

*Regulation (EU) No 1321/2014*

- (a) No component may be fitted unless it is in a satisfactory condition, has been appropriately released to service on an [EASA Form 1](#) or equivalent and is marked in accordance with Annex I (Part-21), Subpart Q, unless otherwise specified in Annex I (Part-21) to Regulation (EU) No 748/2012, [Annex II \(Part-145\)](#) or [Subpart F, Section A](#) of Annex I to this Regulation.
- (b) Prior to installation of a component on an aircraft the person or approved maintenance organisation shall ensure that the particular component is eligible to be fitted when different modification and/or airworthiness directive configurations may be applicable.
- (c) Standard parts shall only be fitted to an aircraft or a component when the maintenance data specifies the particular standard part. Standard parts shall only be fitted when accompanied by evidence of conformity traceable to the applicable standard.
- (d) Material being either raw material or consumable material shall only be used on an aircraft or a component when the aircraft or component manufacturer states so in relevant maintenance data or as specified in [Annex II \(Part-145\)](#). Such material shall only be used when the material meets the required specification and has appropriate traceability. All material must be accompanied by documentation clearly relating to the particular material and containing a conformity to specification statement plus both the manufacturing and supplier source.

### AMC M.A.501(a) Installation

*ED Decision 2015/029/R*

1. To ensure a component is in a satisfactory condition, the person referred to under [M.A.801](#) or the approved maintenance organisation should perform checks and verifications.
2. Performance of above checks and verifications should take place before the component is installed on the aircraft.
3. The following list, though not exhaustive, contains typical checks to be performed:
  - (a) verify the general condition of components and their packaging in relation to damages that could affect the integrity of the components;
  - (b) verify that the shelf life of the component has not expired;
  - (c) verify that items are received in the appropriate package in respect of the type of component: e.g. correct ATA 300 or electrostatic sensitive devices packaging, when necessary;
  - (d) verify that component has all plugs and caps appropriately installed to prevent damage or internal contamination. Tape should not be used to cover electrical connections or fluid fittings/openings because adhesive residues can insulate electrical connections and contaminate hydraulic or fuel units.
4. The purpose of the [EASA Form 1](#) (see also [Part-M Appendix II](#)) is to release components after manufacture and to release maintenance work carried out on such components under the approval of a competent authority and to allow components removed from one aircraft/component to be fitted to another aircraft/ component.
5. For the purpose of [Part-M](#), a document equivalent to an EASA Form 1 may be:

- (a) a release document issued by an organisation under the terms of a bilateral agreement signed by the European Union;
  - (b) a release document issued by an organisation approved under the terms of a JAA maintenance bilateral agreement until superseded by the corresponding agreement signed by the European Union;
  - (c) a JAA Form One issued prior to 28 November 2004 by a JAR 145 organisation approved by a JAA Full Member State;
  - (d) in the case of new aircraft components that were released from manufacturing prior to the Part-21 compliance date, the component should be accompanied by a JAA Form One issued by a JAR 21 organisation approved by a JAA Full Member Authority and within the JAA mutual recognition system;
  - (e) a JAA Form One issued prior to 28 September 2005 by a production organisation approved by a competent authority in accordance with its national regulations;
  - (f) a JAA Form One issued prior to 28 September 2008 by a maintenance organisation approved by a competent authority in accordance with its national regulations;
  - (g) a release document acceptable to a competent authority according to the provisions of a bilateral agreement between the competent authority and a third country until superseded by the corresponding agreement signed by the European Union. This provision is valid provided the above agreements between the competent authority and a third country are notified to the Commission and to the other competent authorities in accordance with Article 12 of Regulation (EC) No 216/2008.
  - (h) a release document issued under the conditions described in [Article 4](#), point 4 of Commission Regulation (EU) No 1321/2014;
  - (i) documents referred in paragraphs (f) and (g) are not acceptable in the [Part-145](#) maintenance environment.
6. Any item in storage without an EASA Form 1 or equivalent cannot be installed on aircraft registered in a Member State unless an EASA Form 1 is issued for such item by an appropriately approved maintenance organisation in accordance with [AMC M.A.613\(a\)](#).

## AMC M.A.501(b) Installation

*ED Decision 2015/029/R*

1. The [EASA Form 1](#) identifies the airworthiness status of an aircraft component. Block 12 'Remarks' on the EASA Form 1 in some cases contains vital airworthiness related information (see also [Part-M Appendix II](#)) which may need appropriate and necessary actions.
2. The fitment of replacement components should only take place when the person referred to in [M.A.801](#) or the [M.A. Subpart F](#) or [Part-145](#) maintenance organisation is satisfied that such components meet required standards in respect of manufacture or maintenance, as appropriate.
3. The person referred to under [M.A.801](#) or the [M.A. Subpart F](#) or [Part-145](#) approved maintenance organisation should be satisfied that the component in question meets the approved data/standard, such as the required design and modification standards. This may be accomplished by reference to the (S)TC holder or manufacturer's parts catalogue or other approved data (i.e. Service Bulletin). Care should also be taken in ensuring compliance with applicable AD and the status of any service life-limited parts fitted to the aircraft component.

## AMC M.A.501(c) Installation

*ED Decision 2015/029/R*

1. Standard parts are:
  - (a) parts manufactured in complete compliance with an established industry, Agency, competent authority or other Government specification which includes design, manufacturing, test and acceptance criteria, and uniform identification requirements. The specification should include all information necessary to produce and verify conformity of the part. It should be published so that any party may manufacture the part. Examples of specifications are National Aerospace Standards (NAS), Army-Navy Aeronautical Standard (AN), Society of Automotive Engineers (SAE), SAE Sematec, Joint Electron Device Engineering Council, Joint Electron Tube Engineering Council, and American National Standards Institute (ANSI), EN Specifications etc...
  - (b) For sailplanes and powered sailplanes, non-required instruments and/or equipment certified under the provision of CS 22.1301(b), if those instruments or equipment, when installed, functioning, functioning improperly or not functioning at all, do not in itself, or by its effect upon the sailplane and its operation, constitute a safety hazard.  
  
'Required' in the term 'non-required' as used above means required by the applicable airworthiness code (CS 22.1303, 22.1305 and 22.1307) or required by the relevant operating regulations and the applicable Rules of the Air or as required by Air Traffic Management (e.g. a transponder in certain controlled airspace). Examples of equipment which can be considered standard parts are electrical variometers, bank/slip indicators ball type, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph / turnpoint camera, bug-wipers and anti-collision systems. Equipment which must be approved in accordance to the airworthiness code shall comply with the applicable ETSO or equivalent and is not considered a standard part (e.g. oxygen equipment).
2. To designate a part as a standard part the TC holder may issue a standard parts manual accepted by the competent authority of original TC holder or may make reference in the parts catalogue to a national/international specification (such as a standard diode/capacitor etc.) not being an aviation only specification for the particular part.
3. Documentation accompanying standard parts should clearly relate to the particular parts and contain a conformity statement plus both the manufacturing and supplier source. Some material is subject to special conditions such as storage condition or life limitation etc. and this should be included on the documentation and / or material packaging.
4. An [EASA Form 1](#) or equivalent is not normally issued and therefore none should be expected.

## AMC M.A.501(d) Installation

*ED Decision 2015/029/R*

1. Consumable material is any material which is only used once, such as lubricants, cements, compounds, paints, chemicals dyes and sealants etc.
2. Raw material is any material that requires further work to make it into a component part of the aircraft such as metals, plastics, wood, fabric etc.
3. Material both raw and consumable should only be accepted when satisfied that it is to the required specification. To be satisfied, the material and or its packaging should be marked with the specification and where appropriate the batch number.

4. Documentation accompanying all material should clearly relate to the particular material and contain a conformity statement plus both the manufacturing and supplier source. Some material is subject to special conditions such as storage condition or life limitation etc. and this should be included on the documentation and/or material packaging.
5. [EASA Form 1](#) or equivalent should not be issued for such material and therefore none should be expected. The material specification is normally identified in the (S)TC holder's data except in the case where the Agency or the competent authority has agreed otherwise.
6. Items purchased in batches (fasteners etc.) should be supplied in a package. The packaging should state the applicable specification/standard, P/N, batch number and the quantity of the items. The documentation accompanying the material should contain the applicable specification/standard, P/N, batch number, supplied quantity, and the manufacturing sources. If the material is acquired from different batches, acceptance documentation for each batch should be supplied.

## M.A.502 Component maintenance

Regulation (EU) 2015/1536

- (a) Except for components referred to in point 21A.307(c) of Annex I (Part-21) to Regulation (EU) No 748/2012, the maintenance of components shall be performed by maintenance organisations appropriately approved in accordance with [Section A, Subpart F](#) of this [Annex \(Part-M\)](#) or with [Annex II \(Part-145\)](#).
- (b) By derogation from point (a), maintenance of a component in accordance with aircraft maintenance data or, if agreed by the competent authority, in accordance with component maintenance data, may be performed by an A rated organisation approved in accordance with [Section A, Subpart F](#) of this [Annex \(Part-M\)](#) or with [Annex II \(Part-145\)](#) as well as by certifying staff referred to in point [M.A.801\(b\)2](#) only whilst such components are fitted to the aircraft. Nevertheless, such organisation or certifying staff may temporarily remove this component for maintenance, in order to improve access to the component, except when such removal generates the need for additional maintenance not eligible for the provisions of this point. Component maintenance performed in accordance with this point is not eligible for the issuance of an [EASA Form 1](#) and shall be subject to the aircraft release requirements provided for in point [M.A.801](#).
- (c) By derogation from point (a), maintenance of an engine/Auxiliary Power Unit (APU) component in accordance with engine/APU maintenance data or, if agreed by the competent authority, in accordance with component maintenance data, may be performed by a B rated organisation approved in accordance with [Section A, Subpart F](#) of this [Annex \(Part-M\)](#) or with [Annex II \(Part-145\)](#) only whilst such components are fitted to the engine/APU. Nevertheless, such B rated organisation may temporarily remove this component for maintenance, in order to improve access to the component, except when such removal generates the need for additional maintenance not eligible for the provisions of this point.
- (d) By derogation from point (a) and point [M.A.801\(b\)2](#), maintenance of a component while installed or temporarily removed from an ELA1 aircraft used by other than licenced air carriers in accordance with Regulation (EC) No 1008/2008, and performed in accordance with component maintenance data, may be performed by certifying staff referred to in point [M.A.801\(b\)2](#), except for:
  1. overhaul of components other than engines and propellers, and;
  2. overhaul of engines and propellers for aircraft other than CS-VLA, CS-22 and LSA.

Component maintenance performed in accordance with point (d) is not eligible for the issuance of an [EASA Form 1](#) and shall be subject to the aircraft release requirements provided for in point [M.A.801](#).

- (e) Maintenance of components referred to in 21A.307(c) of Annex I (Part-21) to Regulation (EU) No 748/2012 shall be performed by an A-rated organisation approved in accordance with [Section A, Subpart F](#) of this [Annex \(Part-M\)](#) or [Part-145](#), by certifying staff referred to in point [M.A.801\(b\)2](#) or by the pilot-owner referred to in point [M.A.801\(b\)3](#) while such a component is fitted to the aircraft or temporarily removed to improve access. Component maintenance performed in accordance with this point is not eligible for the issuance of an EASA Form 1 and shall be subject to the aircraft release requirements provided for in point [M.A.801](#).

## AMC M.A.502 Component maintenance

ED Decision 2015/029/R

Component removal from and installation on an aircraft is considered to be aircraft maintenance and not component maintenance. As a consequence, [M.A.502](#) requirements do not apply to this case.

## AMC M.A.502(b) and (c) Component maintenance

ED Decision 2015/029/R

[M.A.502\(b\) and \(c\)](#) allow the performance of certain component maintenance, in accordance with component maintenance data, to maintenance organisations not holding the corresponding B/C rating and to independent certifying staff, subject to the agreement of:

- The authority responsible for the oversight of the maintenance organisation (refer to [M.1](#), paragraph 2 for [M.A. Subpart F](#) maintenance organisations, or to 145.1 for [Part-145](#) maintenance organisations), or,
- The authority of the Member State of registry in the case of maintenance performed by independent certifying staff.

This should only be permitted by the competent authority in the case of simple component maintenance, where the competent authority is satisfied that the certifying staff are appropriately qualified and the proper tooling and facilities are available. It is important to note that for more complex component maintenance, special qualifications may be required and it is not enough with holding a [Part-66](#) aircraft maintenance licence.

## M.A.503 Service life limited components

Regulation (EU) No 1321/2014

- (a) Installed service life limited components shall not exceed the approved service life limit as specified in the approved maintenance programme and airworthiness directives, except as provided for in point [M.A.504\(c\)](#).
- (b) The approved service life is expressed in calendar time, flight hours, landings or cycles, as appropriate.
- (c) At the end the approved service life, the component must be removed from the aircraft for maintenance, or for disposal in the case of components with a certified life limit.

## M.A.504 Control of unserviceable components

Regulation (EU) 2015/1536

- (a) A component shall be considered unserviceable in any one of the following circumstances:
1. expiry of the service life limit as defined in the maintenance program;
  2. non-compliance with the applicable airworthiness directives and other continued airworthiness requirement mandated by the Agency;
  3. absence of the necessary information to determine the airworthiness status or eligibility for installation;
  4. evidence of defects or malfunctions;
  5. involvement in an incident or accident likely to affect its serviceability.
- (b) Unserviceable components shall be identified and stored in a secure location under the control of an approved maintenance organisation until a decision is made on the future status of such component. Nevertheless, for aircraft not used by licenced air carriers in accordance with Regulation (EC) No 1008/2008 and other than complex motor-powered aircraft, the person or organisation that declared the component unserviceable may transfer its custody, after identifying it as unserviceable, to the aircraft owner provided that such transfer is reflected in the aircraft logbook or engine logbook or component logbook.
- (c) Components which have reached their certified life limit or contain a non-repairable defect shall be classified as unsalvageable and shall not be permitted to re-enter the component supply system, unless certified life limits have been extended or a repair solution has been approved according to point [M.A.304](#).
- (d) Any person or organisation accountable under this [Annex \(Part-M\)](#) shall, in the case of a point (c) unsalvageable components:
1. retain such component in the point (b) location, or;
  2. arrange for the component to be mutilated in a manner that ensures that it is beyond economic salvage or repair before relinquishing responsibility for such component.
- (e) Notwithstanding point (d) a person or organisation accountable under this [Annex \(Part-M\)](#) may transfer responsibility of components classified as unsalvageable to an organisation for training or research without mutilation.

### AMC M.A.504(a) Control of unserviceable components

ED Decision 2015/029/R

A component continues to be unserviceable until a decision is taken pursuant to [AMC M.A.605\(c\)6](#).

### AMC M.A.504(b) Control of unserviceable components

ED Decision 2015/029/R

1. [M.A.801\(b\)\(2\)](#) and [M.A.801\(c\)](#) certifying staff or the [Section A Subpart F/Part-145](#) approved maintenance organisation performing maintenance should ensure proper identification of any unserviceable components.
2. The unserviceable status of the component should be clearly declared on a tag together with the component identification data and any information useful to define actions necessary to be taken. Such information should state, as applicable, in service times, maintenance status,



preservation status, failures, defects or malfunctions reported or detected exposure to adverse environmental conditions, if the component has been involved in or affected by an accident/incident. Means should be provided to prevent unwanted separation of this tag from the component.

3. [M.A.801\(b\)\(2\)](#) and [M.A.801\(c\)](#) certifying staff performing aircraft maintenance should send, with the agreement of the aircraft owner/lessee, any unserviceable component to a maintenance organisation approved under [Section A Subpart F](#) or [Part-145](#) for controlled storage, or transfer the custody of the component to the owner itself under the conditions specified in [M.A.504\(b\)](#).

‘A secure location under the control of an approved maintenance organisation’ means a secure location for which security is the responsibility of the approved maintenance organisation. This may include facilities established by the approved maintenance organisation at locations different from the main maintenance facilities. These locations should be identified in the relevant procedures of the approved maintenance organisation.

## AMC M.A.504(c) Control of unserviceable components – unsalvageable components

ED Decision 2015/029/R

1. The following types of components should typically be classified as unsalvageable:
  - (a) components with non-repairable defects, whether visible or not to the naked eye;
  - (b) components that do not meet design specifications, and cannot be brought into conformity with such specifications;
  - (c) components subjected to unacceptable modification or rework that is irreversible;
  - (d) certified life-limited parts that have reached or exceeded their certified life limits, or have missing or incomplete records;
  - (e) components that cannot be returned to airworthy condition due to exposure to extreme forces, heat or adverse environment;
  - (f) components for which conformity with an applicable airworthiness directive cannot be accomplished;
  - (g) components for which continuing airworthiness records and/or traceability to the manufacturer cannot be retrieved.
2. It is common practice for possessors of aircraft components to dispose of unsalvageable components by selling, discarding, or transferring such items. In some instances, these items have reappeared for sale and in the active parts inventories of the aviation community. Misrepresentation of the status of components and the practice of making such items appear serviceable has resulted in the use of unsalvageable nonconforming components. Therefore organisations disposing of unsalvageable aircraft components should consider the possibility of such components later being misrepresented and sold as serviceable components. Caution should be exercised to ensure that unsalvageable components are disposed of in a manner that does not allow them to be returned to service.

## AMC M.A.504(d)2 Control of unserviceable components

*ED Decision 2015/029/R*

1. Mutilation should be accomplished in such a manner that the components become permanently unusable for their original intended use. Mutilated components should not be able to be reworked or camouflaged to provide the appearance of being serviceable, such as by re-plating, shortening and re-threading long bolts, welding, straightening, machining, cleaning, polishing, or repainting.
2. Mutilation may be accomplished by one or a combination of the following procedures:
  - (a) grinding,
  - (b) burning,
  - (c) removal of a major lug or other integral feature,
  - (d) permanent distortion of parts,
  - (e) cutting a hole with cutting torch or saw,
  - (f) melting,
  - (g) sawing into many small pieces,
  - (h) any other method accepted by the competent authority or the Agency on a case by case basis.
3. The following procedures are examples of mutilation that are often less successful because they may not be consistently effective:
  - (a) stamping or vibro-etching,
  - (b) spraying with paint,
  - (c) small distortions, incisions or hammer marks,
  - (d) identification by tag or markings,
  - (e) drilling small holes,
  - (f) sawing in two pieces only.
4. Since manufacturers producing approved aircraft components should maintain records of serial numbers for 'retired' certified life-limited or other critical components, the organisation that mutilates a component should provide the original manufacturer with the data plate and/or serial number and final disposition of the component.

## AMC M.A.504(e) Control of unserviceable components

*ED Decision 2015/029/R*

A maintenance organisation may choose, in agreement with the component's owner, to release an unsalvageable component for legitimate non-flight uses, such as for training and education, research and development. In such instances, mutilation may not be appropriate. The following methods should be used to prevent the component re-entering the aviation supply system:

- (a) permanently marking or stamping the component, as 'NOT SERVICEABLE'. (Ink stamping is not an acceptable method);
- (b) removing original part number identification;
- (c) removing data plate identification;



- (d) maintaining a tracking or accountability system, by serial number or other individualised data, to record transferred unsalvageable aircraft component;
- (e) including written procedures concerning disposal of such components in any agreement or contract transferring such components.

NOTE: Unsalvageable components should not be released to any person or organisation that is known to return unsalvageable components back into the aviation supply system, due to the potential safety threat.

## SUBPART F — MAINTENANCE ORGANISATION

### M.A.601 Scope

Regulation (EU) 2015/1536

This Subpart establishes the requirements to be met by an organisation to qualify for the issue or continuation of an approval for the maintenance of aircraft other than complex motor powered aircraft and components to be installed therein not used by licenced air carriers in accordance with Regulation (EC) No 1008/2008.

### M.A.602 Application

Regulation (EU) No 1321/2014

An application for issue or change of a maintenance organisation approval shall be made on a form and in a manner established by the competent authority.

### AMC M.A.602 Application

ED Decision 2015/029/R

An application should be made on an [EASA Form 2](#) ([Appendix IX to AMC M.A.602 and AMC M.A.702](#)) or equivalent acceptable to the competent authority.

The [EASA Form 2](#) is valid for the application for [M.A. Subpart F, Part-145](#) and [M.A. Subpart G](#) organisations. Organisations applying for several approvals may do so by using a single [EASA Form 2](#).

### M.A.603 Extent of approval

Regulation (EU) No 1321/2014

- (a) An organisation involved in activities subject to this Subpart shall not exercise its activities unless approved by the competent authority. [Appendix V to Annex I \(Part-M\)](#) provides the template certificate for this approval.
- (b) The maintenance organisation's manual referred to in point [M.A.604](#) shall specify the scope of work deemed to constitute approval. [Appendix IV to Annex I \(Part-M\)](#) defines all classes and ratings possible under [Subpart F](#) of this [Annex \(Part-M\)](#).
- (c) An approved maintenance organisation may fabricate, in conformity with maintenance data, a restricted range of parts for the use in the course of undergoing work within its own facilities, as identified in the maintenance organisation manual.

## AMC M.A.603(a) Extent of Approval

ED Decision 2015/029/R

The following table identifies the ATA Specification 2200 chapter for the category C component rating. If the maintenance manual (or equivalent document) does not follow the ATA Chapters, the corresponding subjects still apply to the applicable C rating.

CLASS	RATING	ATA CHAPTERS
COMPONENTS OTHER THAN COMPLETE ENGINES OR APUs	C1 Air Cond & Press	21
	C2 Auto Flight	22
	C3 Comms and Nav	23 - 34
	C4 Doors - Hatches	52
	C5 Electrical Power & Lights	24 – 33 – 85
	C6 Equipment	25 - 38 - 44 - 45 - 50
	C7 Engine – APU	49 - 71 - 72 - 73 - 74 - 75 - 76 - 77 - 78 - 79 - 80 - 81 - 82 - 83
	C8 Flight Controls	27 - 55 - 57.40 - 57.50 - 57.60 - 57.70
	C9 Fuel	28 - 47
	C10 Helicopters - Rotors	62 - 64 - 66 - 67
	C11 Helicopter - Trans	63 - 65
	C12 Hydraulic Power	29
	C13 Indicating/Recording Systems	31 - 42 - 46
	C14 Landing Gear	32
	C15 Oxygen	35
	C16 Propellers	61
	C17 Pneumatic & Vacuum	36 - 37
	C18 Protection ice/rain/fire	26 - 30
	C19 Windows	56
	C20 Structural	53 - 54 - 57.10 - 57.20 - 57.30
	C21 Water Ballast	41
	C22 Propulsion Augmentation	84

## AMC M.A.603(c) Extent of approval

ED Decision 2015/029/R

1. The agreement by the competent authority for the fabrication of parts by the approved maintenance organisation should be formalised through the approval of a detailed procedure in the maintenance organisation manual. This AMC contains principles and conditions to be taken into account for the preparation of an acceptable procedure.
2. Fabrication, inspection, assembly and test should be clearly within the technical and procedural capability of the approved maintenance organisation.
3. The approved data necessary to fabricate the part are those approved either by the Agency, the TC holder, Part-21 design organisation approval holder, or STC holder.
4. Items fabricated by an approved maintenance organisation may only be used by that organisation in the course of overhaul, maintenance, modifications, or repair of aircraft or components undergoing work within its own facility. The permission to fabricate does not constitute approval for manufacture, or to supply externally and the parts do not qualify for

certification on [EASA Form 1](#). This also applies to the bulk transfer or surplus inventory, in that locally fabricated parts are physically segregated and excluded from any delivery certification.

5. Fabrication of parts, modification kits etc. for onward supply and/or sale may not be conducted under a [M.A. Subpart F](#) approval.
6. The data specified in paragraph 3 may include repair procedures involving the fabrication of parts. Where the data on such parts is sufficient to facilitate fabrication, the parts may be fabricated by an approved maintenance organisation. Care should be taken to ensure that the data include details of part numbering, dimensions, materials, processes, and any special manufacturing techniques, special raw material specification or/and incoming inspection requirement and that the approved organisation has the necessary capability. That capability should be defined by way of maintenance organisation manual content. Where special processes or inspection procedures are defined in the approved data which are not available at the approved maintenance organisation, that organisation cannot fabricate the part unless the TC/STC holder gives an approved alternative.
7. Examples of fabrication under the scope of an [M.A. Subpart F](#) approval can include but are not limited to the following:
  - (a) fabrication of bushes, sleeves and shims,
  - (b) fabrication of secondary structural elements and skin panels,
  - (c) fabrication of control cables,
  - (d) fabrication of flexible and rigid pipes,
  - (e) fabrication of electrical cable looms and assemblies,
  - (f) formed or machined sheet metal panels for repairs.

Note: It is not acceptable to fabricate any item to pattern unless an engineering drawing of the item is produced which includes any necessary fabrication processes and which is accepted to the competent authority.

8. Where a TC holder or an approved production organisation is prepared to make available complete data which is not referred to in aircraft manuals or service bulletins but provides manufacturing drawings for items specified in parts lists, the fabrication of these items is not considered to be within the scope of an [M.A. Subpart F](#) approval unless agreed otherwise by the competent authority in accordance with a procedure specified in the maintenance organisation manual.
9. Inspection and Identification.

Any locally fabricated part should be subject to an inspection stage before, separately, and preferably independently from, any inspection of its installation. The inspection should establish full compliance with the relevant manufacturing data, and the part should be unambiguously identified as fit for use by stating conformity to the approved data. Adequate records should be maintained of all such fabrication processes including heat treatment and the final inspections. All parts, excepting those with inadequate space, should carry a part number which clearly relates it to the manufacturing/inspection data. Additional to the part number the approved maintenance organisation's identity should be marked on the part for traceability purposes.

## M.A.604 Maintenance organisation manual

Regulation (EU) 2015/1088

- (a) The maintenance organisation shall provide a manual containing at least the following information:
1. a statement signed by the accountable manager to confirm that the organisation will continuously work in accordance with [Annex I \(Part-M\)](#) and the manual at all times, and;
  2. the organisation's scope of work, and;
  3. the title(s) and name(s) of person(s) referred to in point [M.A.606\(b\)](#), and;
  4. an organisation chart showing associated chains of responsibility between the person(s) referred to in point [M.A.606\(b\)](#), and;
  5. a list of certifying staff and, if applicable, airworthiness review staff and staff responsible for the development and processing of the maintenance programme, with their scope of approval, and;
  6. a list of locations where maintenance is carried out, together with a general description of the facilities, and;
  7. procedures specifying how the maintenance organisation ensures compliance with this Part, and;
  8. the maintenance organisation manual amendment procedure(s).
- (b) The maintenance organisation manual and its amendments shall be approved by the competent authority.
- (c) Notwithstanding point (b) minor amendments to the manual may be approved through a procedure (hereinafter called indirect approval).

## AMC M.A.604 Maintenance organisation manual

ED Decision 2015/029/R

1. Appendix IV to this AMC provides an outline of the format of an acceptable maintenance organisation manual for a small organisation with less than 10 maintenance staff.
2. The maintenance organisation exposition as specified in [Part-145](#) provides an outline of the format of an acceptable maintenance organisation manual for larger organisations with more than 10 maintenance staff, dependent upon the complexity of the organisation.

## M.A.605 Facilities

Regulation (EU) No 1321/2014

The organisation shall ensure that:

- (a) Facilities are provided for all planned work, specialised workshops and bays are segregated as appropriate, to ensure protection from contamination and the environment.
- (b) Office accommodation is provided for the management of all planned work including in particular, the completion of maintenance records.
- (c) Secure storage facilities are provided for components, equipment, tools and material. Storage conditions shall ensure segregation of unserviceable components and material from all other

components, material, equipment and tools. Storage conditions shall be in accordance with the manufacturers' instructions and access shall be restricted to authorised personnel.

## AMC M.A.605(a) Facilities

ED Decision 2015/029/R

1. Where a hangar is not owned by the [M.A. Subpart F](#) organisation, it may be necessary to establish proof of tenancy. In addition, sufficiency of hangar space to carry out planned maintenance should be demonstrated by the preparation of a projected aircraft hangar visit plan relative to the aircraft maintenance programme. The aircraft hangar visit plan should be updated on a regular basis.

For balloons and airships a hangar may not be required where maintenance of the envelope and bottom end equipment can more appropriately be performed outside, providing all necessary maintenance can be accomplished in accordance with [M.A.402](#). For complex repairs or component maintenance requiring an [EASA Form 1](#), suitable approved workshops should be provided. The facilities and environmental conditions required for inspection and maintenance should be defined in the Maintenance Organisation Manual.

Depending on the scope of work of the maintenance organisation, it may not be necessary to have a hangar available. For example, an organisation maintaining ELA2 aircraft (when not performing major repairs) may perform the work in alternative suitable facilities (and possibly at remote locations) as agreed by the competent authority.

2. Protection from the weather elements relates to the normal prevailing local weather elements that are expected throughout any twelve-month period. Aircraft hangar and aircraft component workshop structures should be to a standard that prevents the ingress of rain, hail, ice, snow, wind and dust etc. Aircraft hangar and aircraft component workshop floors should be sealed to minimise dust generation.
3. Aircraft maintenance staff should be provided with an area where they may study maintenance instructions and complete continuing airworthiness records in a proper manner.
4. **Special case for ELA2 aircraft**

For ELA2 aircraft, it is acceptable not to have access to a hangar or dedicated workshops. Depending on the scope of work, other facilities are acceptable as long as protection is ensured from inclement weather and contamination. This may include, for example, working in the field or in non-aviation premises (closed or not).

These facilities do not need to be individually approved by the competent authority as long as the maintenance organisation manual describes for each type of facility the scope of work, the tooling and equipment available, and the permitted environmental conditions (weather, contamination).

The organisation should include, as part of the periodic internal organisational review, a sampling of the compliance with these conditions during certain maintenance events.

## AMC M.A.605(b) Facilities

ED Decision 2015/029/R

It is acceptable to combine any or all of the office accommodation requirements into one office subject to the staff having sufficient room to carry out assigned tasks.

## AMC M.A.605(c) Facilities

*ED Decision 2015/029/R*

1. Storage facilities for serviceable aircraft components should be clean, well-ventilated and maintained at an even dry temperature to minimise the effects of condensation. Manufacturer's storage recommendations should be followed for those aircraft components identified in such published recommendations.
2. Adequate storage racks should be provided and strong enough to hold aircraft components and provide sufficient support for large aircraft components such that the component is not damaged during storage.
3. All aircraft components, wherever practicable, should remain packaged in their protective material to minimise damage and corrosion during storage. A shelf life control system should be utilised and identity tags used to identify components.
4. Segregation means storing unserviceable components in a separate secured location from serviceable components.
5. Segregation and management of any unserviceable component should be ensured according to the pertinent procedure approved to that organisation.
6. Procedures should be defined by the organisation describing the decision process for the status of unserviceable components. This procedure should identify at least the following:
  - role and responsibilities of the persons managing the decision process;
  - description of the decision process to choose between maintaining, storing or mutilating a component;
  - traceability of decision.
7. Once unserviceable components or materials have been identified as unsalvageable in accordance with [M.A.504\(c\)](#), the organisation should establish secure areas in which to segregate such items and to prevent unauthorised access. Unsalvageable components should be managed through a procedure to ensure that these components receive the appropriate final disposal according to [M.A.504\(d\) or \(e\)](#). The person responsible for the implementation of this procedure should be identified.

## M.A.606 Personnel requirements

*Regulation (EU) No 1321/2014*

- (a) The organisation shall appoint an accountable manager, who has corporate authority for ensuring that all maintenance required by the customer can be financed and carried out to the standard required by this Part.

*Regulation (EU) No 1321/2014*
- (b) A person or group of persons shall be nominated with the responsibility of ensuring that the organisation is always in compliance with this Subpart. Such person(s) shall be ultimately responsible to the accountable manager.

*Regulation (EU) No 1321/2014*
- (c) All point (b) persons shall be able to show relevant knowledge, background and appropriate experience related to aircraft and/or component maintenance.

*Regulation (EU) No 1321/2014*

- (d) The organisation shall have appropriate staff for the normal expected contracted work. The use of temporarily sub-contracted staff is permitted in the case of higher than normally expected contracted work and only for personnel not issuing a certificate of release to service.

*Regulation (EU) 2015/1088*

- (e) The qualification of all personnel involved in maintenance, **airworthiness reviews and development of maintenance programmes** shall be demonstrated and recorded.

*Regulation (EU) No 1321/2014*

- (f) Personnel who carry out specialised tasks such as welding, non-destructive testing/inspection other than colour contrast shall be qualified in accordance with an officially recognised standard.

*Regulation (EU) 2015/1536*

- (g) The maintenance organisation shall have sufficient certifying staff to issue [M.A.612](#) and [M.A.613](#) certificates of release to service for aircraft and components. They shall comply with the requirements of [Article 5](#) of Regulation (EU) No 1321/2014.

*Regulation (EU) No 1321/2014*

- (h) By derogation from point (g), the organisation may use certifying staff qualified in accordance with the following provisions when providing maintenance support to operators involved in commercial operations, subject to appropriate procedures to be approved as part of the organisation's manual:

1. For a repetitive pre-flight airworthiness directive which specifically states that the flight crew may carry out such airworthiness directive, the organisation may issue a limited certifying staff authorisation to the aircraft commander on the basis of the flight crew licence held, provided that the organisation ensures that sufficient practical training has been carried out to ensure that such person can accomplish the airworthiness directive to the required standard;
2. In the case of aircraft operating away from a supported location the organisation may issue a limited certifying staff authorisation to the aircraft commander on the basis of the flight crew licence, provided that the organisation ensures that sufficient practical training has been carried out to ensure that such person can accomplish the task to the required standard.

*Regulation (EU) 2015/1088*

- (i) If the organisation performs **airworthiness reviews and issues the corresponding airworthiness review certificate for ELA1 aircraft not involved in commercial operations in accordance with [M.A.901\(l\)](#)**, it shall have **airworthiness review staff qualified and authorised in accordance with [M.A.901\(l\)1](#)**.

*Regulation (EU) 2015/1088*

- (j) If the organisation is involved in the development and processing of approval of the maintenance programme for ELA2 aircraft not involved in commercial operations in accordance with [M.A.201\(e\)\(ii\)](#), it shall have qualified staff who shall be able to show relevant knowledge and experience.



## AMC M.A.606(a) Personnel requirements

ED Decision 2015/029/R

With regard to the accountable manager, it is normally intended to mean the chief executive officer of the maintenance organisation approved under [M.A. Subpart F](#), who by virtue of position has overall (including in particular financial) responsibility for running the organisation. The accountable manager may be the accountable manager for more than one organisation and is not required to be necessarily knowledgeable on technical matters. When the accountable manager is not the chief executive officer, the competent authority will need to be assured that such an accountable manager has direct access to chief executive officer and has a sufficiency of maintenance funding allocation.

## AMC M.A.606(b) Personnel requirements

ED Decision 2015/029/R

1. Dependent upon the size of the organisation, the functions may be subdivided under individual managers or combined in any number of ways.
2. The maintenance organisation should have, dependent upon the extent of approval, an aircraft maintenance manager, a workshop manager all of whom should report to the accountable manager. In small maintenance organisations any manager may also be the accountable manager, and may also be the aircraft maintenance manager or the workshop manager.
3. The aircraft maintenance manager is responsible for ensuring that all maintenance required to be carried out, plus any defect rectification carried out during aircraft maintenance, is carried out to the design and quality standards specified in this Part. The aircraft maintenance manager is also responsible for any corrective action resulting from the [M.A.616](#) organisational review.
4. The workshop manager is responsible for ensuring that all work on aircraft components is carried out to the standards specified in this Part and also responsible for any corrective action resulting from the [M.A.616](#) organisational review.
5. Notwithstanding the example sub-paragraphs 2 - 4 titles, the organisation may adopt any title for the foregoing managerial positions but should identify to the competent authority the titles and persons chosen to carry out these functions.

## AMC M.A.606(c) Personnel requirements

ED Decision 2015/029/R

1. All nominated persons should, in the normal way, be expected to satisfy the competent authority that they possess the appropriate experience and qualifications which are listed in paragraphs 2.1 to 2.5 below.
2. All nominated persons should have:
  - 2.1. practical experience and expertise in the application of aviation safety standards and safe maintenance practices;
  - 2.2. comprehensive knowledge of:
    - (a) [Part-M](#) and any associated requirements and procedures;
    - (b) the maintenance organisation manual;
  - 2.3. five years aviation experience of which at least three years should be practical maintenance experience;

- 2.4. knowledge of the relevant type(s) of aircraft or components maintained. This knowledge may be demonstrated by documented evidence or by an assessment performed by the competent authority. This assessment should be recorded.

Training courses should be as a minimum at a level equivalent to [Part-66 Appendix III](#) Level 1 General Familiarisation, and could be imparted by a [Part-147](#) organisation, by the manufacturer, or by any other organisation accepted by the competent authority.

- 2.5. knowledge of maintenance standards.

### AMC M.A.606(d) Personnel requirements

*ED Decision 2015/029/R*

1. All staff are subjected to compliance with the organisation's procedures specified in the maintenance organisation manual relevant to their duties.
2. To have sufficient staff means that the approved maintenance organisation employs or contracts staff directly, even on a volunteer basis, for the anticipated maintenance workload.
3. Temporarily sub-contracted means the person is employed by another organisation and contracted by that organisation to the approved maintenance organisation.

### AMC M.A.606(e) Personnel requirements

*ED Decision 2015/029/R*

1. Personnel involved in maintenance should be assessed for competence by 'on the job' evaluation and/or by examination relevant to their particular job role within the organisation before unsupervised work is permitted.
2. Adequate initial and recurrent training should be provided and recorded to ensure continued competence.

### AMC M.A.606(f) Personnel requirements

*ED Decision 2015/029/R*

1. Non-destructive testing means such testing specified by the type certificate holder of the aircraft, engine or propeller in the [M.A.304\(b\)](#) maintenance data for in service aircraft/aircraft components for the purpose of determining the continued fitness of the product to operate safely.
2. Appropriately qualified means to level 1, 2 or 3 as defined by European Standard EN 4179 dependent upon the non-destructive testing function to be carried out.
3. Notwithstanding the fact that level 3 personnel may be qualified via EN 4179 to establish and authorise methods, techniques, etc., this does not permit such personnel to deviate from methods and techniques published by the type certificate holder/manufacturer in the form of continued airworthiness data, such as in non-destructive test manuals or service bulletins, unless the manual or service bulletin expressly permits such deviation.
4. Notwithstanding the general references in EN 4179 to a national aerospace NDT board, all examinations should be conducted by personnel or organisations under the general control of such a board. In the absence of a national aerospace NDT board, examinations should be conducted by personnel or organisations under the general control of the NDT board of a Member State designated by the competent authority.

5. Particular non-destructive test means any one or more of the following: dye penetrant, magnetic particle, eddy current, ultrasonic and radiographic methods including X ray and gamma ray.
6. In addition it should be noted that new methods are and will be developed, such as, but not limited to thermography and shearography, which are not specifically addressed by EN 4179. Until such time as an agreed standard is established such methods should be carried out in accordance with the particular equipment manufacturers' recommendations including any training and examination process to ensure competence of the personnel with the process.
7. Any approved maintenance organisation that carries out continued airworthiness non-destructive testing should establish qualification procedures for non-destructive testing.
8. Boroscopy and other techniques such as delamination coin tapping are non-destructive inspections rather than non-destructive testing. Notwithstanding such differentiation, approved maintenance organisation should establish a procedure to ensure that personnel who carry out and interpret such inspections are properly trained and assessed for their competence with the process. Non-destructive inspections, not being considered as non-destructive testing by [M.A. Subpart F](#) are not listed in [Appendix IV to Part-M](#) under class rating D1.
9. The referenced standards, methods, training and procedures should be specified in the maintenance organisation manual.
10. Any such personnel who intend to carry out and/or control a non-destructive test for which they were not qualified prior to the effective date of [Part-M](#) should qualify for such non-destructive test in accordance with EN 4179.

In this context officially recognised standard means those standards established or published by an official body whether having legal personality or not, which are widely recognised by the air transport sector as constituting good practice.

## AMC M.A.606(h)(2) Personnel requirements

*ED Decision 2015/029/R*

1. For the issue of a limited certification authorisation the commander should hold either a valid air transport pilot license (ATPL), or commercial pilots license (CPL). In addition, the limited certification authorisation is subject to the maintenance organisation manual containing procedures to address the following:
  - (a) Completion of adequate airworthiness regulation training.
  - (b) Completion of adequate task training for the specific task on the aircraft. The task training should be of sufficient duration to ensure that the individual has a thorough understanding of the task to be completed and should involve training in the use of associated maintenance data.
  - (c) Completion of the procedural training.The above procedures should be specified in the maintenance organisation manual and be accepted by the competent authority.
2. Typical tasks that may be certified and/or carried out by the commander holding an ATPL or CPL are minor maintenance or simple checks included in the following list:
  - (a) Replacement of internal lights, filaments and flash tubes.
  - (b) Closing of cowlings and refitment of quick access inspection panels.

- (c) Role changes, e.g., stretcher fit, dual controls, FLIR, doors, photographic equipment etc.
  - (d) Inspection for and removal of de-icing/anti-icing fluid residues, including removal/closure of panels, cowls or covers that are easily accessible but not requiring the use of special tools.
  - (e) Any check/replacement involving simple techniques consistent with this AMC and as agreed by the competent authority.
3. The authorisation should have a finite life of twelve months subject to satisfactory recurrent training on the applicable aircraft type.

## M.A.607 Certifying staff and airworthiness review staff

Regulation (EU) No 1321/2014

- (a) In addition to point [M.A.606\(g\)](#), certifying staff can only exercise their privileges, if the organisation has ensured:
- 1. that certifying staff can demonstrate that they meet the requirements of point [66.A.20\(b\)](#) of [Annex III \(Part-66\)](#), except when [Annex III \(Part-66\)](#) refers to Member State regulation, in which case they shall meet the requirement of such regulation, and;
  - 2. that certifying staff have an adequate understanding of the relevant aircraft and/or aircraft component(s) to be maintained together with the associated organisation procedures.

Regulation (EU) 2015/1088

- (b) In the following unforeseen cases, where an aircraft is grounded at a location other than the main base where no appropriate certifying staff is available, the maintenance organisation contracted to provide maintenance support may issue a one-off certification authorisation:
- 1. to one of its employees holding type qualifications on aircraft of similar technology, construction and systems; or
  - 2. to any person with not less than three years maintenance experience and holding a valid ICAO aircraft maintenance licence rated for the aircraft type requiring certification provided there is no organisation appropriately approved under this Part at that location and the contracted organisation obtains and holds on file evidence of the experience and the licence of that person.

All such cases must be reported to the competent authority within seven days after issuing such certification authorisation. The approved maintenance organisation issuing the one-off certification authorisation shall ensure that any such maintenance that could affect flight safety is re-checked.

Regulation (EU) 2015/1088

- (c) The approved maintenance organisation shall record all details concerning certifying staff and airworthiness review staff and maintain a current list of all certifying staff and airworthiness review staff together with their scope of approval as part of the organisation's manual pursuant to point [M.A.604\(a\)5](#).

## AMC M.A.607 Certifying staff and airworthiness review staff

ED Decision 2015/029/R

- 1. Adequate understanding of the relevant aircraft and/or aircraft component(s) to be maintained together with the associated organisation procedures means that the person has received

- training and has relevant maintenance experience on the product type and associated organisation procedures such that the person understands how the product functions, what are the more common defects with associated consequences.
2. All prospective certifying staff are required to be assessed for competence, qualification and capability related to intended certifying duties. Competence and capability can be assessed by having the person work under the supervision of another certifying person for sufficient time to arrive at a conclusion. Sufficient time could be as little as a few weeks if the person is fully exposed to relevant work. The person need not be assessed against the complete spectrum of intended duties. When the person has been recruited from another approved maintenance organisation and was a certifying person in that organisation then it is reasonable to accept a written confirmation from the previous organisation.
  3. The organisation should hold copies of all documents that attest to qualification, and to recent experience.

### AMC M.A.607(c) Certifying staff and airworthiness review staff

*ED Decision 2015/029/R*

1. The following minimum information as applicable should be kept on record in respect of each certifying person:
  - (a) name;
  - (b) date of birth;
  - (c) basic training;
  - (d) type training;
  - (e) recurrent training;
  - (f) specialised training;
  - (g) experience;
  - (h) qualifications relevant to the approval;
  - (i) scope of the authorisation and personal authorisation reference;
  - (j) date of first issue of the authorisation;
  - (k) if appropriate - expiry date of the authorisation.
2. The following minimum information, as applicable, should be kept on record in respect of each airworthiness review person:
  - (a) name;
  - (b) date of birth;
  - (c) certifying staff authorisation;
  - (d) experience as certifying staff on ELA1 aircraft;
  - (e) qualifications relevant to the approval (knowledge of relevant parts of [Part-M](#) and knowledge of the relevant airworthiness review procedures);
  - (f) scope of the airworthiness review authorisation and personal authorisation reference;
  - (g) date of the first issue of the airworthiness review authorisation; and

- (h) if appropriate, expiry date of the airworthiness review authorisation.
3. Persons authorised to access the system should be maintained at a minimum to ensure that records cannot be altered in an unauthorised manner or that such confidential records become accessible to unauthorised persons.
  4. The competent authority should be granted access to the records upon request.

## M.A.608 Components, equipment and tools

*Regulation (EU) No 1321/2014*

- (a) The organisation shall:
1. hold the equipment and tools specified in the maintenance data described in point [M.A.609](#) or verified equivalents as listed in the maintenance organisation manual as necessary for day-to-day maintenance within the scope of the approval; and,
  2. demonstrate that it has access to all other equipment and tools used only on an occasional basis.
- (b) Tools and equipment shall be controlled and calibrated to an officially recognised standard. Records of such calibrations and the standard used shall be kept by the organisation.
- (c) The organisation shall inspect, classify and appropriately segregate all incoming components.

## AMC M.A.608(a) Components, equipment and tools

*ED Decision 2015/029/R*

1. Once the applicant for [M.A. Subpart F](#) approval has determined the intended scope of approval for consideration by the competent authority, it will be necessary to show that all tools and equipment as specified in the maintenance data can be made available when needed.
2. All such tools should be clearly identified and listed in a control register including any personal tools and equipment that the organisation agrees can be used.
3. For tools required on an occasional basis, the organisation should ensure that they are controlled in terms of servicing or calibration as required.

## AMC M.A.608(b) Components, equipment and tools

*ED Decision 2015/029/R*

1. The control of these tools and equipment requires that the organisation has a procedure to inspect/service and, where appropriate, calibrate such items on a regular basis and indicate to users that the item is within any inspection or service or calibration time-limit. A clear system of labelling all tooling, equipment and test equipment is therefore necessary giving information on when the next inspection or service or calibration is due and if the item is unserviceable for any other reason where it may not be obvious. A register should be maintained for all the organisation's precision tooling and equipment together with a record of calibrations and standards used.
2. Inspection, service or calibration on a regular basis should be in accordance with the equipment manufacturers' instructions except where the [M.A. Subpart F](#) organisation can show by results that a different time period is appropriate in a particular case.

3. In this context officially recognised standard means those standards established or published by an official body whether having legal personality or not, which are widely recognised by the air transport sector as constituting good practice.

## M.A.609 Maintenance data

Regulation (EU) No 1321/2014

The approved maintenance organisation shall hold and use applicable current maintenance data specified in point [M.A.401](#) in the performance of maintenance including modifications and repairs. In the case of customer provided maintenance data, it is only necessary to have such data when the work is in progress.

## AMC M.A.609 Maintenance Data

ED Decision 2015/029/R

When an organisation uses customer provided maintenance data, the scope of approval indicated in the maintenance organisation manual should be limited to the individual aircraft covered by the contracts signed with those customers unless the organisation also holds its own complete set of maintenance data for that type of aircraft.

## M.A.610 Maintenance work orders

Regulation (EU) No 1321/2014

Before the commencement of maintenance a written work order shall be agreed between the organisation and the organisation requesting maintenance to clearly establish the maintenance to be carried out.

## AMC M.A.610 Maintenance work orders

ED Decision 2015/029/R

‘A written work order’ may take the form of, but not limited to, the following:

- A formal document or form specifying the work to be carried out. This form may be provided by the continuing airworthiness management organisation managing the aircraft, or by the maintenance organisation undertaking the work, or by the owner/operator himself;
- An entry in the aircraft log book specifying the defect that needs to be corrected.

## M.A.611 Maintenance standards

Regulation (EU) No 1321/2014

All maintenance shall be carried out in accordance with the requirements of Section A, [Subpart D of this Annex \(Part-M\)](#).

## M.A.612 Aircraft certificate of release to service

Regulation (EU) No 1321/2014

At the completion of all required aircraft maintenance in accordance with this Subpart an aircraft certificate of release to service shall be issued according to point [M.A.801](#).



## M.A.613 Component certificate of release to service

Regulation (EU) No 1321/2014

- (a) At the completion of all required component maintenance in accordance with this Subpart a component certificate of release to service shall be issued in accordance with point [M.A.802](#). [EASA Form 1](#) shall be issued except for those components maintained in accordance with points [M.A.502\(b\)](#), [M.A.502\(d\)](#) or [M.A.502\(e\)](#) and components fabricated in accordance with point [M.A.603\(c\)](#).
- (b) The component certificate release to service document, EASA Form 1 may be generated from a computer database.

## AMC M.A.613(a) Component certificate of release to service

ED Decision 2015/029/R

1. An aircraft component which has been maintained off the aircraft requires the issuance of a CRS for such maintenance and another CRS in regard to being installed properly on the aircraft when such action occurs. When an organisation maintains a component for use by the same organisation, an [EASA Form 1](#) may not be necessary depending upon the organisation's internal release procedures defined in the maintenance organisation exposition.
2. In the case of components in storage prior to [Part-145](#), [Part-M](#) and Part-21 and not released on an EASA Form 1 or equivalent in accordance with [M.A.501\(a\)](#) or removed serviceable from a serviceable aircraft which have been withdrawn from service, this paragraph provides additional guidance regarding the conditions under which an EASA Form 1 may be issued.
  - 2.1. An EASA Form 1 may be issued for an aircraft component which has been:
    - Maintained before [Part-145](#), or [Part-M](#) became effective or manufactured before Part-21 became effective.
    - Used on an aircraft and removed in a serviceable condition. Examples include leased and loaned aircraft components.
    - Removed from aircraft which have been withdrawn from service, or from aircraft which have been involved in abnormal occurrences such as accidents, incidents, heavy landings or lightning strikes.
    - Components maintained by an unapproved organisation.
  - 2.2. An appropriately rated [M.A. Subpart F](#) maintenance organisation may issue an EASA Form 1 as detailed in this AMC subparagraph 2.5 to 2.9, as appropriate, in accordance with the procedures detailed in the manual as approved by the competent authority. The appropriately rated [M.A. Subpart F](#) maintenance organisation is responsible for ensuring that all reasonable measures have been taken to ensure that only approved and serviceable aircraft components are issued an EASA Form 1 under this paragraph.
  - 2.3. For the purposes of this paragraph 2 only, 'appropriately rated' means an organisation with an approval class rating for the type of component or for the product in which it may be installed.
  - 2.4. An EASA Form 1 issued in accordance with this paragraph 2 should be issued by signing in block 14b and stating 'Inspected/Tested' in block 11. In addition, block 12 should specify:
    - 2.4.1. when the last maintenance was carried out and by whom;



- 2.4.2. if the component is unused, when the component was manufactured and by whom with a cross-reference to any original documentation which should be included with the Form;
  - 2.4.3. a list of all ADs, repairs and modifications known to have been incorporated. If no ADs or repairs or modifications are known to be incorporated then this should be so stated;
  - 2.4.4. detail of life used for service life-limited parts being any combination of fatigue, overhaul or storage life;
  - 2.4.5. for any aircraft component having its own maintenance history record, reference to the particular maintenance history record as long as the record contains the details that would otherwise be required in block 12. The maintenance history record and acceptance test report or statement, if applicable, should be attached to the EASA Form 1.
- 2.5. New/unused aircraft components
- 2.5.1. Any unused aircraft component in storage without an EASA Form 1 up to the effective date(s) for Part-21 that was manufactured by an organisation acceptable to the competent authority at the time may be issued an EASA Form 1 by an appropriately rated maintenance organisation approved under [M.A. Subpart F](#). The EASA Form 1 should be issued in accordance with the following subparagraphs which should be included in a procedure within the maintenance organisation manual.

Note 1: It should be understood that the release of a stored but unused aircraft component in accordance with this paragraph represents a maintenance release under [M.A. Subpart F](#) and not a production release under Part-21. It is not intended to bypass the production release procedure agreed by the Member State for parts and subassemblies intended for fitment on the manufacturers own production line.

    - (a) An acceptance test report or statement should be available for all used and unused aircraft components that are subject to acceptance testing after manufacturing or maintenance as appropriate.
    - (b) The aircraft component should be inspected for compliance with the manufacturer's instructions and limitations for storage and condition including any requirement for limited storage life, inhibitors, controlled climate and special storage containers. In addition, or in the absence of specific storage instructions, the aircraft component should be inspected for damage, corrosion and leakage to ensure good condition.
    - (c) The storage life used of any storage life-limited parts should be established.
  - 2.5.2. If it is not possible to establish satisfactory compliance with all applicable conditions specified in subparagraph 2.5.1 (a) to (c) inclusive, the aircraft component should be disassembled by an appropriately rated organisation and subjected to a check for incorporated ADs, repairs and modifications and inspected/tested in accordance with the maintenance data to establish satisfactory condition and, if relevant, all seals, lubricants and life-limited parts replaced. Upon satisfactory completion after reassembly, an EASA Form 1 may be

issued stating what was carried out and the reference to the maintenance data included.

- 2.6. Used aircraft components removed from a serviceable aircraft.
- 2.6.1. Serviceable aircraft components removed from a Member State registered aircraft may be issued an EASA Form 1 by an appropriately rated organisation subject to compliance with this subparagraph.
- (a) The organisation should ensure that the component was removed from the aircraft by an appropriately qualified person.
  - (b) The aircraft component may only be deemed serviceable if the last flight operation with the component fitted revealed no faults on that component or related system.
  - (c) The aircraft component should be inspected for satisfactory condition including in particular damage, corrosion or leakage and compliance with any additional maintenance data.
  - (d) The aircraft record should be researched for any unusual events that could affect the serviceability of the aircraft component such as involvement in accidents, incidents, heavy landings or lightning strikes. Under no circumstances may an EASA Form 1 be issued in accordance with this paragraph 2.6 if it is suspected that the aircraft component has been subjected to extremes of stress, temperatures or immersion which could affect its operation.
  - (e) A maintenance history record should be available for all used serialised aircraft components.
  - (f) Compliance with known modifications and repairs should be established.
  - (g) The flight hours/cycles/landings as applicable of any service life-limited parts including time since overhaul should be established.
  - (h) Compliance with known applicable airworthiness directives should be established.
  - (i) Subject to satisfactory compliance with this subparagraph 2.6.1, an EASA Form 1 may be issued and should contain the information as specified in paragraph 2.4 including the aircraft from which the aircraft component was removed.
- 2.6.2. Serviceable aircraft components removed from a non-Member State registered aircraft may only be issued an EASA Form 1 if the components are leased or loaned from the maintenance organisation approved under [M.A. Subpart F](#) who retains control of the airworthiness status of the components. An EASA Form 1 may be issued and should contain the information as specified in paragraph 2.4 including the aircraft from which the aircraft component was removed.
- 2.7. Used aircraft components removed from an aircraft withdrawn from service. Serviceable aircraft components removed from a Member State registered aircraft withdrawn from service may be issued an EASA Form 1 by a maintenance organisation approved under [M.A. Subpart F](#) subject to compliance with this subparagraph.
- (a) Aircraft withdrawn from service are sometimes dismantled for spares. This is considered to be a maintenance activity and should be accomplished under the

control of an organisation approved under [M.A. Subpart F](#), employing procedures approved by the competent authority.

- (b) To be eligible for installation, components removed from such aircraft may be issued with an EASA Form 1 by an appropriately rated organisation following a satisfactory assessment.
- (c) As a minimum, the assessment will need to satisfy the standards set out in paragraphs 2.5 and 2.6 as appropriate. This should, where known, include the possible need for the alignment of scheduled maintenance that may be necessary to comply with the maintenance programme applicable to the aircraft on which the component is to be installed.
- (d) Irrespective of whether the aircraft holds a certificate of airworthiness or not, the organisation responsible for certifying any removed component should satisfy itself that the manner in which the components were removed and stored are compatible with the standards required by [M.A. Subpart F](#).
- (e) A structured plan should be formulated to control the aircraft disassembly process. The disassembly is to be carried out by an appropriately rated organisation under the supervision of certifying staff, who will ensure that the aircraft components are removed and documented in a structured manner in accordance with the appropriate maintenance data and disassembly plan.
- (f) All recorded aircraft defects should be reviewed and the possible effects these may have on both normal and standby functions of removed components are to be considered.
- (g) Dedicated control documentation is to be used as detailed by the disassembly plan, to facilitate the recording of all maintenance actions and component removals performed during the disassembly process. Components found to be unserviceable are to be identified as such and quarantined pending a decision on the actions to be taken. Records of the maintenance accomplished to establish serviceability are to form part of the component maintenance history.
- (h) Suitable [M.A. Subpart F](#) facilities for the removal and storage of removed components are to be used which include suitable environmental conditions, lighting, access equipment, aircraft tooling and storage facilities for the work to be undertaken. While it may be acceptable for components to be removed, given local environmental conditions, without the benefit of an enclosed facility subsequent disassembly (if required) and storage of the components should be in accordance with the manufacturer's recommendations.

- 2.8. Used aircraft components maintained by organisations not approved in accordance with M.A [Subpart F](#) or [Part-145](#).

For used components maintained by a maintenance organisation not approved under [Part-M Subpart F](#) or [Part-145](#), due care should be taken before acceptance of such components. In such cases an appropriately rated maintenance organisation approved under [M.A. Subpart F](#) should establish satisfactory conditions by:

- (a) dismantling the component for sufficient inspection in accordance with the appropriate maintenance data,
- (b) replacing of all service life-limited components when no satisfactory evidence of life used is available and/or the components are in an unsatisfactory condition,

- (c) reassembling and testing as necessary the component,
- (d) completing all certification requirements as specified in [M.A.613](#).

In the case of used components maintained by an FAA [Part-145](#) repair station (USA) or by TCCA CAR573 approved maintenance organisations (Canada) that does not hold an EASA Part-145 or [M.A. Subpart F](#) approval, the conditions (a) through (d) described above may be replaced by the following conditions:

- (a) availability of an 8130-3 (FAA) or TCCA 24-0078 (TCCA) or an Authorized Release Certificate Form One (TCCA),
- (b) verification of compliance with all applicable airworthiness directives,
- (c) verification that the component does not contain repairs or modifications that have not been approved in accordance with Part-21,
- (d) inspection for satisfactory condition including in particular damage, corrosion or leakage,
- (e) issuance of an EASA Form 1 in compliance with paragraphs 2.2, 2.3 and 2.4.

These alleviated requirements are based on the fact that credit can be taken for their technical capabilities and their competent authority oversight, as attested by the following documents:

- Maintenance Annex Guidance (MAG) between the FAA and EASA,
- Maintenance Annex Guidance (MAG) between the EASA and TCCA.

- 2.9. Used aircraft components removed from an aircraft involved in an accident or incident. Such components should only be issued with an EASA Form 1 when processed in accordance with paragraph 2.7 and a specific work order including all additional necessary tests and inspections made necessary by the accident or incident. Such a work order may require input from the TC holder or original manufacturer as appropriate. This work order should be referenced in block 12.
3. A certificate should not be issued for any component when it is known that the component is unserviceable except in the case of a component undergoing a series of maintenance processes at several approved maintenance organisations and the component needs a certificate for the previous maintenance process carried out for the next approved maintenance organisation to accept the component for subsequent maintenance processes. In such a case, a clear statement of limitation should be endorsed in block.
4. The certificate is to be used for export/import purposes, as well as for domestic purposes, and serves as an official certificate for components from the manufacturer/maintenance organisation to users. It should only be issued by organisations approved by a competent authority or the Agency as applicable within the scope of the approval.

## **M.A.614 Maintenance and airworthiness review records**

*Regulation (EU) 2015/1088*

- (a) The approved maintenance organisation shall record all details of work carried out. Records necessary to prove all requirements have been met for the issue of the certificate of release to service including the subcontractor's release documents **and for the issue of any airworthiness review certificate and recommendation** shall be retained.

- (b) The approved maintenance organisation shall provide a copy of each certificate of release to service to the aircraft owner, together with a copy of any specific repair/modification data used for repairs/modifications carried out.
- (c) The approved maintenance organisation shall retain a copy of all maintenance records and any associated maintenance data for three years from the date the aircraft or aircraft component to which the work relates was released from the approved maintenance organisation. **In addition, it shall retain a copy of all the records related to the issue of recommendations and airworthiness review certificates for three years from the date of issue and shall provide a copy of them to the owner of the aircraft.**
1. The records under this point shall be stored in a manner that ensures protection from damage, alteration, and theft.
  2. All computer hardware used to ensure backup shall be stored in a different location from that containing the working data in an environment that ensures they remain in good condition.
  3. Where an approved maintenance organisation terminates its operation, all retained maintenance records covering the last three years shall be distributed to the last owner or customer of the respective aircraft or component or shall be stored as specified by the competent authority.

### **AMC M.A.614(a) Maintenance and airworthiness review records**

*ED Decision 2015/029/R*

1. Properly executed and retained records provide owners, operators and maintenance personnel with information essential in controlling unscheduled and scheduled maintenance, and troubleshooting to eliminate the need for re-inspection and rework to establish airworthiness.
2. The prime objective is to have secure and easily retrievable records with comprehensive and legible contents. The aircraft record should contain basic details of all serialised aircraft components and all other significant aircraft components installed, to ensure traceability to such installed aircraft component documentation and associated [M.A.304](#) maintenance data.
3. The maintenance record can be either a paper or computer system or any combination of both. The records should remain legible throughout the required retention period.
4. Paper systems should use robust material which can withstand normal handling and filing.
5. Computer systems may be used to control maintenance and/or record details of maintenance work carried out. Computer systems used for maintenance should have at least one backup system which should be updated at least within 24 hours of any maintenance. Each terminal is required to contain programme safeguards against the ability of unauthorised personnel to alter the database.

### **AMC M.A.614(c) Maintenance and airworthiness review records**

*ED Decision 2015/029/R*

Associated maintenance data is specific information such as repair and modification data. This does not necessarily require the retention of all aircraft maintenance manual, component maintenance manual, parts catalogues etc. issued by the TC holder or STC holder. Maintenance records should refer to the revision status of the data used.

## M.A.615 Privileges of the organisation

Regulation (EU) 2015/1088

The maintenance organisation approved in accordance with [Section A, Subpart F](#) of this [Annex \(Part-M\)](#), may:

- (a) maintain any aircraft and/or component for which it is approved at the locations specified in the approval certificate and the maintenance organisation manual;
- (b) arrange for the performance of specialized services under the control of the maintenance organisation at another organisation appropriately qualified, subject to appropriate procedures being established as part of the Maintenance Organisation Manual approved by the competent authority directly;
- (c) maintain any aircraft and/or component for which it is approved at any location subject to the need of such maintenance arising either from the unserviceability of the aircraft or from the necessity of supporting occasional maintenance, subject to the conditions specified in the Maintenance Organisation Manual;
- (d) issue certificates of release to service on completion of maintenance, in accordance with point [M.A.612](#) or point [M.A.613](#);
- (e) if specifically approved to do so for ELA1 aircraft not involved in commercial operations,
  1. perform airworthiness reviews and issue the corresponding airworthiness review certificate, under the conditions specified in point [M.A.901\(l\)](#), and
  2. perform airworthiness reviews and issue the corresponding recommendations, under the conditions specified in point [M.A.901\(l\)](#) and [M.A.904\(a\)2 and \(b\)](#).
- (f) develop the maintenance programme and process its approval in accordance with point [M.A.302](#) for ELA2 aircraft not involved in commercial operations, under the conditions specified in point [M.A.201\(e\)\(ii\)](#), and limited to the aircraft ratings listed in the approval certificate.

The organisation shall only maintain an aircraft or component for which it is approved when all the necessary facilities, equipment, tooling, material, maintenance data and certifying staff are available.

## GM M.A.615 Privileges of the organisation

ED Decision 2015/029/R

[M.A.615](#) states that the organisation shall only maintain an aircraft or component for which it is approved when all the necessary facilities, equipment, tooling, material, maintenance data, and certifying staff are available.

This provision is intended to cover the situation where the larger organisation may temporarily not hold all the necessary tools, equipment, etc. for an aircraft type or variant specified in the organisation's approval. This paragraph means that the competent authority need not amend the approval to delete the aircraft type or variants on the basis that it is a temporary situation and there is a commitment from the organisation to re-acquire tools, equipment, etc. before maintenance on the type may recommence.

## GM M.A.615(a) Privileges of the organisation

ED Decision 2015/029/R

[M.A.615\(a\)](#) applies also to facilities which may not be individually approved by the competent authority, such as those described in [AMC M.A.605\(a\)](#) for ELA2 aircraft.

## AMC M.A.615(b) Privileges of the organisation

ED Decision 2015/029/R

[M.A.615\(b\)](#) refers to work carried out by another organisation which is not appropriately approved under M.A. Subpart F or [Part-145](#) to carry out such tasks.

The intent is to permit the acceptance of specialised maintenance services, such as, but not limited to, non-destructive testing, surface treatment, heat-treatment, welding, fabrication of specified parts for minor repairs and modifications, etc., without the need of [Subpart F](#) approval for those tasks.

The requirement that the organisation performing the specialised services must be ‘appropriately qualified’ means that it should meet an officially recognised standard or, otherwise, it should be acceptable to the competent authority (through the approval of the Maintenance Organisation Manual).

‘Under the control of the [Subpart F](#) organisation’ means that the [Subpart F](#) organisation should investigate the capability of the subcontracted organisation (including qualifications, facilities, equipment and materials) and ensure that such organisation:

- Receives appropriate maintenance instructions and maintenance data for the task to be performed.
- Properly records the maintenance performed in the [Subpart F](#) airworthiness records.
- Notifies the [Subpart F](#) organisation for any deviation or non-conformity, which has arisen during such maintenance.

The CRS may be issued either at the subcontractors or at the organisation facility by authorised certifying staff, and always under the [M.A. Subpart F](#) organisation reference. Such staff would normally come from the [M.A. Subpart F](#) organisation but may otherwise be a person from the subcontractor who meets the M.A. Subpart F organisation certifying staff standard which itself is approved by the competent authority via the Maintenance Organisation Manual.

Subcontracted specialised services organisations should be listed in the Maintenance Organisation Manual of the Subpart F organisation together with their qualifications, and the associated control procedures.

## M.A.616 Organisational review

Regulation (EU) No 1321/2014

To ensure that the approved maintenance organisation continues to meet the requirements of this Subpart, it shall organise, on a regular basis, organisational reviews.

## AMC M.A.616 Organisational review

ED Decision 2015/029/R

1. The primary objectives of the organisational review are to enable the approved maintenance organisation to ensure that it can deliver a safe product and that approved maintenance organisation remains in compliance with the requirements.
2. The approved maintenance organisation should identify:
  - 2.1. the person responsible for the organisational review;
  - 2.2. the frequency of the reviews;
  - 2.3. the scope and content of the reviews;



- 2.4. the persons accomplishing the reviews;
  - 2.5. the procedure for planning, performing and processing review findings; and,
  - 2.6. the procedure for ensuring corrective actions are carried out in the appropriate time frame.
3. The organisation quality system as specified in [Part-145](#) provides an acceptable basic structure for the organisational review system for organisations with more than 10 maintenance staff, dependent upon the complexity of the organisation.
  4. [Appendix VIII to AMC M.A.616](#) should be used to manage the organisational reviews.

## M.A.617 Changes to the approved maintenance organisation

Regulation (EU) 2015/1088

In order to enable the competent authority to determine continued compliance with this Part, the approved maintenance organisation shall notify it of any proposal to carry out any of the following changes, before such changes take place:

1. the name of the organisation;
2. the location of the organisation;
3. additional locations of the organisation;
4. the accountable manager;
5. any of the persons specified in point [M.A.606\(b\)](#);
6. the facilities, equipment, tools, material, procedures, work scope, certifying staff and **airworthiness review staff** that could affect the approval.

In the case of proposed changes in personnel not known to the management beforehand, these changes shall be notified at the earliest opportunity.

## AMC M.A.617 Changes to the approved maintenance organisation

ED Decision 2015/029/R

The competent authority should be given adequate notification of any proposed changes in order to enable the maintenance organisation to remain approved if agreed by the competent authority during negotiations about any of the specified changes. Without this paragraph the approval would automatically be suspended in all cases.

## M.A.618 Continued validity of approval

Regulation (EU) No 1321/2014

- (a) An approval shall be issued for an unlimited duration. It shall remain valid subject to:
  1. the organisation remaining in compliance with this Part, in accordance with the provisions related to the handling of findings as specified under point [M.A.619](#), and;
  2. the competent authority being granted access to the organisation to determine continued compliance with this Part, and;
  3. the approval not being surrendered or revoked;
- (b) Upon surrender or revocation, the approval certificate shall be returned to the competent authority.



## M.A.619 Findings

Regulation (EU) No 1321/2014

- (a) A level 1 finding is any significant non-compliance with [Part-M](#) requirements which lowers the safety standard and hazards seriously the flight safety.
- (b) A level 2 finding is any non-compliance with the [Part-M](#) requirements which could lower the safety standard and possibly hazard the flight safety.
- (c) After receipt of notification of findings according to point [M.B.605](#), the holder of the maintenance organisation approval shall define a corrective action plan and demonstrate corrective action to the satisfaction of the competent authority within a period agreed with this authority.

## SUBPART G — CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATION

### M.A.701 Scope

Regulation (EU) No 1321/2014

This Subpart establishes the requirements to be met by an organisation to qualify for the issue or continuation of an approval for the management of aircraft continuing airworthiness.

### M.A.702 Application

Regulation (EU) No 1321/2014

An application for issue or change of a continuing airworthiness management organisation approval shall be made on a form and in a manner established by the competent authority.

### AMC M.A.702 Application

ED Decision 2015/029/R

An application should be made on an [EASA Form 2](#) ([Appendix IX to AMC M.A.602 and AMC M.A.702](#)) or equivalent acceptable to the competent authority

The [EASA Form 2](#) is valid for the application for [M.A. Subpart F, Part-145](#) and [M.A. Subpart G](#) organisations. Organisations applying for several approvals may do so using a single [EASA Form 2](#).

### M.A.703 Extent of approval

Regulation (EU) 2015/1536

- (a) The approval is indicated on a certificate included in Appendix VI issued by the competent authority.
- (b) Notwithstanding point (a), for licenced air carriers in accordance with Regulation (EC) No 1008/2008, the approval shall be part of the air operator certificate issued by the competent authority, for the aircraft operated.
- (c) The scope of work deemed to constitute the approval shall be specified in the continuing airworthiness management exposition in accordance with point [M.A.704](#).

### M.A.704 Continuing airworthiness management exposition

Regulation (EU) 2015/1536

- (a) The continuing airworthiness management organisation shall provide a continuing airworthiness management exposition containing the following information:
  1. a statement signed by the accountable manager to confirm that the organisation will work in accordance with this Part and the exposition at all times, and;
  2. the organisation's scope of work, and;
  3. the title(s) and name(s) of person(s) referred to in points [M.A.706\(a\)](#), [M.A.706\(c\)](#), [M.A.706\(d\)](#) and [M.A.706\(i\)](#), and;
  4. an organisation chart showing associated chains of responsibility between all the person(s) referred to in points [M.A.706\(a\)](#), [M.A.706\(c\)](#), [M.A.706\(d\)](#) and [M.A.706\(i\)](#), and;

5. a list of the airworthiness staff referred to in point [M.A.707](#), specifying, where applicable, the staff authorised to issue permits to fly in accordance with point [M.A.711\(c\)](#), and;
  6. a general description and location of the facilities, and;
  7. procedures specifying how the continuing airworthiness management organisation ensures compliance with this Part, and;
  8. the continuing airworthiness management exposition amendment procedures, and;
  9. the list of approved aircraft maintenance programmes, or, for aircraft not used by licenced air carriers in accordance with Regulation (EC) No 1008/2008, the list of ‘generic’ and ‘baseline’ maintenance programmes.
- (b) The continuing airworthiness management exposition and its amendments shall be approved by the competent authority.
- (c) Notwithstanding point (b), minor amendments to the exposition may be approved indirectly through an indirect approval procedure. The indirect approval procedure shall define the minor amendment eligible, be established by the continuing airworthiness management organisation as part of the exposition and be approved by the competent authority responsible for that continuing airworthiness management organisation.

## AMC1 M.A.704 Continuing airworthiness management exposition

*ED Decision 2016/011/R*

1. The purpose of the continuing airworthiness management exposition is to set forth the procedures, means and methods of the CAMO. Compliance with its contents will assure compliance with [Part-M](#) requirements.
2. A continuing airworthiness management exposition should comprise:
  - Part 0 General organisation
  - Part 1 Continuing airworthiness procedures
  - Part 2 Quality system or organisational review (as applicable)
  - Part 3 Contracted maintenance — management of maintenance (liaison with maintenance organisations)
  - Part 4 Airworthiness review procedures (if applicable)
3. Personnel should be familiar with those parts of the continuing airworthiness management exposition that are relevant to their tasks.
4. The CAMO should specify in the exposition who is responsible for the amendment of the document. Unless otherwise agreed by the approving competent authority, the person responsible for the management of the quality system or for the organisational review should be responsible for monitoring and amending the continuing airworthiness management exposition, including associated procedure’s manuals, and the submission of proposed amendments to the competent authority. The competent authority may agree to a procedure, and its agreement will be stated in the amendment control section of the continuing airworthiness management exposition defining the class of amendments, which can be incorporated without the prior consent of the competent authority (‘indirect approval procedure’).

5. The CAMO may use electronic data processing (EDP) for the publication of the continuing airworthiness management exposition. The continuing airworthiness management exposition should be made available to the approving competent authority in a form acceptable to the latter. Attention should be paid to the compatibility of the EDP publication systems with the necessary dissemination, both internally and externally, of the continuing airworthiness management exposition.
6. The continuing airworthiness management exposition should contain information, as applicable, on how the CAMO complies with CDCCL instructions.
7. [Appendix V to AMC M.A.704](#) contains an example of a continuing airworthiness management exposition layout.

## AMC2 M.A.704 Continuing airworthiness management exposition

*ED Decision 2016/011/R*

### EXPOSITION LAYOUT FOR A CAMO HOLDING A MAINTENANCE ORGANISATION APPROVAL

1. Where a CAMO is also approved to another Part, the exposition or manual required by the other Part may form the basis of the continuing airworthiness management exposition in a combined document.
2. Example for a combined CAMO and [Part-145](#) organisation:  
Part-145 Exposition (see equivalent paragraphs in [AMC 145.A.70\(a\)](#))

Part 0	General organisation
Part 1	Management
Part 2	Maintenance procedures
Part L2	Additional line maintenance procedures
Part 3	Quality system and/or organisational review (as applicable)
	This chapter should cover the functions specified in <a href="#">M.A.712</a> 'Quality system' and <a href="#">145.A.65</a> 'Safety and quality system'.
Part 4	Contracts
	This chapter should include:
	– the contracts of the CAMO with the owners/operators as per <a href="#">Appendix I to Part-M</a> ;
	– the CAMO procedures for the management of maintenance and liaison with maintenance organisations.
Part 5	Appendices (sample of documents)
Part 6	Continuing airworthiness management procedures
Part 7	FAA supplement (if applicable)
Part 8	TCCA supplement (if applicable)
Part 9	Airworthiness review procedures (if applicable)
3. Example for a combined CAMO and [M.A. Subpart F](#) organisation:

Part 0	General organisation
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Part 1	General
Part 2	Description
Part 3	General procedures
Part 4	Working procedures
	This part should contain, among other things, procedures for quality system or organisation review, as applicable.
Part 5	Appendices
Part 6	Continuing airworthiness management procedures
Part 7	Airworthiness review procedures (if applicable)

## AMC M.A.704(a)(2) Continuing airworthiness management exposition

ED Decision 2016/011/R

1. Part 0 'General organisation' of the continuing airworthiness management exposition should include a corporate commitment by the CAMO, signed by the accountable manager, confirming that the continuing airworthiness management exposition and any associated manuals define the organisation's compliance with [Part-M](#) and will be complied with at all times.
2. The accountable manager's exposition statement should embrace the intent of the following paragraph, and in fact this statement may be used without amendment. Any amendment to the statement should not alter its intent:

*'This exposition defines the organisation and procedures upon which the competent authority's\* CAMO approval is based.*

*These procedures are approved by the undersigned and should be complied with, as applicable, in order to ensure that all continuing airworthiness tasks are carried out on time to an approved standard.*

*It is accepted that these procedures do not override the necessity of complying with any new or amended regulation published from time to time where these new or amended regulations are in conflict with these procedures.*

*It is understood that the competent authority\* will approve this organisation whilst the competent authority\* is satisfied that the procedures are followed and the work standard is maintained. It is understood that the competent authority\* reserves the right to suspend, limit or revoke the CAMO approval or the air operator certificate, as applicable, if the competent authority\* has evidence that the procedures are not followed and standards not upheld.*

*Signed .....*

*Dated .....*

*Accountable manager and ... (quote position) ...*

*For and on behalf of ... (quote organisation's name) ...'*

*\*Where 'competent authority' is stated, please insert the actual name of the approving competent authority organisation or administration delivering the CAMO approval or the air operator certificate.'*

3. Whenever the accountable manager is changed, it is important to ensure that the new accountable manager signs the paragraph 2 statement at the earliest opportunity as part of the acceptance by the approving competent authority. Failure to carry out this action invalidates the CAMO approval or the air operator certificate.

## M.A.705 Facilities

*Regulation (EU) No 1321/2014*

The continuing airworthiness management organisation shall provide suitable office accommodation at appropriate locations for the personnel specified in point [M.A.706](#).

## AMC M.A.705 Facilities

*ED Decision 2015/029/R*

Office accommodation should be such that the incumbents, whether they be continuing airworthiness management, planning, technical records or quality staff, can carry out their designated tasks in a manner that contributes to good standards. In the smaller CAMO, the competent authority may agree to these tasks being conducted from one office subject to being satisfied that there is sufficient space and that each task can be carried out without undue disturbance. Office accommodation should also include an adequate technical library and room for document consultation.

## M.A.706 Personnel requirements

*Regulation (EU) No 1321/2014*

- (a) The organisation shall appoint an accountable manager, who has corporate authority for ensuring that all continuing airworthiness management activities can be financed and carried out in accordance with this Part.

*Regulation (EU) 2015/1536*
- (b) For licenced air carriers in accordance with Regulation (EC) No 1008/2008 the accountable manager referred to in point (a) shall be the person who also has corporate authority for ensuring that all the operations of the operator can be financed and carried out to the standard required for the issue of an air operator's certificate.

*Regulation (EU) No 1321/2014*
- (c) A person or group of persons shall be nominated with the responsibility of ensuring that the organisation is always in compliance with this Subpart. Such person(s) shall be ultimately responsible to the accountable manager.

*Regulation (EU) 2015/1536*
- (d) For licenced air carriers in accordance with Regulation (EC) No 1008/2008, the accountable manager shall designate a nominated post holder. This person shall be responsible for the management and supervision of continuing airworthiness activities, pursuant to point (c).

*Regulation (EU) No 1321/2014*
- (e) The nominated post holder referred to in point (d) shall not be employed by a [Part-145](#) approved organisation under contract to the operator, unless specifically agreed by the competent authority.

*Regulation (EU) No 1321/2014*
- (f) The organisation shall have sufficient appropriately qualified staff for the expected work.

*Regulation (EU) No 1321/2014*

- (g) All point (c) and (d) persons shall be able to show relevant knowledge, background and appropriate experience related to aircraft continuing airworthiness.

*Regulation (EU) No 1321/2014*

- (h) The qualification of all personnel involved in continuing airworthiness management shall be recorded.

*Regulation (EU) No 1321/2014*

- (i) For organisations extending airworthiness review certificates in accordance with points [M.A.711\(a\)4](#) and [M.A.901\(f\)](#), the organisation shall nominate persons authorised to do so, subject to approval by the competent authority.

*Regulation (EU) No 1321/2014*

- (j) The organisation shall define and keep updated in the continuing airworthiness management exposition the title(s) and name(s) of person(s) referred to in points [M.A.706\(a\)](#), [M.A.706\(c\)](#), [M.A.706\(d\)](#) and [M.A.706\(i\)](#).

*Regulation (EU) 2015/1536*

- (k) For complex motor-powered aircraft and for aircraft used by licenced air carriers in accordance with Regulation (EC) No 1008/2008, the organisation shall establish and control the competence of personnel involved in the continuing airworthiness management, airworthiness review and/or quality audits in accordance with a procedure and to a standard agreed by the competent authority.

## AMC M.A.706 Personnel requirements

*ED Decision 2015/029/R*

1. The person or group of persons should represent the continuing airworthiness management structure of the organisation and be responsible for all continuing airworthiness functions. Dependent on the size of the operation and the organisational set-up, the continuing airworthiness functions may be divided under individual managers or combined in nearly any number of ways. However, if a quality system is in place it should be independent from the other functions.
2. The actual number of persons to be employed and their necessary qualifications is dependent upon the tasks to be performed and thus dependent on the size and complexity of the organisation (general aviation aircraft, corporate aircraft, number of aircraft and the aircraft types, complexity of the aircraft and their age and for commercial air transport, route network, line or charter, ETOPS) and the amount and complexity of maintenance contracting. Consequently, the number of persons needed, and their qualifications may differ greatly from one organisation to another and a simple formula covering the whole range of possibilities is not feasible.
3. To enable the competent authority to accept the number of persons and their qualifications, an organisation should make an analysis of the tasks to be performed, the way in which it intends to divide and/or combine these tasks, indicate how it intends to assign responsibilities and establish the number of man/hours and the qualifications needed to perform the tasks. With significant changes in the aspects relevant to the number and qualifications of persons needed, this analysis should be updated.
4. Nominated person or group of persons should have:

- 4.1. practical experience and expertise in the application of aviation safety standards and safe operating practices;
- 4.2. a comprehensive knowledge of:
  - (a) relevant parts of operational requirements and procedures;
  - (b) the AOC holder's operations specifications when applicable;
  - (c) the need for, and content of, the relevant parts of the AOC holder's operations manual when applicable;
- 4.3. knowledge of quality systems;
- 4.4. five years relevant work experience of which at least two years should be from the aeronautical industry in an appropriate position;
- 4.5. a relevant engineering degree or an aircraft maintenance technician qualification with additional education acceptable to the competent authority. 'relevant engineering degree' means an engineering degree from aeronautical, mechanical, electrical, electronic, avionic or other studies relevant to the maintenance and continuing airworthiness of aircraft/aircraft components;

The above recommendation may be replaced by 5 years of experience additional to those already recommended by paragraph 4.4 above. These 5 years should cover an appropriate combination of experience in tasks related to aircraft maintenance and/or continuing airworthiness management and/or surveillance of such tasks;

- 4.6. thorough knowledge with the organisation's continuing airworthiness management exposition;
- 4.7. knowledge of a relevant sample of the type(s) of aircraft gained through a formalised training course. These courses should be at least at a level equivalent to [Part-66 Appendix III](#) Level 1 General Familiarisation and could be imparted by a [Part-147](#) organisation, by the manufacturer, or by any other organisation accepted by the competent authority.

'Relevant sample' means that these courses should cover typical systems embodied in those aircraft being within the scope of approval.

*For all balloons and any other aircraft of 2 730 kg MTOM and below the formalised training courses may be replaced by demonstration of knowledge. This knowledge may be demonstrated by documented evidence or by an assessment performed by the competent authority. This assessment should be recorded.*

- 4.8. knowledge of maintenance methods.
- 4.9. knowledge of applicable regulations.

## AMC M.A.706(a) Personnel requirements

*ED Decision 2015/029/R*

Accountable manager is normally intended to mean the chief executive officer of the CAMO, who by virtue of position has overall (including in particular financial) responsibility for running the organisation. The accountable manager may be the accountable manager for more than one organisation and is not required to be knowledgeable on technical matters. When the accountable manager is not the chief executive officer, the competent authority will need to be assured that such an accountable manager has direct access to the chief executive officer and has a sufficiency of continuing airworthiness funding allocation.



## AMC M.A.706(e) Personnel requirements

ED Decision 2015/029/R

1. The competent authority of the operator should only accept that the nominated post holder be employed by the organisation approved under [Part-145](#) when it is manifest that he/she is the only available competent person in a position to exercise this function, within a practical working distance from the operator's offices.
2. This paragraph only applies to contracted maintenance and therefore does not affect situations where the organisation approved under [Part-145](#) and the operator are the same organisation.

## AMC M.A.706(f) Personnel requirements

ED Decision 2015/029/R

Additional training in fuel tank safety as well as associated inspection standards and maintenance procedures should be required of CAMO technical personnel, especially the staff involved with the management of CDCCL, Service Bulletin assessment, work planning and maintenance programme management. EASA guidance is provided for training to CAMO personnel in [Appendix XII to AMC M.A.706\(f\) and M.B.102\(c\)](#).

## AMC M.A.706(i) Personnel requirements

ED Decision 2015/029/R

The approval by the competent authority of the exposition, containing in [M.A.704\(a\)3](#) the list of [M.A.706\(i\)](#) personnel, constitutes their formal acceptance by the competent authority and also their formal authorisation by the organisation.

Airworthiness review staff are automatically recognised as persons with authority to extend an airworthiness review certificate in accordance with [M.A.711\(a\)4](#) and [M.A.901\(f\)](#).

## AMC M.A.706(k) Personnel requirements

ED Decision 2015/029/R

Adequate initial and recurrent training should be provided and recorded to ensure continued competence.

## M.A.707 Airworthiness review staff

Regulation (EU) 2015/1536

- (a) To be approved to carry out airworthiness reviews and, if applicable, to issue permits to fly, an approved continuing airworthiness management organisation shall have appropriate airworthiness review staff to issue airworthiness review certificates or recommendations referred to in [Section A of Subpart I](#) and, if applicable, to issue a permit to fly in accordance with point [M.A.711\(c\)](#):
  1. For aircraft used by licenced air carriers in accordance with Regulation (EC) No 1008/2008, and aircraft above 2730 kg MTOM, except balloons, these staff shall have acquired:
    - (a) at least 5 years' experience in continuing airworthiness, and;
    - (b) an appropriate license in compliance with Annex III (Part-66) or an aeronautical degree or a national equivalent, and;

- (c) formal aeronautical maintenance training, and;
  - (d) a position within the approved organisation with appropriate responsibilities.
  - (e) Notwithstanding points (a) to (d), the requirement laid down in point [M.A.707\(a\)1\(b\)](#) may be replaced by 5 years of experience in continuing airworthiness additional to those already required by point [M.A.707\(a\)1\(a\)](#).
2. For aircraft not used by licenced air carriers in accordance with Regulation (EC) No 1008/2008 of 2730 kg MTOM and below, and balloons, these staff shall have acquired:
- (a) at least 3 years' experience in continuing airworthiness, and;
  - (b) an appropriate license in compliance with [Annex III \(Part-66\)](#) or an aeronautical degree or a national equivalent, and;
  - (c) appropriate aeronautical maintenance training, and;
  - (d) a position within the approved organisation with appropriate responsibilities;
  - (e) Notwithstanding points (a) to (d), the requirement laid down in point [M.A.707\(a\)2\(b\)](#) may be replaced by 4 years of experience in continuing airworthiness additional to those already required by point [M.A.707\(a\)2\(a\)](#).

*Regulation (EU) 2015/1088*

- (b) Airworthiness review staff nominated by the approved continuing airworthiness organisation can only be issued an authorisation by the approved continuing airworthiness organisation when formally accepted by the competent authority after satisfactory completion of an airworthiness review under the supervision of the competent authority or under the supervision of the organisation's airworthiness review staff in accordance with a procedure approved by the competent authority.

*Regulation (EU) No 1321/2014*

- (c) The organisation shall ensure that aircraft airworthiness review staff can demonstrate appropriate recent continuing airworthiness management experience.

*Regulation (EU) No 1321/2014*

- (d) Airworthiness review staff shall be identified by listing each person in the continuing airworthiness management exposition together with their airworthiness review authorisation reference.

*Regulation (EU) No 1321/2014*

- (e) The organisation shall maintain a record of all airworthiness review staff, which shall include details of any appropriate qualification held together with a summary of relevant continuing airworthiness management experience and training and a copy of the authorisation. This record shall be retained until two years after the airworthiness review staff have left the organisation.

## AMC M.A.707(a) Airworthiness review staff

*ED Decision 2015/029/R*

1. Airworthiness review staff are only required if the CAMO wants to be granted [M.A.711\(b\)](#) airworthiness review and, if applicable, [M.A.711\(c\)](#) permit to fly privileges.
2. 'experience in continuing airworthiness' means any appropriate combination of experience in tasks related to aircraft maintenance and/or continuing airworthiness management and/or surveillance of such tasks.

3. A person qualified to the [AMC M.A.706](#) subparagraph 4.5 should be considered as holding the equivalent to an aeronautical degree.
4. An appropriate licence in compliance with [Annex III \(Part-66\)](#) is any one of the following:
  - a category B1 licence in the subcategory of the aircraft reviewed, or
  - a category B2 or C licence, or
  - in the case of piston-engine non-pressurised aeroplanes of 2 000 kg MTOM and below, a category B3 licence.

It is not necessary to satisfy the experience requirements of [Part-66](#) at the time of the review.

5. To hold a position with appropriate responsibilities means the airworthiness review staff should have a position in the organisation independent from the airworthiness management process or with overall authority on the airworthiness management process of complete aircraft.

Independence from the airworthiness management process may be achieved, among other ways, by:

- Being authorised to perform airworthiness reviews only on aircraft for which the person has not participated in their management. For example, performing airworthiness reviews on a specific model line, while being involved in the airworthiness management of a different model line.
- [M.A. Subpart G](#) organisations with [Part-145/M.A. Subpart F](#) approval, may nominate maintenance personnel from their [Part-145/M.A. Subpart F](#) organisation as airworthiness review staff, as long as they are not involved in the airworthiness management of the aircraft. These personnel should not have been involved in the release to service of that particular aircraft (other than maintenance tasks performed during the physical survey of the aircraft or performed as a result of findings discovered during such physical survey) to avoid possible conflict of interests.
- Nominating as airworthiness review staff personnel from the quality department of the CAMO.

Overall authority on the airworthiness management process of complete aircraft may be achieved, among other ways, by:

- Nominating as airworthiness review staff the accountable manager or the nominated postholder.
- Being authorised to perform airworthiness reviews only on those particular aircraft for which the person is responsible for the complete continuing airworthiness management process.
- In the case of one-man organisations, this person has always overall authority. This means that this person can be nominated as airworthiness review staff.

## **AMC M.A.707(a)(1) Airworthiness review staff**

*ED Decision 2016/011/R*

For all aircraft used by air carriers licensed in accordance with Regulation (EC) No 1008/2008 and for any other aircraft, other than balloons, above 2 730 kg MTOM, formal aeronautical maintenance training means training (internal or external) supported by evidence on the following subjects:

- Relevant parts of initial and continuing airworthiness regulations.

- Relevant parts of operational requirements and procedures, if applicable.
- The organisation’s continuing airworthiness management exposition.
- Knowledge of a relevant sample of the type(s) of aircraft gained through a formalised training course. These courses should be at least at a level equivalent to [Part-66 Appendix III](#) Level 1 General Familiarisation and could be imparted by a [Part-147](#) organisation, by the manufacturer, or by any other organisation accepted by the competent authority.  
  
‘Relevant sample’ means that these courses should cover typical systems embodied in those aircraft being within the scope of approval
- Maintenance methods.

### AMC M.A.707(a)(2) Airworthiness review staff

*ED Decision 2016/011/R*

For all balloons and any other aircraft of 2 730 Kg MTOM and below, not used by air carriers licensed in accordance with Regulation (EC) No 1008/2008:

1. ‘experience in continuing airworthiness’ can be full-time or part-time, either as professional or on a voluntary basis.
2. Appropriate aeronautical maintenance training means demonstrated knowledge of the following subjects:
  - Relevant parts of initial and continuing airworthiness regulations.
  - Relevant parts of operational requirements and procedures, if applicable.
  - The organisation’s continuing airworthiness management exposition.
  - Knowledge of a relevant sample of the type(s) of aircraft gained through training and/or work experience. Such knowledge should be at least at a level equivalent to [Part-66 Appendix III](#) Level 1 General Familiarisation and could be imparted by a [Part-147](#) organisation, by the manufacturer, or by any other organisation accepted by the competent authority.  
  
‘Relevant sample’ means that these courses should cover typical systems embodied in those aircraft being within the scope of approval.
  - Maintenance methods.

This knowledge may be demonstrated by documented evidence or by an assessment performed by the competent authority or by other airworthiness review staff already authorised within the organisation in accordance with approved procedures. This assessment should be recorded.

### AMC M.A.707(b) Airworthiness review staff

*ED Decision 2015/029/R*

The formal acceptance by the competent authority of the airworthiness review staff is granted through the corresponding [EASA Form 4](#).

If the airworthiness review is performed under the supervision of existing airworthiness review staff, evidence should be provided to the competent authority together with [EASA Form 4](#). If satisfied, the competent authority will issue the formal acceptance through [EASA Form 4](#).

Once the airworthiness review staff has been accepted by the competent authority, the inclusion of their name in the exposition (refer to [M.A.704\(a\)5](#)) constitutes the formal authorisation by the organisation.

### AMC M.A.707(c) Airworthiness review staff

*ED Decision 2015/029/R*

In order to keep the validity of the airworthiness review staff authorisation, the airworthiness review staff should have either:

- been involved in continuing airworthiness management activities for at least six months in every two year period, or
- conducted at least one airworthiness review in the last twelve month period.

In order to restore the validity of the authorisation, the airworthiness review staff should conduct at a satisfactory level an airworthiness review under the supervision of the competent authority or, if accepted by the competent authority, under the supervision of another currently valid authorised airworthiness review staff of the concerned continuing airworthiness management organisation in accordance with an approved procedure.

### AMC M.A.707(e) Airworthiness review staff

*ED Decision 2015/029/R*

The minimum content of the airworthiness review staff record should be:

- Name,
- Date of Birth,
- Basic Education,
- Experience,
- Aeronautical Degree and/or [Part-66](#) qualification and/or nationally-recognised maintenance personnel qualification,
- Initial Training received,
- Type of Training received,
- Continuation Training received,
- Experience in continuing airworthiness and within the organisation,
- Responsibilities of current role in the organisation,
- Copy of the authorisation.

### M.A.708 Continuing airworthiness management

*Regulation (EU) 2015/1536*

- (a) All continuing airworthiness management shall be carried out according to the prescriptions of M.A. Subpart C.
- (b) For every aircraft managed, the approved continuing airworthiness management organisation shall:

1. develop and control a maintenance programme for the aircraft managed including any applicable reliability programme,
  2. present the aircraft maintenance programme and its amendments to the competent authority for approval, unless covered by an indirect approval procedure in accordance with point [M.A.302\(c\)](#), and for aircraft not used by licenced air carriers in accordance with Regulation (EC) No 1008/2008 provide a copy of the programme to the owner or operator responsible in accordance with [M.A.201](#),
  3. manage the approval of modification and repairs,
  4. ensure that all maintenance is carried out in accordance with the approved maintenance programme and released in accordance with [Section A, Subpart H](#) of this [Annex \(Part-M\)](#),
  5. ensure that all applicable airworthiness directives and operational directives with a continuing airworthiness impact, are applied,
  6. ensure that all defects discovered during scheduled maintenance or reported are corrected by an appropriately approved maintenance organisation,
  7. ensure that the aircraft is taken to an appropriately approved maintenance organisation whenever necessary,
  8. coordinate scheduled maintenance, the application of airworthiness directives, the replacement of service life limited parts, and component inspection to ensure the work is carried out properly,
  9. manage and archive all continuing airworthiness records and/or operator's technical log.
  10. ensure that the mass and balance statement reflects the current status of the aircraft.
- (c) In the case of complex motor-powered aircraft or aircraft used for CAT, or aircraft used for commercial specialised operations or commercial ATO operations, when the continuing airworthiness management organisation is not appropriately approved to [Part-145](#) or [Part-M.A. Subpart F](#), the organisation shall in consultation with the operator, establish a written maintenance contract with a [Part-145](#) or [Part-M.A. Subpart F](#) approved organisation or another operator, detailing the functions specified under [M.A.301-2](#), [M.A.301-3](#), [M.A.301-5](#) and [M.A.301-6](#), ensuring that all maintenance is ultimately carried out by a [Part-145](#) or [Part-M.A. Subpart F](#) approved maintenance organisation and defining the support of the quality functions of [M.A.712\(b\)](#).
- (d) Notwithstanding point (c), the contract may be in the form of individual work orders addressed to the [Part-145](#) or [Part-M.A. Subpart F](#) maintenance organisation in the case of:
1. an aircraft requiring unscheduled line maintenance,
  2. component maintenance, including engine maintenance.

## GM M.A.708 Continuing airworthiness management

*ED Decision 2016/011/R*

The CAMO should have adequate knowledge of the design status (type specification, customer options, airworthiness directives (ADs), airworthiness limitations contained in the aircraft instructions for continuing airworthiness, modifications, major repairs, operational equipment) and of the required and performed maintenance. The status of aircraft design and maintenance should be adequately documented to support the performance of the quality system.

For CS-25 aeroplanes, adequate knowledge of the airworthiness limitations should cover those contained in CS-25 Book 1, Appendix H, paragraph H25.4 and fuel tank system airworthiness limitations including critical design configuration control limitations (CDCCL).

### AMC M.A.708(b)3 Continuing Airworthiness Management

ED Decision 2015/029/R

When managing the approval of modifications or repairs the organisation should ensure that Critical Design Configuration Control Limitations are taken into account.

### GM M.A.708(b)(4) Continuing airworthiness management

ED Decision 2016/011/R

This requirement means that the CAMO is responsible for determining what maintenance is required, when it has to be performed, by whom and to what standard in order to ensure the continued airworthiness of the aircraft.

### AMC1 M.A.708(c) Continuing airworthiness management

ED Decision 2016/011/R

1. In case of complex motor-powered aircraft, aircraft used for CAT operations, aircraft used for commercial specialised operations and aircraft used by commercial ATO, the provisions of [M.A.201](#) establish that a CAMO is required. This CAMO is in charge of the continuing airworthiness management and this includes the tasks specified in [M.A.301](#) points (2), (3), (5) and (6). If the CAMO does not hold the appropriate maintenance organisation approval ([Subpart F](#) organisation approval or a [Part-145](#) approval), then the CAMO should conclude a contract with the appropriate organisation(s).
2. The CAMO bears the responsibility for the airworthy condition of the aircraft for which it performs the continuing airworthiness management. Thus, it should be satisfied before the intended flight that all required maintenance has been properly carried out.
3. The CAMO should agree with the operator on the process to select a maintenance organisation before concluding any contract with a maintenance organisation.
4. The fact that the CAMO has contracted a maintenance organisation approved under [Subpart F](#) or [Part-145](#) should not prevent it from checking at the maintenance facilities on any aspect of the contracted work to fulfil its responsibility for the airworthiness of the aircraft.
5. The contract between the CAMO and the maintenance organisation(s) should specify in detail the responsibilities and the work to be performed by each party.
6. Both the specification of work and the assignment of responsibilities should be clear, unambiguous and sufficiently detailed to ensure that no misunderstanding arises between the parties concerned that could result in a situation where work that has an effect on the airworthiness or serviceability of aircraft is not or will not be properly performed.
7. Special attention should be paid to procedures and responsibilities to ensure that all maintenance work is performed, service bulletins are analysed and decisions are taken on their accomplishment, airworthiness directives are accomplished on time and that all work, including non-mandatory modifications, is carried out to approved data and to the latest standards.
8. [Appendix XI to this AMC](#) gives further details on the subject.



## AMC2 M.A.708(c) Continuing airworthiness management

ED Decision 2016/011/R

### MAINTENANCE CONTRACT WITH ANOTHER CAMO/OPERATOR

1. The purpose of [M.A.708\(c\)](#) is to ensure that all maintenance is carried out by an appropriately approved maintenance organisation. It is possible to contract another operator/CAMO (secondary operator/CAMO) that does not hold a maintenance organisation approval when it proves that such a contract is in the interest of the CAMO by simplifying the management of its maintenance, and the CAMO keeps an appropriate control of it. In this case the continuing airworthiness management exposition should include appropriate procedures to ensure that all maintenance is ultimately carried out on time by approved maintenance organisations in accordance with the CAMO's data. In particular, the quality system procedures should place great emphasis on monitoring compliance with the above. The list of approved maintenance organisations, or a reference to this list, should be included in the CAMO's continuing airworthiness management exposition.
2. This contract should not preclude the CAMO from ensuring that all maintenance is performed by appropriately approved organisations which comply with the [M.A.201](#) continuing airworthiness responsibility requirements. Typical examples of such arrangements are the following:
  - Component maintenance:

The CAMO may find it more appropriate to have a primary contractor (the secondary operator/CAMO) dispatching the components to appropriately approved organisations rather than sending themselves different types of components to various maintenance organisations approved under [Part-145](#). The benefit for the CAMO is that the management of maintenance is simplified by having a single point of contact for component maintenance. The CAMO remains responsible for ensuring that all maintenance is performed by maintenance organisations approved under [Part-145](#) and in accordance with the approved standards.
  - Aircraft, engine and component maintenance:

The CAMO may wish to have a maintenance contract with a secondary operator/CAMO not approved under Part-145 for the same type of aircraft. A typical case is that of a dry-leased aeroplane between operators where the parties, for consistency or continuity reasons (especially for short-term lease agreements), find it appropriate to keep the aeroplane under the current maintenance arrangement. Where this arrangement involves various Part-145 approved contractors, it might be more manageable for the lessee CAMO to have a single maintenance contract with the lessor operator/CAMO. Whatever type of acceptable maintenance contract is concluded, the CAMO is required to exercise the same level of control on contracted maintenance, particularly through the [M.A.706\(c\)](#) continuing airworthiness management group of persons and quality system as referred to in [M.A.712](#).

## GM M.A.708(c) Continuing airworthiness management

ED Decision 2016/011/R

For line maintenance, the actual layout of the IATA Standard Ground Handling Agreement may be used as a basis, but this does not preclude the CAMO from ensuring that the content of the contract is acceptable and especially that the contract allows the CAMO to properly exercise its maintenance



responsibility. Those parts of the contract that have no effect on the technical or operational aspects of airworthiness are outside the scope of this paragraph.

## AMC M.A.708(d) Continuing airworthiness management

*ED Decision 2016/011/R*

The intent of this paragraph is that maintenance contracts are not necessary when the continuing airworthiness management exposition specifies that the relevant maintenance activity may be ordered through one-time work orders. This includes unscheduled line maintenance and may also include component maintenance up to engines, as long as the maintenance is manageable through work orders, both in terms of volume and complexity. It should be noted that this paragraph implies that even where base maintenance is ordered on a case-by-case basis, there should be a written maintenance contract.

## M.A.709 Documentation

*Regulation (EU) 2015/1536*

- (a) The approved continuing airworthiness management organisation shall hold and use applicable current maintenance data in accordance with point [M.A.401](#) for the performance of continuing airworthiness tasks referred to in point [M.A.708](#). This data may be provided by the owner or the operator, subject to an appropriate contract being established with such an owner or operator. In such case, the continuing airworthiness management organisation only needs to keep such data for the duration of the contract, except when required by point [M.A.714](#).
- (b) For aircraft not used by licenced air carriers in accordance with Regulation (EC) No 1008/2008, the approved continuing airworthiness management organisation may develop ‘baseline’ and/or ‘generic’ maintenance programmes in order to allow for the initial approval and/or the extension of the scope of an approval without having the contracts referred to in Appendix I to this [Annex \(Part-M\)](#). These ‘baseline’ and/or ‘generic’ maintenance programmes however do not preclude the need to establish an adequate Aircraft Maintenance Programme in compliance with point [M.A.302](#) in due time before exercising the privileges referred to in point [M.A.711](#).

## AMC M.A.709 Documentation

*ED Decision 2016/011/R*

When using maintenance data provided by the customer, the CAMO is responsible for ensuring that this data is current. As a consequence, it should establish appropriate procedures or provisions in the contract with the customer.

The sentence ‘..., except when required by point [M.A.714](#)’, means, in particular, the need to keep a copy of the customer data which was used to perform continuing airworthiness activities during the contract period.

‘Baseline’ maintenance programme: it is a maintenance programme developed for a particular aircraft type following, where applicable, the maintenance review board (MRB) report, the type certificate holder’s maintenance planning document (MPD), the relevant chapters of the maintenance manual or any other maintenance data containing information on scheduling.

‘Generic’ maintenance programme: it is a maintenance programme developed to cover a group of similar types of aircraft. These programmes should be based on the same type of instructions as the baseline maintenance programme. Examples of ‘generic’ maintenance programmes could be Cessna 100 Series (covering Cessna 150, 172, 177, etc.).

'Baseline' and 'generic' maintenance programmes are not applicable to a particular aircraft registration mark, but to an aircraft type or group of types, and should be available to the competent authority prior to the initial approval and prior to the extension of the scope of an existing organisation approval. The intent is that the competent authority is aware of the scope and complexity of tasks that will be managed before granting an organisation approval or change of approval.

After this initial approval, when an owner/operator is contracted, the baseline or generic maintenance programme, as applicable, may be used to establish the [M.A.302](#) aircraft maintenance programme, incorporating the additional maintenance tasks and indicating those which are not applicable to a particular aircraft registration mark. This may be achieved by adding an Annex to the baseline/generic maintenance programme for each aircraft registration, specifying which tasks are added and which are not applicable. This will result in an aircraft maintenance programme specific for each customer.

However, this does not mean that this adaptation must be performed for each contracted aircraft registration. The reason is that the customer may already have an approved aircraft maintenance programme, which in that case should be used by the continuing airworthiness management organisation to manage the continuing airworthiness of such aircraft.

Continuing airworthiness management organisations may seek authorisation for indirect approval in order to amend the aircraft maintenance programme mentioned above in accordance with [M.A.302\(c\)](#). The indirect approval procedure should include provisions to notify to the competent authority that an aircraft maintenance programme specific for a customer has been created. The reason is that, according to [M.A.704\(a\)](#)<sup>9</sup>, for aircraft not used by air carriers licensed in accordance with Regulation (EC) No 1008/2008, the Continuing Airworthiness Management Exposition (CAME) only needs to include the reference to the baseline/generic maintenance programme.

## GM M.A.709 Documentation

*ED Decision 2015/029/R*

Paragraph [M.A.709\(a\)](#) refers to continuing airworthiness tasks referred to in [M.A.708](#). As a consequence, this covers continuing airworthiness management tasks but not airworthiness reviews.

Airworthiness review requirements are established in [M.A.710](#) and the requirements for the corresponding record retention are contained in [M.A.714](#).

## M.A.710 Airworthiness review

*Regulation (EU) 2015/1088*

- (a) To satisfy the requirement for the airworthiness review of an aircraft referred to in point [M.A.901](#), a full documented review of the aircraft records shall be carried out by the approved continuing airworthiness management organisation in order to be satisfied that:
1. airframe, engine and propeller flying hours and associated flight cycles have been properly recorded; and
  2. the flight manual is applicable to the aircraft configuration and reflects the latest revision status; and
  3. all the maintenance due on the aircraft according to the approved maintenance programme has been carried out; and
  4. all known defects have been corrected or, when applicable, carried forward in a controlled manner; and
  5. all applicable airworthiness directives have been applied and properly registered; and

6. all modifications and repairs applied to the aircraft have been registered and are in compliance with Annex I (Part-21) to Regulation (EU) No 748/2012; and
  7. all service life limited components installed on the aircraft are properly identified, registered and have not exceeded their approved service life limit; and
  8. all maintenance has been released in accordance with [Annex I \(Part-M\)](#); and
  9. the current mass and balance statement reflects the configuration of the aircraft and is valid; and
  10. the aircraft complies with the latest revision of its type design approved by the Agency; and
  11. if required, the aircraft holds a noise certificate corresponding to the current configuration of the aircraft in compliance with Subpart I of Annex I (Part-21) to Regulation (EU) No 748/2012.
- (b) The airworthiness review staff of the approved continuing airworthiness management organisation shall carry out a physical survey of the aircraft. For this survey, airworthiness review staff not appropriately qualified to [Annex III \(Part-66\)](#) shall be assisted by such qualified personnel.
- (c) Through the physical survey of the aircraft, the airworthiness review staff shall ensure that:
1. all required markings and placards are properly installed; and
  2. the aircraft complies with its approved flight manual; and
  3. the aircraft configuration complies with the approved documentation; and
  4. no evident defect can be found that has not been addressed according to point [M.A.403](#); and
  5. no inconsistencies can be found between the aircraft and the point (a) documented review of records.
- (d) By derogation to point [M.A.901\(a\)](#), the airworthiness review can be anticipated by a maximum period of 90 days without loss of continuity of the airworthiness review pattern, to allow the physical review to take place during a maintenance check.
- (e) The airworthiness review certificate ([EASA Form 15b](#)) or the recommendation for the issue of the airworthiness review certificate ([EASA Form 15a](#)) referred to in [Appendix III to Annex I \(Part-M\)](#) can only be issued:
1. by airworthiness review staff appropriately authorised in accordance with point [M.A.707](#) on behalf of the approved continuing airworthiness management organisation or by certifying staff in cases provided for in point [M.A.901\(g\)](#); and
  2. when satisfied that the airworthiness review has been completely carried out and that there is no non-compliance which is known to endanger flight safety.
- (f) A copy of any airworthiness review certificate issued or extended for an aircraft shall be sent to the Member State of Registry of that aircraft within 10 days.
- (g) Airworthiness review tasks shall not be sub-contracted.
- (ga) For ELA1 aircraft not involved in commercial operations for which the aircraft maintenance programme has been established in accordance with [M.A.302\(h\)](#), the aircraft maintenance

programme shall be reviewed in conjunction with the airworthiness review. This review shall be accomplished by the person who performed the airworthiness review.

- (h) Should the outcome of the airworthiness review be inconclusive or should the review under point [M.A.710\(ga\)](#) show discrepancies on the aircraft linked to deficiencies in the content of the maintenance programme, the competent authority shall be informed by the organisation as soon as practicable but in any case within 72 hours from the moment the organisation identifies the condition to which the review relates. The airworthiness review certificate shall not be issued until all findings have been closed.

## GM M.A.710 Airworthiness review

ED Decision 2015/029/R

### Responsibilities of airworthiness review staff:

The following is a summary of the requirements contained in [M.A.710](#) as well as the associated AMCs and Appendices, in relation to the responsibilities of the airworthiness review staff:

- Airworthiness review staff are responsible for performing both the documental and the physical survey.
- Procedures must be established by the CAMO in order to perform the airworthiness review, including the depth of samplings (refer to [Appendix V to AMC M.A.704](#), paragraphs 4.2 and 4.3).
- Procedures must make very clear that the final word about the depth of the inspections (both documental and physical) belongs to the airworthiness review staff, who can go beyond the depth contained in the CAME if they find it necessary. At the end, it is the responsibility of the airworthiness review staff to be satisfied that the aircraft complies with [Part-M](#) and is airworthy, and the organisation must ensure that no pressure or restrictions are imposed on the airworthiness review staff when performing their duty.
- A compliance report must be produced by the airworthiness review staff, detailing all items checked and the outcome of the review.
- Airworthiness review staff are responsible for the items checked during the airworthiness review. However, they do not take over the responsibilities of the CAMO, [Part-145](#), DOA, POA or any other organisations, not being responsible for problems not detected during the airworthiness review or for the possibility that the approved or declared maintenance programme may not include certain recommendations from the Design Approval Holder. Obviously, if the airworthiness review staff are not independent of the airworthiness management process and were nominated on the basis of the option of having overall authority on such a process, they will be responsible for the full continuing airworthiness of such aircraft. Nevertheless, this responsibility will be a consequence of their position related to [M.A.706](#) and not of their position as airworthiness review staff ([M.A.707](#)).
- The issuance of the airworthiness review certificate (ARC) by the airworthiness review staff only certifies that the aircraft is considered airworthy in relation to the scope of the airworthiness review performed and the fact that the airworthiness review staff are not aware of instances of non-compliance which endanger flight safety. Furthermore, it only certifies that the aircraft is considered airworthy at the time of the review.

It is the responsibility of the owner or contracted CAMO to ensure that the aircraft is fully airworthy at any time.

## AMC M.A.710(a) Airworthiness review

ED Decision 2016/011/R

1. A full documented review is a check of at least the following categories of documents:
  - registration papers
  - [M.A.305](#) aircraft continuing airworthiness record system
  - [M.A.306](#) aircraft technical log system
  - list of deferred defects, minimum equipment list and configuration deviation list if applicable
  - aircraft flight manual including aircraft configuration
  - aircraft maintenance programme
  - maintenance data
  - relevant work packages
  - AD status
  - modification and SB status
  - modification and repair approval sheets
  - list of service life-limited component
  - relevant [EASA Form 1](#) or equivalent
  - mass and balance report and equipment list
  - aircraft, engine and propeller TC Data Sheets

As a minimum, sample checks within each document category should be carried out.

2. The CAMO should develop procedures for the airworthiness review staff to produce a compliance report that confirms the above have been reviewed and found in compliance with [Part-M](#).

## AMC M.A.710(b) and (c) Airworthiness review

ED Decision 2015/029/R

1. The physical survey could require actions categorised as maintenance (e.g. operational tests, tests of emergency equipment, visual inspections requiring panel opening etc.). In this case, after the airworthiness review a release to service should be issued in accordance with [Part-M](#).
2. When the airworthiness review staff are not appropriately qualified to [Part-66](#) in order to release such maintenance, [M.A.710\(b\)](#) requires them to be assisted by such qualified personnel. However, the function of such [Part-66](#) personnel is limited to perform and release the maintenance actions requested by the airworthiness review staff, it not being their function to perform the physical survey of the aircraft. As stated in [M.A.710\(b\)](#), the airworthiness review staff shall carry out the physical survey of the aircraft, and this survey includes the verification that no inconsistencies can be found between the aircraft and the documented review of records.
3. This means that the airworthiness review staff who are going to sign the airworthiness review certificate or the recommendation should be the one performing both the documented review

and the physical survey of the aircraft, it not being the intent of the rule to delegate the survey to [Part-66](#) personnel who are not airworthiness review staff. Furthermore, the provision of [M.A.710\(d\)](#) allowing a 90 days anticipation for the physical survey provides enough flexibility to ensure that the airworthiness review staff are present.

4. The physical survey may include verifications to be carried out during flight.
5. The CAMO should develop procedures for the airworthiness review staff to produce a compliance report that confirms the physical survey has been carried out and found satisfactory.
6. To ensure compliance the physical survey may include relevant sample checks of items.

### AMC M.A.710(d) Airworthiness review

*ED Decision 2015/029/R*

‘Without loss of continuity of the airworthiness review pattern’ means that the new expiration date is set up one year after the previous expiration date. As a consequence, when the airworthiness review is anticipated, the validity of the airworthiness review certificate is longer than one year (up to 90 days longer).

This anticipation of up to 90 days also applies to the 12 month requirements shown in [M.A.901\(b\)](#), which means that the aircraft is still considered as being in a controlled environment if it has been continuously managed by a single organisation and maintained by appropriately approved organisations, as stated in [M.A.901\(b\)](#), from the date when the last airworthiness review certificate was issued until the date when the new airworthiness review is performed (this can be up to 90 days less than 12 months).

### AMC M.A.710(e) Airworthiness review

*ED Decision 2015/029/R*

A copy of both physical survey and document review compliance reports stated above should be sent to the competent authority together with any recommendation issued.

### AMC M.A.710(ga) Airworthiness review

*ED Decision 2015/029/R*

This review of the maintenance programme is performed by the person who performed the airworthiness review, who could belong to the competent authority, a CAMO or a maintenance organisation or could also be independent certifying staff in accordance with [M.A.901\(g\)](#).

During the annual review of the maintenance programme, the following should be taken into consideration:

- The results of the maintenance performed during that year, which may reveal that the current maintenance programme is not adequate.
- The results of the airworthiness review performed on the aircraft, which may reveal that the current maintenance programme is not adequate.
- Revisions introduced in the documents affecting the programme basis, such as the [M.A.302\(i\)](#) ‘Minimum Inspection Programme’ or the Design Approval Holder data.

- Applicable mandatory requirements for compliance with Part-21, such as Airworthiness Directives, Airworthiness Limitations, Certification Maintenance Requirements and specific maintenance requirements contained in the TCDS.

For the purpose of reviewing the results of the maintenance performed during that year, the airworthiness review staff should request the owner/CAMO to provide the records of all the maintenance performed during that year, including unscheduled maintenance.

When reviewing the results of the maintenance performed during that year and the results of the airworthiness review, attention should be paid as to whether the defects found may have been prevented by introducing in the maintenance programme certain recommendations from the Design Approval Holder which were initially disregarded by the owner.

## GM M.A.710(h) Airworthiness review

*ED Decision 2015/029/R*

The objective of informing the competent authority when the airworthiness review shows discrepancies linked to deficiencies in the content of the maintenance programme is to allow the competent authority to take it into account when planning the ACAM inspections and to make sure that the competent authority agrees on the amendments required in the maintenance programme as required by [M.A.302\(h\)5](#).

## M.A.711 Privileges of the organisation

*Regulation (EU) 2015/1536*

- (a) A continuing airworthiness management organisation approved in accordance with [Section A, Subpart G](#) of this [Annex \(Part-M\)](#) may:
  1. manage the continuing airworthiness of aircraft, except those used by licenced air carriers in accordance with Regulation (EC) No 1008/2008, as listed on the approval certificate;
  2. manage the continuing airworthiness of aircraft used by licenced air carriers in accordance with Regulation (EC) No 1008/2008, when listed both on its approval certificate and on its Air Operator Certificate (AOC);
  3. arrange to carry out limited continuing airworthiness tasks with any contracted organisation, working under its quality system, as listed on the approval certificate;
  4. extend, under the conditions of point [M.A.901\(f\)](#), an airworthiness review certificate that has been issued by the competent authority or by another continuing airworthiness management organisation approved in accordance with [Section A, Subpart G](#) of this [Annex \(Part-M\)](#);
- (b) An approved continuing airworthiness management organisation registered in one of the Member States may, additionally, be approved to carry out airworthiness reviews referred to in point [M.A.710](#) and:
  1. issue the related airworthiness review certificate and extend it in due time under the conditions of points [M.A.901\(c\)2](#) or [M.A.901\(e\)2](#); and,
  2. issue a recommendation for the airworthiness review to the competent authority of the Member State of registry.
- (c) A continuing airworthiness management organisation whose approval includes the privileges referred to in point [M.A.711\(b\)](#) may additionally be approved to issue a permit to fly in



accordance with point 21.A.711(d) of Annex I (Part-21) to Regulation (EU) No 748/2012 for the particular aircraft for which the organisation is approved to issue the airworthiness review certificate, when the continuing airworthiness management organisation is attesting conformity with approved flight conditions, subject to an adequate approved procedure in the exposition referred to in point [M.A.704](#).

## AMC M.A.711(a)(3) Privileges of the organisation

*ED Decision 2016/011/R*

### SUBCONTRACTING OF CONTINUING AIRWORTHINESS TASKS

1. The CAMO may subcontract certain continuing airworthiness management tasks to qualified persons or organisations. The subcontracted person or organisation performs the continuing airworthiness management tasks as an integral part of the CAMO's continuing airworthiness management system, irrespective of any other approval held by the subcontracted person or organisation (including CAMO or [Part-145](#) approval).
2. The CAMO remains accountable for the satisfactory completion of the continuing airworthiness management tasks irrespective of any contract that may be established.
3. In order to fulfil this responsibility, the CAMO should be satisfied that the actions taken by the subcontracted person or organisation meet the standards required by [Subpart G](#). Therefore, the CAMO management of such activities should be accomplished:
  - (a) by active control through direct involvement, and/or
  - (b) by endorsing the recommendations made by the subcontracted person or organisation.
4. In order to retain ultimate responsibility, the CAMO should limit subcontracted tasks to the activities specified below:
  - (a) airworthiness directive analysis and planning;
  - (b) service bulletin analysis;
  - (c) planning of maintenance;
  - (d) reliability monitoring, engine health monitoring;
  - (e) maintenance programme development and amendments;
  - (f) any other activities, which do not limit the CAMO responsibilities, as agreed by the competent authority.
5. The CAMO's controls associated with subcontracted continuing airworthiness management tasks should be reflected in the associated contract and be in accordance with the CAMO policy and procedures defined in the continuing airworthiness management exposition. When such tasks are subcontracted, the continuing airworthiness management system is considered to be extended to the subcontracted persons or organisations.
6. With the exception of engines and auxiliary power units, contracts would normally be limited to one organisation per aircraft type for any combination of the activities described in Appendix II. Where contracts are made with more than one organisation, the CAMO should demonstrate that adequate coordination controls are in place and that the individuals' responsibilities are clearly defined in the related contracts.
7. Contracts should not authorise the subcontracted organisation to subcontract to other organisations elements of the continuing airworthiness management tasks.



8. The competent authority should exercise oversight of the subcontracted activities through the CAMO approval. The contracts should be acceptable to the competent authority. The CAMO should only subcontract to organisations which are specified by the competent authority on [EASA Form 14](#).
9. The subcontracted organisation should agree to notify the CAMO of any changes affecting the contract as soon as practical. The CAMO should then inform its competent authority. Failure to do so may invalidate the competent authority's acceptance of the contract.
10. [Appendix II to AMC M.A.711\(a\)\(3\)](#) provides information on the subcontracting of continuing airworthiness management tasks.

## AMC M.A.711(b) Privileges of the organisation

ED Decision 2015/029/R

An organisation may be approved for the privileges of [M.A.711\(a\)](#) only, without the privilege to carry out airworthiness reviews. This can be contracted to another appropriately approved organisation. In such a case, it is not mandatory that the contracted organisation is linked to an AOC holder, being possible to contract an appropriately approved independent continuing airworthiness management organisation which is approved for the same aircraft type.

In order to be approved for the privileges of [M.A.711\(b\)](#) for a particular aircraft type, it is necessary to be approved for the privileges of [M.A.711\(a\)](#) for that aircraft type. As a consequence, the normal situation in this case is that the organisation will be performing continuing airworthiness management tasks and performing airworthiness reviews on every aircraft type contained in the approval certificate.

Nevertheless, this does not necessarily mean that the organisation needs to be currently managing an aircraft type in order to be able to perform airworthiness reviews on that aircraft type. The organisation may be performing only airworthiness reviews on an aircraft type without having any customer under contract for that type.

Furthermore, this situation should not necessarily lead to the removal of the aircraft type from the organisation approval. As a matter of fact, since in most cases the airworthiness review staff are not involved in continuing airworthiness management activities, it cannot be argued that these airworthiness review staff are going to lose their skills just because the organisation is not managing a particular aircraft type. The important issue in relation to maintaining a particular aircraft type in the organisation approval is whether the organisation continuously fulfils all the [Subpart G](#) requirements (facilities, documentation, qualified personnel, quality system, etc.) required for initial approval.

## AMC M.A.711(c) Privileges of the organisation

ED Decision 2016/011/R

The sentence 'for the particular aircraft for which the organisation is approved to issue the airworthiness review certificate' contained in [M.A.711\(c\)](#) means that:

- For aircraft used by air carriers licensed in accordance with Regulation (EC) No 1008/2008, and for aircraft above 2 730kg MTOM, except balloons, the permit to fly can only be issued for aircraft which are in a controlled environment and are managed by that CAMO.
- For aircraft of 2 730kg MTOM and below not used by air carriers licensed in accordance with Regulation (EC) No 1008/2008, and for all balloons, the permit to fly can be issued for any aircraft.

## M.A.712 Quality system

Regulation (EU) 2015/1536

- (a) To ensure that the approved continuing airworthiness management organisation continues to meet the requirements of this Subpart, it shall establish a quality system and designate a quality manager to monitor compliance with, and the adequacy of, procedures required to ensure airworthy aircraft. Compliance monitoring shall include a feedback system to the accountable manager to ensure corrective action as necessary.
- (b) The quality system shall monitor activities carried out under [Section A, Subpart G](#) of this [Annex \(Part-M\)](#). It shall at least include the following functions:
  - 1. monitoring that all activities carried out under [Section A, Subpart G](#) of this [Annex \(Part-M\)](#) are being performed in accordance with the approved procedures, and;
  - 2. monitoring that all contracted maintenance is carried out in accordance with the contract, and;
  - 3. monitoring the continued compliance with the requirements of this Part.
- (c) The records of these activities shall be stored for at least two years.
- (d) Where the approved continuing airworthiness management organisation is approved in accordance with another Part, the quality system may be combined with that required by the other Part.
- (e) For licenced air carriers in accordance with Regulation (EC) No 1008/2008 the [M.A. Subpart G](#) quality system shall be an integrated part of the operator's quality system.
- (f) In the case of a small organisation not managing the continuing airworthiness of aircraft used by licenced air carriers in accordance with Regulation (EC) No 1008/2008, the quality system may be replaced by regular organisational reviews subject to the approval of the competent authority, except when the organisation issues airworthiness review certificates for aircraft above 2730 kg MTOM other than balloons. In the case where there is no quality system, the organisation shall not contract continuing airworthiness management tasks to other parties.

## AMC M.A.712(a) Quality system

ED Decision 2015/029/R

- 1. Procedures should be held current such that they reflect best practice within the organisation. It is the responsibility of all employees to report any difficulties with the procedures via their organisation's internal occurrence reporting mechanisms.
- 2. All procedures, and changes to the procedures, should be verified and validated before use where practicable.
- 3. The feedback part of the system should address who is required to rectify any non-compliance in each particular case and the procedure to be followed if rectification is not completed within appropriate timescales. The procedure should lead to the accountable manager specified in [M.A.706](#).
- 4. The independent quality audit reports referenced in [AMC M.A.712\(b\)](#) should be sent to the relevant department for rectification action giving target rectification dates. Rectification dates should be discussed with such department before the quality department or nominated quality auditor confirms such dates in the report. The relevant department is required to rectify findings and inform the quality manager or the quality auditor of such rectification.

5. The accountable manager should hold regular meetings with staff to check progress on rectification except that in the large organisations such meetings may be delegated on a day to day basis to the quality manager subject to the accountable manager meeting at least twice per year with the senior staff involved to review the overall performance and receiving at least a half yearly summary report on findings of non-compliance.

## AMC M.A.712(b) Quality System

*ED Decision 2015/029/R*

1. The primary objectives of the quality system are to enable the CAMO to ensure airworthy aircraft and to remain in compliance with the [Part-M](#) requirements.
2. An essential element of the quality system is the independent audit.
3. The independent audit is an objective process of routine sample checks of all aspects of the CAMO ability to carry out continuing airworthiness management to the required standards. It includes some product sampling as this is the end result of the process.
4. The independent audit represents an objective overview of the complete continuing airworthiness management related activities. It is intended to complement the [M.A.902](#) requirement for an airworthiness review to be satisfied that all aircraft managed by the organisation remain airworthy.
5. The independent audit should ensure that all aspects of [M.A. Subpart G](#) compliance are checked annually, including all the sub-contracted activities, and may be carried out as a complete single exercise or subdivided over the annual period in accordance with a scheduled plan. The independent audit does not require each procedure to be checked against each product line when it can be shown that the particular procedure is common to more than one product line and the procedure has been checked every year without resultant findings. Where findings have been identified, the particular procedure should be rechecked against other product lines until the findings have been rectified after which the independent audit procedure may revert back to the annual interval for the particular procedure. Provided that there are no safety related findings, the audit time periods specified in this AMC may be increased by up to 100% subject to agreement by the competent authority.
6. Where the organisation has more than one location approved the quality system should describe how these are integrated into the system and include a plan to audit each location every year.
7. A report should be raised each time an audit is carried out describing what was checked and the resulting findings against applicable requirements, procedures and products.
8. The independence of the audit should be established by always ensuring that audits are carried out by personnel not responsible for the function, procedure or products being checked.
9. An organisation should establish a quality plan acceptable to the competent authority to show when and how often the activities as required by [M.A. Subpart G](#) will be audited.

## AMC M.A.712(f) Quality system

*ED Decision 2015/029/R*

A small organisation is considered to be an organisation with up to 5 full-time staff (including all [M.A.706](#) personnel) or equivalent proportional number when using part-time staff. The complexity of the organisation, combination of aircraft and aircraft types, the utilisation of the aircraft and the

number of approved locations of the organisations should also be considered before replacing the quality system by an organisational review.

[Appendix XIII to this AMC](#) should be used to manage the organisational reviews.

The following activities should not be considered as subcontracting and, as a consequence, they may be performed without a quality system, although they need to be described in the continuing airworthiness management exposition and be approved by the competent authority:

- Subscription to a technical publisher that provides maintenance data (Aircraft Maintenance Manuals, Illustrated Parts Catalogues, Service Bulletins, etc.), which may be applicable to a wide range of aircraft. These data may include maintenance schedules recommended by different manufacturers that can be afterwards used by the continuing airworthiness management organisation in order to produce customised maintenance programmes.
- Contracting the use of a software tool for the management of continuing airworthiness data and records, under the following conditions (in addition to [M.A.714\(d\) and \(e\)](#)):
  - If the tool is used by several organisations, each organisation should have access to its own data only.
  - Introduction of data can only be performed by personnel of the continuing airworthiness management organisation.
  - The data can be retrieved at any time.

## **M.A.713 Changes to the approved continuing airworthiness organisation**

*Regulation (EU) No 1321/2014*

In order to enable the competent authority to determine continued compliance with this Part, the approved continuing airworthiness management organisation shall notify it of any proposal to carry out any of the following changes, before such changes take place:

1. the name of the organisation.
2. the location of the organisation.
3. additional locations of the organisation.
4. the accountable manager.
5. any of the persons specified in [M.A.706\(c\)](#).
6. the facilities, procedures, work scope and staff that could affect the approval.

In the case of proposed changes in personnel not known to the management beforehand, these changes shall be notified at the earliest opportunity.

## **AMC M.A.713 Changes to the approved continuing airworthiness organisation**

*ED Decision 2016/011/R*

This paragraph covers scheduled changes to the CAMO approval. The primary purpose of this paragraph is to enable the CAMO to remain approved if agreed by the competent authority during negotiations about any of the specified changes. Without this paragraph the approval would automatically be suspended in all cases.

## M.A.714 Record-keeping

Regulation (EU) No 1321/2014

- (a) The continuing airworthiness management organisation shall record all details of work carried out. The records required by [M.A.305](#) and if applicable [M.A.306](#) shall be retained.
- (b) If the continuing airworthiness management organisation has the privilege referred to in point [M.A.711\(b\)](#), it shall retain a copy of each airworthiness review certificate and recommendation issued or, as applicable, extended, together with all supporting documents. In addition, the organisation shall retain a copy of any airworthiness review certificate that it has extended under the privilege referred to in point [M.A.711\(a\)4](#).
- (c) If the continuing airworthiness management organisation has the privilege referred to in point [M.A.711\(c\)](#), it shall retain a copy of each permit to fly issued in accordance with the provisions of point 21A.729 of Annex I (Part-21) to Regulation (EU) No 748/2012.
- (d) The continuing airworthiness management organisation shall retain a copy of all records referred to in points (b) and (c) until two years after the aircraft has been permanently withdrawn from service.
- (e) The records shall be stored in a manner that ensures protection from damage, alteration and theft.
- (f) All computer hardware used to ensure backup shall be stored in a different location from that containing the working data in an environment that ensures they remain in good condition.
- (g) Where continuing airworthiness management of an aircraft is transferred to another organisation or person, all retained records shall be transferred to the said organisation or person. The time periods prescribed for the retention of records shall continue to apply to the said organisation or person.
- (h) Where a continuing airworthiness management organisation terminates its operation, all retained records shall be transferred to the owner of the aircraft.

## AMC M.A.714 Record-keeping

ED Decision 2015/029/R

1. The CAMO should ensure that it always receives a complete CRS from the approved maintenance organisation, [M.A.801\(b\)\(2\)](#) certifying staff and/or from the Pilot-owner such that the required records can be retained. The system to keep the continuing airworthiness records should be described in the organisation continuing airworthiness management exposition.
2. When an organisation arranges for the relevant maintenance organisation to retain copies of the continuing airworthiness records on its behalf, it will nevertheless continue to be responsible for the records under [M.A.714](#) relating to the preservation of records. If it ceases to be the organisation of the aircraft, it also remains responsible for transferring the records to any other person or organisation managing continuing airworthiness of the aircraft.
3. Keeping continuing airworthiness records in a form acceptable to the competent authority means in paper form or on a computer database or a combination of both methods. Records stored in microfilm or optical disc form are also acceptable. The record should remain legible throughout the required retention period.
4. Paper systems should use robust material which can withstand normal handling and filing.

5. Computer systems should have at least one backup system which should be updated within 24 hours of any new entry. Each terminal is required to contain programme safeguards against the ability of unauthorised personnel to alter the database.

Microfilming or optical storage of continuing airworthiness records may be carried out at any time. The records should be as legible as the original record and remain so for the required retention period.

## **M.A.715 Continued validity of approval**

*Regulation (EU) No 1321/2014*

- (a) An approval shall be issued for an unlimited duration. It shall remain valid subject to:
1. the organisation remaining in compliance with this Part, in accordance with the provisions related to the handling of findings as specified under point [M.B.705](#) and;
  2. the competent authority being granted access to the organisation to determine continued compliance with this Part, and;
  3. the approval not being surrendered or revoked.
- (b) Upon surrender or revocation, the approval certificate shall be returned to the competent authority.

## **M.A.716 Findings**

*Regulation (EU) No 1321/2014*

- (a) A level 1 finding is any significant non-compliance with [Part-M](#) requirements which lowers the safety standard and hazards seriously the flight safety.
- (b) A level 2 finding is any non-compliance with the [Part-M](#) requirements which could lower the safety standard and possibly hazard the flight safety.
- (c) After receipt of notification of findings according to point [M.B.705](#), the holder of the continuing airworthiness management organisation approval shall define a corrective action plan and demonstrate corrective action to the satisfaction of the competent authority within a period agreed with this authority.

## SUBPART H — CERTIFICATE OF RELEASE TO SERVICE — CRS

### M.A.801 Aircraft certificate of release to service

Regulation (EU) 2015/1536

- (a) Except for aircraft released to service by a maintenance organisation approved in accordance with [Annex II \(Part-145\)](#), the certificate of release to service shall be issued according to this Subpart;
- (b) No aircraft can be released to service unless a certificate of release to service is issued at the completion of any maintenance, when satisfied that all maintenance required has been properly carried out, by:
1. appropriate certifying staff on behalf of the maintenance organisation approved in accordance with [Section A, Subpart F](#) of this Annex ([Part-M](#)); or
  2. certifying staff in compliance with the requirements laid down in [Annex III \(Part-66\)](#), except for complex maintenance tasks listed in [Appendix VII to this Annex](#) for which point 1 applies; or
  3. by the Pilot-owner in compliance with point [M.A.803](#);
- (c) By derogation from point [M.A.801\(b\)2](#) for ELA1 aircraft not used in CAT or not used in commercial specialised operations or not used in commercial ATO operations, aircraft complex maintenance tasks listed in [Appendix VII](#) may be released by certifying staff referred to in point [M.A.801\(b\)2](#);
- (d) By derogation from point [M.A.801\(b\)](#), in the case of unforeseen situations, when an aircraft is grounded at a location where no approved maintenance organisation appropriately approved under this Annex or [Annex II \(Part-145\)](#) and no appropriate certifying staff are available, the owner may authorise any person, with no less than 3 years of appropriate maintenance experience and holding the proper qualifications, to maintain according to the standards set out in [Subpart D of this Annex](#) and release the aircraft. The owner shall in that case:
1. obtain and keep in the aircraft records details of all the work carried out and of the qualifications held by that person issuing the certification; and
  2. ensure that any such maintenance is rechecked and released by an appropriately authorised person referred to in point [M.A.801\(b\)](#) or an organisation approved in accordance with [Section A, Subpart F](#) of this [Annex \(Part-M\)](#), or with [Annex II \(Part-145\)](#) at the earliest opportunity but within a period not exceeding 7 days; and
  3. notify the organisation responsible for the continuing airworthiness management of the aircraft when contracted in accordance with point [M.A.201\(j\)](#), or the competent authority in the absence of such a contract, within 7 days of the issuance of such certification authorisation;
- (e) In the case of a release to service in accordance with point [M.A.801\(b\)2](#) or point [M.A.801\(c\)](#), the certifying staff may be assisted in the execution of the maintenance tasks by one or more persons subject to his/her direct and continuous control;
- (f) A certificate of release to service shall contain as a minimum:
1. basic details of the maintenance carried out; and
  2. the date such maintenance was completed; and



3. the identity of the organisation and/or person issuing the release to service, including:
    - (i) the approval reference of the maintenance organisation approved in accordance with [Section A, Subpart F](#) of this [Annex \(Part-M\)](#) and the certifying staff issuing such a certificate; or
    - (ii) in the case of point [M.A.801\(b\)2](#) or [M.A.801\(c\)](#) certificate of release to service, the identity and if applicable licence number of the certifying staff issuing such a certificate;
  4. the limitations to airworthiness or operations, if any.
- (g) By derogation from point (b) and notwithstanding the provisions of point (h), when the maintenance prescribed cannot be completed, a certificate of release to service may be issued within the approved aircraft limitations. Such fact together with any applicable limitations of the airworthiness or the operations shall be entered in the aircraft certificate of release to service before its issue as part of the information required in point (f)4;
- (h) A certificate of release to service shall not be issued in the case of any known non-compliance which endangers flight safety.

## AMC M.A.801 Aircraft certificate of release to service after embodiment of a Standard Change or a Standard Repair (SC/SR)

*ED Decision 2016/011/R*

### 1. Release to service and eligible persons

Only natural or legal persons entitled to release to service an aircraft after maintenance in accordance with [Part-M](#) or [Part-145](#) are considered as an eligible installer responsible for the embodiment of a SC/SR when in compliance with applicable requirements.

- For aircraft where there is no [Part-66](#) licence applicable, the release to service of an aircraft after embodiment of a SC/SR is only possible by holders of an appropriate certifying staff qualification valid in a Member State (national qualification), with the following conditions:
  - If the holder signs the release to service on behalf of an Approved Maintenance Organisation (AMO), this is valid for aircraft registered in any Member State.
  - If the holder signs the release to service as an independent certifying staff (not on behalf of an AMO), this is only valid for aircraft registered in the Member State responsible for such certifying staff qualification.

Depending on its nature, for certain SCs/SRs, the Certification Specification CS-STAN might restrict the eligibility for the issuance of the release to service to certain persons.

Since the design of the SC/SR does not require specific approval, the natural or legal person releasing the aircraft to service after the embodiment of the change or repair takes the responsibility that the applicable Certification Specifications within CS-STAN are fulfilled while being in compliance with [Part-M](#) and/or [Part-145](#) and not in conflict with TC holders' data. This includes responsibility in respect of an adequate design, the selection/manufacturing of suitable parts and their identification, documenting the change or repair, generation or amendment of aircraft manuals and instructions as needed, embodiment of the change/repair, releasing the aircraft to service and record-keeping.

### 2. Parts and appliances to be installed as part of a SC/SR



The design of the parts and appliances to be used in a SC/SR is considered a part of the change/repair, and, therefore, there is no need of a specific design approval. However, it is possible that for a particular SC, these Certification Specifications specifically require the use of parts and appliances that meet a technical standard. In this case, when the parts and appliances require to be authorised as an ETSO article, other articles recognised as equivalent by means of an international safety agreement or grandfathered in accordance with Regulation (EU) No 748/2012 are equally acceptable.

Normally, a SC/SR shall not contain specifically designed parts that should be produced by a production organisation approved in accordance with Part-21 (POA). However, in the case that the change or repair would contain such a part, it should be produced by an approved Production Organisation (POA), and delivered with an EASA Form 1. An arrangement in accordance with 21.A.122(b) is not applicable.

Eligibility for installation of parts and appliances belonging to a SC/SR is subject to compliance with the Part-21 and [Part-M](#) and [Part-145](#) related provisions, and the situation varies depending on the aircraft in/on which the SC/SR is to be embodied, and who the installer is. The need for an EASA Form 1 is addressed in Part-21 and [Part-M](#), while less restrictive rules may, for instance, apply for ELA1 and ELA2 aircraft parts (e.g. 21.A.307) and sailplanes parts (e.g. AMC 21A.303 of the 'AMC and GM to Part-21'). Furthermore, [Part-M](#) Subpart F and [Part-145](#) contain provisions (i.e. [M.A.603\(c\)](#) and [145.A.42\(c\)](#)) allowing maintenance organisations to fabricate certain parts to be installed in/on the aircraft as part of their maintenance activities.

### **3. Parts and appliances identification**

The parts modified or installed during the embodiment of the SC/SR need to be permanently marked in accordance with Part-21 Subpart Q.

### **4. Documenting the SC/SR and declaring compliance with the Certification Specifications**

In accordance with [Part-M](#) or [Part-145](#) (e.g. [AMC M.A.801\(f\)](#) and [145.A.50\(b\)](#)), the legal or natural person responsible for the embodiment of a change or a repair should compile details of the work accomplished. In the case of SCs/SRs, this includes, as necessary, based on its complexity, an engineering file containing drawings, a list of the parts and appliances used for the change or repair, supporting analysis and the results of tests performed or any other evidence suitable to show that the design fulfils the applicable Certification Specifications within CS-STAN together with a statement of compliance and amendments to aircraft manuals, to instructions for continuing airworthiness and to other documents such as aircraft parts list, wiring diagrams, etc., as deemed necessary. The EASA Form 123 is prepared for the purpose of documenting the preparation and embodiment of the SC/SR. The aircraft logbook should contain an entry referring to EASA Form 123; both EASA Form 123 and the release to service required after the embodiment of the SC/SR should be signed by the same person.

Form 123 and all the records listed on it should follow elementary principles of controlled documentation, e.g. contain reference number of documents, issue dates, revision numbers, name of persons preparing/releasing the document, etc.

### **5. Record-keeping**

The legal or natural person responsible (see paragraph 1. above) for the embodiment of the change/repair should keep the records generated with the SC/SR as required by Part-M or Part-145 and CS-STAN.

In addition, [M.A.305](#) requires that the aircraft owner (or CAMO, if a contract i.a.w. [M.A.201](#) exists) keeps the status of the changes/repairs embodied in/on the aircraft in order to control the aircraft configuration and manage its continuing airworthiness.

With regard to SCs/SRs, the information provided to the owner or CAMO may be listed in Form 123 and should include, as required, a copy of any modified aircraft manual and/or instructions for continuing airworthiness. All this information should normally be consulted when the aircraft undergoes an airworthiness review, and, therefore, a clear system to record the embodiment of SCs/SRs, which is also easily traceable, would be of help during subsequent aircraft inspections.

**6. Instructions for continuing airworthiness**

As stipulated in [M.A.302](#), the aircraft owner or CAMO needs to assess if the changes in the instructions for continuing airworthiness of the aircraft require to amend the aircraft maintenance programme and to obtain its approval.

**7. Embodiment of more than one SC**

The embodiment of two or more related SCs described in Subpart B of CS-STAN is permitted as a single change (the use of one Form 123 only) as long as adequate references to and records of all SCs embodied are captured. Restrictions and limitations of the two (or more) SCs would apply. It is permitted to issue a single release to service containing adequate traceability of all the SCs embodied.

**8. Acceptable form to be used to record the embodiment of SCs/SRs**

**EASA Form 123 — Standard Change/Standard Repair (SC/SR) embodiment record**

<b>EASA Form 123 — Standard Change/Standard Repair (SC/SR) embodiment record</b>		1. SC/SR number(s):
2. SC/SR title & description:		
3. Applicability:		
4. List of parts (description/Part-No/Qty):		
5. Operational limitations/affected aircraft manuals. Copies of these manuals are provided to the aircraft owner:		
6. Documents used for the development and embodiment of this SC/SR:		
* Copies of the documents marked with an asterisk are handed to the aircraft owner.		
7. Instructions for continuing airworthiness. Copies of these manuals are provided to the aircraft owner:		
8. Other information:		
9a. <input type="checkbox"/> This SC complies with the criteria established in 21A.90B(a) and with the relevant paragraphs of CS-STAN.		
9b. <input type="checkbox"/> This SR complies with the criteria established in 21A.431B(a) and with the relevant paragraphs of CS-STAN.		
10. Date of SC/SR embodiment:	11. Identification data and signature of the person responsible for the embodiment of the SC/SR:	
12. Signature of the aircraft owner. This signature attests that all relevant documentation is handed over from the issuer of this form to the aircraft owner, and, therefore, the latter becomes aware of any impact or limitations on operations or additional continuing airworthiness requirements which may apply to the aircraft due to the embodiment of the change/repair.		

Form 123 Issue 00

**Notes:**

Original remains with the legal or natural person responsible for the embodiment of the SC/SR.

The aircraft owner should retain a copy of this form.

The aircraft owner should be provided with copies of the documents referenced in boxes 5 and 7 and those in box 6 marked with an asterisk '\*'.

The 'relevant paragraphs' in boxes 9a and 9b refer to the applicable paragraphs of 'Subpart A – General' of CS-STAN and those of the SC/SR quoted in box 2.

For box 12, when the aircraft owner has signed a contract i.a.w. [M.A.201](#), it is possible that the Continuing Airworthiness Management Organisation (CAMO) representative signs box 12 and provides all relevant information to the owner before next flight.

**Completion instructions:**

Use English or the official language of the State of registry to fill in the form.

1. Identify the SC/SR with a unique number and reference this number in the aircraft logbook.
  2. Specify the applicable EASA CS-STAN chapter including revision (e.g. CS-SCxxx or CS-SRxxx) & title. Provide also a short description.
  3. Identify the aircraft (a/c) registration, serial number and type.
  4. List the parts' numbers and description for the parts installed. Refer to an auxiliary document if necessary.
  5. Identify affected aircraft manuals.
  6. Refer to the documentation developed to support the SC/SR and its embodiment, including design data required by the CS-STAN: design definition, documents recording the showing of compliance with the Certification Specifications or any test result, etc. The documents' references should quote their revision/issue.
  7. Identify instructions for continuing airworthiness that need to be considered for the aircraft maintenance programme review.
  8. To be used as deemed necessary by the installer.
- 9a., 9b., 10. and 12. Self-explanatory.
11. Give full name details and certificate reference (of the natural or legal person) used for issuing the aircraft release to service.

**AMC M.A.801(b) Aircraft certificate of release to service***ED Decision 2015/029/R*

A certificate of release to service is necessary before flight, at the completion of any defect rectification, whilst the aircraft operates a flight between scheduled maintenance checks.

**AMC M.A.801(d) Aircraft certificate of release to service***ED Decision 2015/029/R*

1. '3 years of appropriate maintenance experience' means 3 years working in an aircraft maintenance environment on at least some of the aircraft type systems corresponding to the aircraft endorsed on the aircraft maintenance license or on the certifying staff authorisation that the person holds.
2. 'Holding the proper qualifications' means holding either:
  - (a) a valid ICAO Annex 1 compliant maintenance license for the aircraft type requiring certification, or;
  - (b) a certifying staff authorisation valid for the work requiring certification, issued by an ICAO Annex 6 approved maintenance organisation.

3. A release in accordance with this paragraph does not affect the controlled environment of the aircraft as long as the [M.A.801\(d\)2](#) recheck and release has been carried out by an approved maintenance organisation.

### AMC M.A.801(f) Aircraft certificate of release to service

*ED Decision 2015/029/R*

1. The aircraft certificate of release to service should contain the following statement:
  - (a) 'Certifies that the work specified except as otherwise specified was carried out in accordance with [Part-M](#) and in respect to that work the aircraft is considered ready for release to service'.
  - (b) For a Pilot-owner a certificate of release to service should contain the following statement:

'Certifies that the limited pilot-owner maintenance specified except as otherwise specified was carried out in accordance with Part-M and in respect to that work the aircraft is considered ready for release to service'.
2. The certificate of release to service should relate to the task specified in the manufacturer's or operator's instruction or the aircraft maintenance programme which itself may cross-refer to a manufacturer's/operator's instruction in a maintenance manual, service bulletin etc.
3. The date such maintenance was carried out should include when the maintenance took place relative to any life or overhaul limitation in terms of date/flying hours/cycles/ landings etc., as appropriate.
4. When extensive maintenance has been carried out, it is acceptable for the certificate of release to service to summarise the maintenance so long as there is a unique cross-reference to the work-pack containing full details of maintenance carried out. Dimensional information should be retained in the work-pack record.
5. The person issuing the certificate of release to service should use his normal signature except in the case where a computer release to service system is used. In this latter case the competent authority will need to be satisfied that only the particular person can electronically issue the release to service. One such method of compliance is the use of a magnetic or optical personal card in conjunction with a personal identity number (PIN) known only to the individual, which is keyed into the computer. A certification stamp is optional.
6. At the completion of all maintenance, owners, certifying staff, operators and maintenance organisations should ensure they have a clear, concise, legible record of the work performed.
7. In the case of an [M.A.801\(b\)2](#) release to service, certifying staff should retain all records necessary to prove that all requirements have been met for the issuance of a certificate of release to service.

### AMC M.A.801(g) Aircraft certificate of release to service

*ED Decision 2015/029/R*

1. Being unable to establish full compliance with sub-paragraph [M.A.801\(b\)](#) means that the maintenance required by the aircraft owner or CAMO could not be completed due either to running out of available aircraft maintenance downtime for the scheduled check or by virtue of the condition of the aircraft requiring additional maintenance downtime.

2. The aircraft owner or CAMO is responsible for ensuring that all required maintenance has been carried out before flight. Therefore an aircraft owner or CAMO should be informed and agree to the deferment of full compliance with M.A.801(b). The certificate of release to service may then be issued subject to details of the deferment, including the aircraft owner or CAMO authorisation, being endorsed on the certificate.
3. If a CRS is issued with incomplete maintenance a record should be kept stating what action the mechanic, supervisor and certifying staff should take to bring the matter to the attention of the relevant aircraft owner or CAMO so that the issue may be discussed and resolved with the aircraft owner or CAMO.

## AMC M.A.801(h) Aircraft certificate of release to service

ED Decision 2015/029/R

Endangers flight safety' means any instance where safe operation could not be assured or which could lead to an unsafe condition. It typically includes, but is not limited to, significant cracking, deformation, corrosion or failure of primary structure, any evidence of burning, electrical arcing, significant hydraulic fluid or fuel leakage and any emergency system or total system failure. An AD overdue for compliance is also considered a hazard to flight safety.

## M.A.802 Component certificate of release to service

Regulation (EU) No 1321/2014

- (a) A certificate of release to service shall be issued at the completion of any maintenance carried out on an aircraft component in accordance with point [M.A.502](#).
- (b) The authorised release certificate identified as [EASA Form 1](#) constitutes the component certificate of release to service, except when such maintenance on aircraft components has been performed in accordance with point [M.A.502\(b\)](#), point [M.A.502\(d\)](#) or point [M.A.502\(e\)](#) in which case the maintenance is subject to aircraft release procedures in accordance with point [M.A.801](#).

## AMC M.A.802 Component certificate of release to service

ED Decision 2015/029/R

When an approved organisation maintains an aircraft component for use by the organisation an [EASA Form 1](#) may not be necessary depending upon the organisation's internal release procedures, however all the information normally required for the EASA Form 1 should be adequately detailed in the certificate of release to service.

## M.A.803 Pilot-owner authorisation

Regulation (EU) 2015/1536

- (a) To qualify as a Pilot-owner, the person must:
  1. hold a valid pilot licence (or equivalent) issued or validated by a Member State for the aircraft type or class rating; and
  2. own the aircraft, either as sole or joint owner; that owner must be:
    - (i) one of the natural persons on the registration form; or
    - (ii) a member of a non-profit recreational legal entity, where the legal entity is specified on the registration document as owner or operator, and that member is

directly involved in the decision making process of the legal entity and designated by that legal entity to carry out Pilot-owner maintenance.

- (b) For any non-complex motor-powered aircraft of 2 730 kg MTOM and below, sailplane, powered sailplane or balloon, that are not used in CAT, or not used in commercial specialised operations or not used in commercial ATO operations, the pilot-owner may issue a certificate of release to service after limited pilot-owner maintenance as specified in Appendix VIII.
- (c) The scope of the limited Pilot-owner maintenance shall be specified in the aircraft maintenance programme referred to in point [M.A.302](#).
- (d) The certificate of release to service shall be entered in the logbooks and contain basic details of the maintenance carried out, the maintenance data used, the date on which that maintenance was completed and the identity, the signature and pilot licence number of the Pilot-owner issuing such a certificate.

## AMC M.A.803 Pilot-owner authorisation

*ED Decision 2016/011/R*

- 1. Privately operated means the aircraft is operated pursuant to [M.A.201\(i\)](#).
- 2. A Pilot-owner may only issue a CRS for maintenance he/she has performed.
- 3. In the case of a jointly-owned aircraft, the maintenance programme should list:
  - The names of all Pilot-owners competent and designated to perform Pilot-owner maintenance in accordance with the basic principles described in [Appendix VIII of Part-M](#). An alternative would be the maintenance programme to contain a procedure to ensure how such a list of competent Pilot-owners should be managed separately and kept current.
  - The limited maintenance tasks they may perform.
- 4. An equivalent valid pilot license may be any document attesting a pilot qualification recognised by the Member State. It does not have to be necessarily issued by the competent authority, but it should in any case be issued in accordance with the particular Member State's system. In such a case, the equivalent certificate or qualification number should be used instead of the pilot's licence number for the purpose of the [M.A.801\(b\)3](#) (certificate of release to service).

Not holding a valid medical examination does not invalidate the pilot licence (or equivalent) required under [M.A.803\(a\)1](#) for the purpose of the Pilot-owner authorisation.

## SUBPART I — AIRWORTHINESS REVIEW CERTIFICATE

### M.A.901 Aircraft airworthiness review

Regulation (EU) 2015/1536

To ensure the validity of the aircraft airworthiness certificate an airworthiness review of the aircraft and its continuing airworthiness records shall be carried out periodically.

- (a) An airworthiness review certificate is issued in accordance with Appendix III ([EASA Form 15a, 15b or 15c](#)) on completion of a satisfactory airworthiness review. The airworthiness review certificate is valid one year;
- (b) An aircraft in a controlled environment is an aircraft (i) continuously managed during the previous 12 months by a unique continuing airworthiness management organisation approved in accordance with [Section A, Subpart G](#), of this [Annex \(Part-M\)](#), and (ii) which has been maintained for the previous 12 months by maintenance organisations approved in accordance with [Section A, Subpart F](#) of this [Annex \(Part-M\)](#), or with [Annex II \(Part-145\)](#). This includes maintenance tasks referred to in point [M.A.803\(b\)](#) carried out and released to service in accordance with point [M.A.801\(b\)2](#) or point [M.A.801\(b\)3](#);
- (c) For all aircraft used by licenced air carriers in accordance with Regulation (EC) No 1008/2008, and aircraft above 2730 kg MTOM, except balloons, that are in a controlled environment, the organisation referred to in (b) managing the continuing airworthiness of the aircraft may, if appropriately approved, and subject to compliance with point (k):
  1. issue an airworthiness review certificate in accordance with point [M.A.710](#), and;
  2. for the airworthiness review certificates it has issued, when the aircraft has remained within a controlled environment, extend twice the validity of the airworthiness review certificate for a period of 1 year each time;
- (d) For all aircraft used by licenced air carriers in accordance with Regulation (EC) No 1008/2008 and aircraft above 2730 kg MTOM, except balloons, that
  - (i) are not in a controlled environment, or
  - (ii) which continuing airworthiness is managed by a continuing airworthiness management organisation that does not hold the privilege to carry out airworthiness reviews,the airworthiness review certificate shall be issued by the competent authority upon satisfactory assessment based on a recommendation made by a continuing airworthiness management organisation appropriately approved in accordance with Section A, [Subpart G](#) of this Annex (Part-M) sent together with the application from the owner or operator. This recommendation shall be based on an airworthiness review carried out in accordance with point [M.A.710](#);
- (e) For aircraft not used by licenced air carriers in accordance with Regulation (EC) No 1008/2008 of 2730 kg MTOM and below, and balloons, any continuing airworthiness management organisation approved in accordance with Section A, [Subpart G](#) of this Annex (Part-M) and appointed by the owner or operator may, if appropriately approved and subject to point (k):
  1. issue the airworthiness review certificate in accordance with point [M.A.710](#), and;
  2. for airworthiness review certificates it has issued, when the aircraft has remained within a controlled environment under its management, extend twice the validity of the airworthiness review certificate for a period of 1 year each time;



- (f) By derogation from points [M.A.901\(c\)2](#) and [M.A.901\(e\)2](#), for aircraft that are in a controlled environment, the organisation referred to in (b) managing the continuing airworthiness of the aircraft, subject to compliance with point (k), may extend twice for a period of one year each time the validity of an airworthiness review certificate that has been issued by the competent authority or by another continuing airworthiness management organisation approved in accordance with [Section A, Subpart G](#) of this [Annex \(Part-M\)](#);
- (g) By derogation from points [M.A.901\(e\)](#) and [M.A.901\(i\)2](#), for ELA1 aircraft not used in CAT or not used in commercial specialised operations or not used in commercial ATO operations, the airworthiness review certificate may also be issued by the competent authority upon satisfactory assessment, based on a recommendation made by certifying staff formally approved by the competent authority and complying with provisions of [Annex III \(Part-66\)](#) as well as requirements laid down in point [M.A.707\(a\)2\(a\)](#), sent together with the application from the owner or operator. This recommendation shall be based on an airworthiness review carried out in accordance with point [M.A.710](#) and shall not be issued for more than two consecutive years;
- (h) Whenever circumstances reveal the existence of a potential safety threat, the competent authority shall carry out the airworthiness review and issue the airworthiness review certificate itself;
- (i) In addition to point (h), the competent authority may also carry out the airworthiness review and issue the airworthiness review certificate itself in the following cases:
1. when the aircraft is managed by a continuing airworthiness management organisation approved in accordance with [Section A, Subpart G](#) of this [Annex \(Part-M\)](#) located in a third country;
  2. for all balloons and any other aircraft of 2730 kg MTOM and below, if it is requested by the owner;
- (j) When the competent authority carries out the airworthiness review and/or issues the airworthiness review certificate itself, the owner or operator shall provide the competent authority with:
1. the documentation required by the competent authority; and
  2. suitable accommodation at the appropriate location for its personnel; and
  3. when necessary, the support of personnel appropriately qualified in accordance with [Annex III \(Part-66\)](#) or equivalent personnel requirements laid down in point [145.A.30\(j\)\(1\) and \(2\)](#) of [Annex II \(Part-145\)](#);
- (k) An airworthiness review certificate cannot be issued nor extended if there is evidence or reason to believe that the aircraft is not airworthy;
- (l) For ELA1 aircraft not involved in commercial operations, the [Part-145](#) or [M.A. Subpart F](#) maintenance organisation performing the annual inspection contained in the maintenance programme may, if appropriately approved, perform the airworthiness review and issue the corresponding airworthiness review certificate, subject to the following conditions:
1. The organisation nominates airworthiness review staff complying with all the following requirements:
    - (a) The airworthiness review staff hold a certifying staff authorisation for the corresponding aircraft.

- (b) The airworthiness review staff have at least three years of experience as certifying staff.
  - (c) The airworthiness review staff are independent from the continuing airworthiness management process of the aircraft being reviewed or have overall authority on the continuing airworthiness management process of the complete aircraft being reviewed.
  - (d) The airworthiness review staff have acquired knowledge of the parts of this Annex (Part-M) relevant to continuing airworthiness management.
  - (e) The airworthiness review staff have acquired proven knowledge of the procedures of the maintenance organisation relevant to the airworthiness review and issue of the airworthiness review certificate.
  - (f) The airworthiness review staff have been formally accepted by the competent authority after having performed an airworthiness review under the supervision of the competent authority or under the supervision of the organisation's airworthiness review staff in accordance with a procedure approved by the competent authority.
  - (g) the airworthiness review staff have performed at least one airworthiness review in the last twelve-month period.
2. The airworthiness review is performed at the same time as the annual inspection contained in the maintenance programme and by the same person who releases such annual inspection, being possible to use the 90 days anticipation provision contained in [M.A.710\(d\)](#).
3. The airworthiness review includes a full documented review in accordance with point [M.A.710\(a\)](#).
4. The airworthiness review includes a physical survey of the aircraft in accordance with points [M.A.710\(b\)](#) and [\(c\)](#).
5. An airworthiness review certificate [EASA Form 15c](#) is issued, on behalf of the maintenance organisation, by the person who performed the airworthiness review when satisfied that:
  - (a) the airworthiness review has been completely and satisfactorily carried out; and
  - (b) the maintenance programme has been reviewed in accordance with point [M.A.710\(ga\)](#); and
  - (c) there is no non-compliance which is known to endanger flight safety.
6. A copy of the airworthiness review certificate issued is sent to the competent authority of the Member State of Registry of the aircraft within 10 days of the date of issue.
7. The competent authority of the Member State of Registry is informed within 72 hours if the organisation has determined that the airworthiness review is inconclusive or if the review under point [M.A.901\(l\)5\(b\)](#) shows discrepancies on the aircraft linked to deficiencies in the content of the maintenance programme.
8. The manual or exposition of the maintenance organisation describes all the following:
  - (a) The procedures for the performance of airworthiness reviews and the issue of the corresponding airworthiness review certificate.

- (b) The names of the certifying staff authorised to perform airworthiness reviews and issue the corresponding airworthiness review certificate.
- (c) The procedures for the review of the maintenance programme.

## AMC M.A.901 Aircraft airworthiness review

*ED Decision 2015/029/R*

In order to ensure the validity of the aircraft airworthiness certificate, [M.A.901](#) requires performing periodically an airworthiness review of the aircraft and its continuing airworthiness records, which results in the issuance of an airworthiness review certificate valid for one year.

## AMC M.A.901(a) Aircraft airworthiness review

*ED Decision 2015/029/R*

[EASA Form 15a](#) is issued by competent authorities while [EASA Form 15b](#) is issued by a [M.A. Subpart G](#) organisation and [EASA Form 15c](#) is issued by a [Part-145](#) or an M.A. [Subpart F](#) maintenance organisation.

## AMC M.A.901(b) Aircraft airworthiness review

*ED Decision 2016/011/R*

1. If the continuing airworthiness of the aircraft is not managed according to an Appendix I Continuing airworthiness contract, the aircraft should be considered to be outside a controlled environment. Nevertheless, such contract is not necessary when the operator and the CAMO are the same organisation.
2. The fact that limited pilot-owner maintenance as defined in [M.A.803\(b\)](#) is not carried out and released by an approved maintenance organisation does not change the status of an aircraft in a controlled environment providing the CAMO under contract has been informed of any such maintenance carried out.

## AMC M.A.901(c)2, (e)2 and (f) Aircraft airworthiness review

*ED Decision 2015/029/R*

When the aircraft has remained within a controlled environment, the extension of the validity of the airworthiness review certificate does not require an airworthiness review but only a verification of the continuous compliance with [M.A.901\(b\)](#).

It is acceptable to anticipate the extension of the airworthiness review certificate by a maximum of 30 days without a loss of continuity of the airworthiness review pattern, which means that the new expiration date is set up one year after the previous expiration date. This anticipation of up to 30 days also applies to the 12 month requirements shown in [M.A.901\(b\)](#), meaning that the aircraft is still considered as being in a controlled environment if it has been continuously managed by a single organisation and maintained by appropriately approved organisations, as stated in [M.A.901\(b\)](#), from the date when the last airworthiness review certificate was issued until the date when the extension is performed (this can be up to 30 days less than 12 months).

It is also acceptable to perform the extension of an airworthiness review certificate after its expiration date, as long as all the conditions for the extension are met. However, this means the following:

- The aircraft could not fly since the airworthiness review certificate expired until it is extended, and

- The new expiration date (after extension) is set one year after the previous expiration date (not one year after the extension is performed).

## AMC M.A.901(d) and (g) Aircraft airworthiness review

*ED Decision 2015/029/R*

The recommendation sent by a CAMO or by [M.A.901\(g\)](#) certifying staff to the competent authority of the Member State of registry should be, at least, in English when the Member State of registry is different from the CAMO's Member State. Otherwise it can be completed in the official language(s) of the CAMO's Member State.

The recommendation sent to the competent authority should contain at least the items described below:

- (a) General information
  - CAMO information
  - owner/lessee information
  - date and place where the document review and the aircraft survey were carried out
  - period and place the aircraft can be seen if required by the competent authority
- (b) Aircraft information
  - registration
  - type
  - manufacturer
  - serial number
  - flight manual reference
  - weight and centre of gravity data
  - maintenance programme reference
- (c) Documents accompanying the recommendation
  - copy of registration papers
  - copy of the owners request for a new airworthiness review certificate
- (d) Aircraft status
  - aircraft total time and cycles
  - list of persons or organisations having carried out continuing airworthiness activities including maintenance tasks on the aircraft and its components since the last airworthiness review certificate
- (e) Aircraft survey
  - a precise list of the areas of the aircraft that were surveyed and their status
- (f) Findings
  - a list of all the findings made during the airworthiness review with the corrective action carried out

(g) Statement

A statement signed by the airworthiness review staff recommending the issue of an airworthiness review certificate.

The statement should confirm that the aircraft in its current configuration complies with the following:

- airworthiness directives up to the latest published issue, and;
- type certificate datasheet;
- maintenance programme;
- component service life limitations;
- the valid weight and centre of gravity schedule reflecting the current configuration of the aircraft;
- Part-21 for all modifications and repairs;
- the current flight manual including supplements, and;
- operational requirements.

The above items should clearly state the exact reference of the data used in establishing compliance; for instance the number and issue of the type certificate data sheet used should be stated.

The statement should also confirm that all of the above is properly entered and certified in the aircraft continuing airworthiness record system and/or in the operator's technical log.

### AMC M.A.901(g) Aircraft airworthiness review

*ED Decision 2015/029/R*

The words 'certifying staff' mean that the personnel meet at the time of the airworthiness review all the [Part-66](#) requirements to be certifying staff for the aircraft subject to review (including also continuing experience requirements), which in some cases may refer to national rules.

The formal acceptance of the certifying staff by the competent authority should only be granted after verification of the qualifications and after the satisfactory performance of an airworthiness review under supervision of the competent authority.

The sentence 'shall not be issued for more than two consecutive years' means that every three years the airworthiness review has to be performed by the competent authority or by an appropriately approved CAMO.

### AMC M.A.901(j) Aircraft airworthiness review

*ED Decision 2015/029/R*

Suitable accommodation should include:

- (a) an office with normal office equipment such as desks, telephones, photocopying machines etc. whereby the continuing airworthiness records can be reviewed.
- (b) a hangar when needed for the physical survey.

The support of personnel appropriately qualified in accordance with [Part-66](#) is necessary when the competent authority's airworthiness review staff is not appropriately qualified.

## AMC M.A.901(I)1 Aircraft airworthiness review

ED Decision 2015/029/R

Independence from the continuing airworthiness management process of the aircraft means being authorised to perform airworthiness reviews only on aircraft for which the person has not participated in their continuing airworthiness management.

This may not be relevant for most maintenance organisations ([Part-145](#) or [Part-M Subpart F](#)). Since these organisations cannot perform the continuing airworthiness management of aircraft (this is a privilege of CAMOs), it needs to be considered by those maintenance organisations ([Part-145](#) or [Part-M Subpart F](#)) intending to nominate as airworthiness review staff certifying staff who are also employed/contracted by a CAMO and who have been involved in the continuing airworthiness management of the aircraft being reviewed.

Nevertheless, such independence is not necessary if these airworthiness review staff (who are also employed/contracted by the CAMO) can show 'overall authority on the continuing airworthiness management process of the complete aircraft'. This may be achieved, among other ways, if this person is:

- the accountable manager or the nominated postholder of the CAMO.
- responsible for the complete continuing airworthiness management process of the aircraft being reviewed.
- the only person employed by an one-man CAMO.

## GM M.A.901(I)5 Aircraft airworthiness review

ED Decision 2015/029/R

The [EASA Form 15c](#) is only applicable to ELA1 aircraft not involved in commercial operations. As a consequence, a new [EASA Form 15a](#) or 15b has to be issued if the operation of the aircraft changes to commercial. This includes the corresponding approval of the maintenance programme and the performance of an airworthiness review.

## GM M.A.901(I)7 Aircraft airworthiness review

ED Decision 2015/029/R

The objective of informing the competent authority when the airworthiness review shows discrepancies linked to deficiencies in the content of the maintenance programme is to allow the competent authority to take it into account when planning the ACAM inspections and to make sure that the competent authority agrees on the amendments required in the maintenance programme as required by [M.A.302\(h\)5](#).

## M.A.902 Validity of the airworthiness review certificate

Regulation (EU) No 1321/2014

- (a) An airworthiness review certificate becomes invalid if:
1. suspended or revoked; or
  2. the airworthiness certificate is suspended or revoked; or
  3. the aircraft is not on the aircraft register of a Member State; or
  4. the type certificate under which the airworthiness certificate was issued is suspended or revoked.

- (b) An aircraft must not fly if the airworthiness certificate is invalid or if:
1. the continuing airworthiness of the aircraft or any component fitted to the aircraft does not meet the requirements of this Part; or
  2. the aircraft does not remain in conformity with the type design approved by the Agency; or
  3. the aircraft has been operated beyond the limitations of the approved flight manual or the airworthiness certificate, without appropriate action being taken; or
  4. the aircraft has been involved in an accident or incident that affects the airworthiness of the aircraft, without subsequent appropriate action to restore airworthiness; or
  5. a modification or repair is not in compliance with Annex I (Part-21) to Regulation (EU) No 748/2012.
- (c) Upon surrender or revocation, the airworthiness review certificate shall be returned to the competent authority

## **M.A.903 Transfer of aircraft registration within the EU**

*Regulation (EU) No 1321/2014*

- (a) When transferring an aircraft registration within the EU, the applicant shall:
1. inform the former Member State in which Member State it will be registered, then;
  2. apply to the new Member State for the issuance of a new airworthiness certificate in accordance with Annex I (Part-21) to Regulation (EU) No 748/2012.
- (b) Notwithstanding point [M.A.902\(a\)\(3\)](#), the former airworthiness review certificate shall remain valid until its expiry date.

## **AMC M.A.903(a)1 Transfer of aircraft registration within the EU**

*ED Decision 2015/029/R*

The applicant should notify to the competent authority within the former Member State of registry so as to allow the proper transfer of information between the two competent authorities during the aircraft transfer process.

## **AMC M.A.903(b) Transfer of aircraft registration within the EU**

*ED Decision 2015/029/R*

In case of transfer of aircraft registration within EU, the aircraft owner/ operator should verify that the competent authority of the new Member State of registry has entered the new aircraft registration on the existing airworthiness review certificate and validated the change.

## **M.A.904 Airworthiness review of aircraft imported into the EU**

*Regulation (EU) 2015/1088*

- (a) When importing an aircraft onto a Member State register from a third country, the applicant shall:
1. apply to the Member State of registry for the issuance of a new airworthiness certificate in accordance with Annex I (Part-21) to Regulation (EU) No 748/2012; and



2. for aircraft other than new, have a airworthiness review carried out satisfactorily in accordance with point [M.A.901](#); and
  3. have all maintenance carried out to comply with the approved maintenance programme in accordance with point [M.A.302](#).
- (b) When satisfied that the aircraft is in compliance with the relevant requirements, the continuing airworthiness management organisation or maintenance organisation, if applicable, shall send a documented recommendation for the issuance of an airworthiness review certificate to the Member State of registry.
- (c) The owner shall allow access to the aircraft for inspection by the Member State of registry.
- (d) A new airworthiness certificate will be issued by the Member State of registry when it is satisfied the aircraft complies with the prescriptions of Annex I (Part-21) to Regulation (EU) No 748/2012.
- (e) The Member State shall also issue the airworthiness review certificate valid normally for one year unless the Member State has safety reason to limit the validity.

### **AMC M.A.904(a)1 Airworthiness reviews of aircraft imported into the EU**

*ED Decision 2015/029/R*

In order to allow for possible participation of authority personnel, the applicant should inform the competent authority at least 10 working days in advance of the time and location of the airworthiness review.

### **AMC M.A.904(a)2 Airworthiness reviews of aircraft imported into the EU**

*ED Decision 2015/029/R*

1. When performing an airworthiness review of aircraft imported into the EU the aircraft and the relevant records should be reviewed to determine the work to be undertaken to establish the airworthiness of the aircraft.
2. In determining the work to be undertaken during the airworthiness review on the aircraft, the following should be taken into consideration:
  - (a) the information from third country authorities such as export certificates, primary authority information;
  - (b) the information on aircraft maintenance history such as continuing airworthiness records, aircraft, engine, propeller, rotor and life limited part log books or cards as appropriate, tech log/flight log/cabin log, list of deferred defects, total flight times and cycles, times and cycles since last maintenance, accident history, former maintenance schedule, former AD compliance status;
  - (c) the information on aircraft such as aircraft, engine and propeller type certificate datasheets, noise and emission certificate data sheets, flight manual and supplements;
  - (d) the aircraft continuing airworthiness status such as the aircraft and component AD status, the SB status, the maintenance status, the status of all service life limited components, weight and centre of gravity schedule including equipment list;



- (e) the modification and repair status of the aircraft detailing elements such as owner/operator designed modifications and repairs, STCs, and parts needing European parts approval (EPA);
  - (f) the aircraft cabin configuration such as emergency equipment fitted, cockpit configuration, placards, instrument limitations, cabin layout;
  - (g) the maintenance needed for import, such as embodiment of modifications needed to comply with the EASA type certificate, bridging check to comply with the new maintenance programme;
  - (h) the avionics such as, but not limited to, radio and navigation equipment, instrument flight rules (IFR) equipment, digital flight data recorder (DFDR)/cockpit voice recorder (CVR) test, emergency locator transmitter (ELT) 406 MHz code and identification;
  - (i) the compass compensation;
  - (j) special operating rules such as extended twin-engine operations (ETOPS)/long range operations (LROPS), reduced vertical separation minima (RVSM), minimum navigation performance specifications (MNPS), all weather operations (AWOPS), area navigation (RNAV);
  - (k) the aircraft survey including verification of conformity with the flight manual and the datasheet, presence of fire proof identification plates, conformity of markings including registration, presence and serviceability of emergency equipment, internal and external lighting systems, and
  - (l) check flight including check of control system/cockpit ground check/engine run up.
3. If there is no CAMO or maintenance organisation approved for the airworthiness review of the specific aircraft type available, the competent authority may carry out the airworthiness review in accordance with this paragraph and the provisions [M.A.901\(h\)](#) and [M.B.902](#). In this case, the airworthiness review should be requested to the competent authority with a 30-day notice.

## AMC M.A.904(b) Airworthiness review of aircraft imported into the EU

*ED Decision 2015/029/R*

The recommendation sent to the competent authority should contain at least the items described below.

- (a) All the information set forth by AMC M.A 901(d) & (g)
- (b) Aircraft information
  - aircraft assigned registration;
  - state of manufacturer;
  - previous registration;
  - export certificate number;
  - TC and TC data sheet numbers;
  - noise and emissions TC and TC data sheet numbers;
  - comparison of prior maintenance programme with the proposed new maintenance programme.

- (c) Documents accompanying the recommendation
  - copy of the application;
  - original export certificate;
  - copy of the approvals of the flight manual and its supplements;
  - list of ADs incorporated up to the latest published issue;
  - proposed new maintenance programme;
  - status of all service life limited components;
  - the valid weight and centre of gravity schedule reflecting the current configuration of the aircraft, and;
  - Part-21 approval reference for all modifications and repairs.
- (d) Maintenance
  - a copy of the work packages requested by the CAMO including details of any bridging check to ensure all the necessary maintenance has been carried out.
- (e) Aircraft check flight
  - a copy of the check flight report.

## M.A.905 Findings

Regulation (EU) No 1321/2014

- (a) A level 1 finding is any significant non-compliance with requirements laid down in this [Annex \(Part-M\)](#) which lowers the safety standard and hazards seriously the flight safety.
- (b) A level 2 finding is any non-compliance with requirements laid down in this [Annex \(Part-M\)](#) which could lower the safety standard and possibly hazard the flight safety.
- (c) After receipt of notification of findings according to point [M.B.903](#), the person or organisation accountable referred to in point [M.A.201](#) shall define a corrective action plan and demonstrate corrective action to the satisfaction of the competent authority within a period agreed with this authority including appropriate corrective action to prevent reoccurrence of the finding and its root cause.

## SECTION B — PROCEDURE FOR COMPETENT AUTHORITIES

### SUBPART A — GENERAL

#### M.B.101 Scope

Regulation (EU) No 1321/2014

This Section establishes the administrative requirements to be followed by the competent authorities in charge of the application and the enforcement of Section A of this Part.

#### M.B.102 Competent authority

Regulation (EU) No 1321/2014

(a) General

A Member State shall designate a competent authority with allocated responsibilities for the issuance, continuation, change, suspension or revocation of certificates and for the oversight of continuing airworthiness. This competent authority shall establish documented procedures and an organisational structure.

(b) Resources

The number of staff shall be appropriate to carry out the requirements as detailed in this Section.

(c) Qualification and training

All staff involved in activities dealt with in this Annex shall be appropriately qualified and have appropriate knowledge, experience, initial training and continuation training to perform their allocated tasks.

(d) Procedures

The competent authority shall establish procedures detailing how compliance with this [Annex \(Part-M\)](#) is accomplished.

The procedures shall be reviewed and amended to ensure continued compliance.

#### AMC M.B.102(a) Competent authority — General

ED Decision 2016/011/R

1. In deciding upon the required airworthiness organisational structure, the competent authority should review the number of certificates to be issued, the number and size of potential operators, the number of [M.A. Subpart F](#) approved maintenance organisations and CAMOs within that Member State, as well as the level of civil aviation activity, number and complexity of aircraft and the size of the Member State's aviation industry.
2. The competent authority should retain effective control of important inspection functions and not delegate them in such a way that aircraft owners, operators, [M.A. Subpart F](#) approved maintenance organisations and CAMOs, in effect, regulate themselves in airworthiness matters.
3. The set-up of the organisational structure should ensure that the various tasks and obligations of the competent authority are not relying on individuals. That means that a continuing and

undisturbed fulfilment of these tasks and obligations of the competent authority should also be guaranteed in case of illness, accident or leave of individual employees.

## AMC1 M.B.102(c) Competent authority — Qualification and training

ED Decision 2016/011/R

1. Competent authority inspectors should have:
  - 1.1. practical experience and expertise in the application of aviation safety standards and safe operating practices;
  - 1.2. comprehensive knowledge of:
    - (a) relevant parts of implementing rules, certification specifications and guidance material;
    - (b) the competent authority's procedures;
    - (c) the rights and obligations of an inspector;
    - (d) quality systems;
    - (e) continuing airworthiness management;
    - (f) operational procedures when affecting the continuing airworthiness management of the aircraft or the maintenance.
  - 1.3. training on auditing techniques.
  - 1.4. five years relevant work experience to be allowed to work as an inspector independently. This may include experience gained during training to obtain the subparagraph 1.5 qualification.
  - 1.5. a relevant engineering degree or an aircraft maintenance technician qualification with additional education. 'Relevant engineering degree' means an engineering degree from aeronautical, mechanical, electrical, electronic, avionic or other studies relevant to the maintenance and continuing airworthiness of aircraft/aircraft components.
  - 1.6. knowledge of a relevant sample of the type(s) of aircraft gained through a formalised training course including Fuel Tank Safety (FTS) training as described in [Appendix XII to AMC M.A.706\(f\) and AMC1 M.B.102\(c\)](#). These courses should be at least at a level equivalent to [Part-66 Appendix III](#) Level 1 General Familiarisation.  
  
'Relevant sample' means that these courses should cover typical systems embodied in those aircraft being within the scope of approval.
  - 1.7. knowledge of maintenance standards.
2. In addition to technical competency, inspectors should have a high degree of integrity, be impartial in carrying out their tasks, be tactful, and have a good understanding of human nature.
3. A programme for continuation training should be developed which provides for the inspectors, at regular intervals, to visit appropriate manufacturers and attend technical symposia as well as training or refresher courses to gain first-hand knowledge of new developments. As a general policy, it is not desirable for the inspectors to obtain technical qualifications from those entities under their direct regulatory jurisdiction.

## AMC2 M.B.102(c) Competent authority — Qualification and training

ED Decision 2016/011/R

### AIRCRAFT CONTINUING AIRWORTHINESS MONITORING (ACAM) INSPECTORS

1. ACAM in-depth surveys should be performed by competent authority inspectors qualified in accordance with [M.B.102\(c\)](#).
2. ACAM ramp surveys may be performed by inspectors qualified for the technical tasks of ramp inspections in accordance with other Parts, or by inspectors qualified in accordance with [M.B.102\(c\)](#).

## AMC M.B.102(d) Competent authority organisation — Procedures

ED Decision 2015/029/R

The documented procedures should contain the following information:

- (a) The Member State's designation of the competent authority(ies).
- (b) The title(s) and name(s) of the manager(s) of the competent authority and their duties and responsibilities.
- (c) Organisation chart(s) showing associated chains of responsibility of the senior persons.
- (d) A procedure defining the qualifications for staff together with a list of staff authorised to sign certificates.
- (e) A general description of the facilities.
- (f) Procedures specifying how the competent authority(ies) ensure(s) compliance with [Part-M](#).

## M.B.104 Record-keeping

Regulation (EU) No 1321/2014

- (a) The competent authorities shall establish a system of record-keeping that allows adequate traceability of the process to issue, continue, change, suspend or revoke each certificate.
- (b) The records for the oversight of organisations approved in accordance with this Annex shall include as a minimum:
  1. the application for an organisation approval.
  2. the organisation approval certificate including any changes.
  3. a copy of the audit program listing the dates when audits are due and when audits were carried out.
  4. the competent authority continued oversight records including all audit records.
  5. copies of all relevant correspondence.
  6. details of any exemption and enforcement actions.
  7. any report from other competent authorities relating to the oversight of the organisation.
  8. organisation exposition or manual and amendments.
  9. copy of any other document directly approved by the competent authority.
- (c) The retention period for the point (b) records shall be at least four years.

- (d) The minimum records for the oversight of each aircraft shall include, at least, a copy of:
1. aircraft certificate of airworthiness,
  2. airworthiness review certificates,
  3. [Section A Subpart G](#) organisation recommendations,
  4. reports from the airworthiness reviews carried out directly by the Member State,
  5. all relevant correspondence relating to the aircraft,
  6. details of any exemption and enforcement action(s),
  7. any document approved by the competent authority pursuant to [Annex I \(Part-M\)](#) or [Annex II](#) (Part-ARO) of Regulation (EU) No 965/2012.
- (e) The records specified in point (d) shall be retained until two years after the aircraft has been permanently withdrawn from service.
- (f) All records specified in point [M.B.104](#) shall be made available upon request by another Member State or the Agency.

### AMC M.B.104(a) Record-keeping

*ED Decision 2015/029/R*

1. The record-keeping system should ensure that all records are accessible whenever needed within a reasonable time. These records should be organized in a consistent way throughout the competent authority (chronological, alphabetical order, etc.).
2. All records containing sensitive data regarding applicants or organisations should be stored in a secure manner with controlled access to ensure confidentiality of this kind of data.
3. All computer hardware used to ensure data backup should be stored in a different location from that containing the working data in an environment that ensures they remain in good condition. When hardware- or software-changes take place special care should be taken that all necessary data continues to be accessible at least through the full period specified in [M.B.104\(c\)](#) and/or [\(e\)](#).

### AMC M.B.104(f) Record-keeping

*ED Decision 2015/029/R*

The cases, when records shall be made available should be limited to:

- incidents or accidents,
- findings through the aircraft continuing monitoring program where organisations approved by another competent authority are involved, to determine the root cause,
- aircraft mainly operated in another Member State,
- an aircraft previously operated in another Member State,
- an organisation having approvals in several Member States.

When records are requested from another Member State, the reason for the request should be clearly stated. The records can be made available by sending a copy or by allowing their consultation.

## **M.B.105 Mutual exchange of information**

*Regulation (EU) 2015/1536*

- (a) In order to contribute to the improvement of air safety, the competent authorities shall participate in a mutual exchange of all necessary information in accordance with Article 15 of Regulation (EC) No 216/2008.
- (b) Without prejudice to the competencies of the Member States, in the case of a potential safety threat involving several Member States, the concerned competent authorities shall assist each other in carrying out the necessary oversight action.

## **AMC M.B.105(a) Mutual exchange of information**

*ED Decision 2015/029/R*

One typical case where the mutual exchange of information is necessary is when an aircraft is transferred inside the EU according to [M.A.903](#). When notified of such a transfer, a competent authority should inform the competent authority where the aircraft will be registered of any known problems with the aircraft being transferred. Furthermore, the competent authority where the aircraft will be registered should ensure that the former competent authority has been properly notified that the aircraft is leaving.

## SUBPART B — ACCOUNTABILITY

### M.B.201 Responsibilities

*Regulation (EU) No 1321/2014*

The competent authorities as specified in [M.1](#) are responsible for conducting inspections and investigations in order to verify that the requirements of this Part are complied with.



## SUBPART C — CONTINUING AIRWORTHINESS

### M.B.301 Maintenance programme

Regulation (EU) 2015/1088

- (a) Except for those cases where the owner has issued a declaration for the maintenance programme in accordance with point [M.A.302\(h\)](#), the competent authority shall verify that the maintenance programme is in compliance with point [M.A.302](#).
- (b) Except where stated otherwise in points [M.A.302\(c\)](#) and [M.A.302\(h\)](#) the maintenance programme and its amendments shall be approved directly by the competent authority.
- (c) In the case of indirect approval, the maintenance programme procedure shall be approved by the competent authority through the continuing airworthiness management exposition.
- (d) In order to approve a maintenance programme according to point (b) of this point, the competent authority shall have access to all the data required in points [M.A.302\(d\)](#), [\(e\)](#), [\(f\)](#) and [\(h\)](#).

### AMC M.B.301(a) Maintenance programme

ED Decision 2015/029/R

For the competent authority of registry to verify compliance with [M.A.302](#), the auditing surveyor/inspector should have received training on maintenance programme development and control.

### AMC M.B.301(b) Maintenance programme

ED Decision 2016/011/R

1. When assessing aircraft maintenance programmes for approval, the competent authority should verify that the maintenance programme is acceptable for the continuing airworthiness of the specific aircraft listed and it is appropriate for the proposed operating environment and scheduled utilisation.
2. The competent authority should assess the contents taking into account the origins of the document, i.e. the manufacturer's recommended maintenance programme, an MRB report, the CAMO or operator's own experience or another approved programme.
3. A competent authority may elect to publish a proposed maintenance schedule for a piston engine aircraft type or a group of piston engine aircraft types below 2 730 kg maximum take-off mass (MTOM) or for a sailplane, powered sailplane or balloon type or for a group of sailplanes, powered sailplanes or balloon types. When owners/operators of the aircraft mentioned above elect to use a competent authority proposed maintenance schedule, all the out of phase manufacturer recommendations should be incorporated into the final maintenance programme in order for it to be approved.
4. A copy of the approved programme should be retained by the competent authority, unless the programme is approved by a CAMO.
5. The documentation issued by the competent authority to approve the aircraft maintenance programme may include details of who may issue certificates of release to service in a particular situation and may define which tasks are considered as complex maintenance tasks or limited pilot owner maintenance according to [Appendix VIII to Part-M](#).

6. In the case of aircraft used by air carriers licensed in accordance with Regulation (EC) No 1008/2008 or complex motor-powered aircraft, the development of the aircraft maintenance programme is dependent upon sufficient satisfactory in-service experience which has been properly processed. In general, the task being considered for escalation beyond the MRB limits should have been satisfactorily repeated at the existing frequency several times before being proposed for escalation. [Appendix I to AMC M.A.302 and M.B.301\(b\)](#) gives further information.
7. The competent authority may approve an incomplete maintenance programme at the start of operation of an aircraft or an operator, subject to limiting the approval of the maintenance programme to a period that does not exceed any required maintenance not yet approved.
8. If the competent authority is no longer satisfied that a safe operation can be maintained, the approval of a maintenance programme or part of it may be suspended or revoked. Events giving rise to such action include:
  - 8.1. An operator changing the utilisation of an aircraft;
  - 8.2. The owner or CAMO has failed to ensure that the programme reflects the maintenance needs of the aircraft such that safe operation can be assured.

### AMC M.B.301(c) Maintenance Programme

*ED Decision 2015/029/R*

1. Approval of an aircraft maintenance programme through a procedure established by a CAMO should require the organisation to demonstrate to the competent authority that it has competence, procedures and record keeping provisions, which will enable the organisation to analyse aircraft reliability, TC holder's instructions, and other related operating and maintenance criteria.
2. According to the complexity of the aircraft and the nature of the operation, the maintenance programme procedures should contain reliability centred maintenance and condition monitored maintenance programme procedures and have procedures relating to the programme control which contain the following provisions:
  - (a) task escalation or adjustment,
  - (b) maintenance programme review,
  - (c) SB or Service Information assessment,
  - (d) component and structures in service performance review,
  - (e) maintenance programme revision,
  - (f) maintenance procedure effectiveness review and amendment,
  - (g) maintenance review board report (MRBR) or manufacturer maintenance planning document (MPD) review and assessment, as appropriate,
  - (h) AD review and assessment,
  - (i) owner/maintenance/CAMO liaison,
  - (j) training.
3. When the competent authority requests it, the organisation should make provision for the attendance of a representative of the competent authority at meetings held to consider maintenance implications arising from reviews of the above provisions.

## AMC M.B.301(d) Maintenance programme

*ED Decision 2015/029/R*

Programmes and all associated airworthiness data, including that data used for substantiating the escalation of programmes should be made available to the competent authority upon request.

## M.B.302 Exemptions

*Regulation (EU) No 1321/2014*

All exemptions granted in accordance with Article 14(4) of Regulation (EC) No 216/2008 shall be recorded and retained by the competent authority.

## M.B.303 Aircraft continuing airworthiness monitoring

*Regulation (EU) 2015/1536*

- (a) The competent authority shall develop a survey programme on a risk-based approach to monitor the airworthiness status of the fleet of aircraft on its register.
- (b) The survey programme shall include sample product surveys of aircraft and shall cover all aspects of airworthiness key risk elements.
- (c) The product survey shall sample the airworthiness standards achieved, on the basis of the applicable requirements, and identify any findings.
- (d) Any findings identified shall be categorised against the requirements of this Part and confirmed in writing to the person or organisation accountable according to [M.A.201](#). The competent authority shall have a process in place to analyse findings for their safety significance.
- (e) The competent authority shall record all findings and closure actions.
- (f) If during aircraft surveys evidence is found showing non-compliance with this Part or with any other Part, the finding shall be dealt with as prescribed by the relevant Part.
- (g) If so required to ensure appropriate enforcement action, the competent authority shall exchange information on non-compliances identified in accordance with point (f) with other competent authorities.

## AMC1 M.B.303(a) Aircraft continuing airworthiness monitoring (ACAM)

*ED Decision 2016/011/R*

### ACAM SURVEY PROGRAMME — SCOPE

1. The competent authority should establish a programme covering in-depth surveys and ramp surveys.
2. The competent authority's survey programme should select aircraft and/or operators depending on the number and complexity of aircraft on the national register, the diversity of aircraft types, local knowledge of the maintenance environment and operating conditions, airworthiness standards and past surveillance experience.
3. The programme should prioritise the operator/fleet/aircraft/key risk elements which are causing the greatest concern.
4. The survey programme should also include a certain percentage of unannounced ramp surveys.

5. The survey programme and changes thereto should be documented.

## AMC2 M.B.303(a) Aircraft continuing airworthiness monitoring (ACAM)

ED Decision 2016/011/R

### ACAM SURVEY PROGRAMME — CREDITING

1. Where the ACAM survey can be linked to the oversight of an approved organisation, then credit can be granted in the monitoring process of that approved organisation.
2. The competent authority may take credit of aircraft airworthiness inspections qualifying for the ACAM programme when these inspections are performed in accordance with the provisions of Regulation (EC) No 216/2008 and its implementing rules.

## GM M.B.303(a) Aircraft continuing airworthiness monitoring (ACAM)

ED Decision 2016/011/R

### COMBINED SURVEYS

In the interest of efficient use of competent authority resources, aircraft inspection procedures may be established covering the combined scope of various aircraft survey tasks performed by a competent authority, such as but not limited to:

- ACAM in-depth survey;
- airworthiness review;
- permit to fly physical inspection;
- Export Certificate of Airworthiness inspection;
- product survey in accordance with [M.B.704\(c\)](#);
- product audit in accordance with Part-145 or [Part-M Subpart F](#);
- review under supervision for airworthiness review staff authorisation, provided it covers the full scope of the physical survey in accordance with [M.A.710\(c\)](#); and
- ramp inspections performed in accordance with ARO.OPS<sup>14</sup> or ARO.RAMP<sup>15</sup>.

Depending on which type of survey is required, any actual survey performed may cover a subset of the combined scope.

## AMC1 M.B.303(b) Aircraft continuing airworthiness monitoring

ED Decision 2015/029/R

### SCOPE OF SURVEYS

1. The competent authority should undertake sample product surveys of aircraft on its register to verify that:

<sup>14</sup> Subpart OPS of Part-ARO 'Authority requirements for air operations' to Commission Regulation (EU) No 965/2012.

<sup>15</sup> Subpart RAMP of Part-ARO 'Authority requirements for air operations' to Commission Regulation (EU) No 965/2012.

- (a) the condition of an aircraft as sampled is to a standard acceptable for the Certificate of Airworthiness/Airworthiness Review Certificate to remain in force,
  - (b) the operator/owner's management of the airworthiness of the aircraft is effective,
  - (c) the approvals and licenses granted to organisations and persons continue to be applied in a consistent manner to achieve the required standards.
- A physical inspection of the aircraft is necessary during each ACAM survey (ramp or in-depth).
2. Sample product surveys of aircraft include:
    - (a) in-depth surveys carried out during extensive maintenance that fully encompass selected aspects of an aircraft's airworthiness,
    - (b) ramp surveys carried out during aircraft operations to monitor the apparent condition of an aircraft's airworthiness.
  3. When performing a ramp survey, the inspector(s) should make all possible efforts to avoid an unreasonable delay of the aircraft inspected.
  4. The further information on 'KEY RISK ELEMENTS' can be found in [Appendix III to GM1 M.B.303\(b\)](#).

## AMC2 M.B.303(b) Aircraft continuing airworthiness monitoring

*ED Decision 2015/029/R*

### IN-DEPTH SURVEY

1. An ACAM in-depth survey is a sample inspection of the key risk elements (KREs) and should be performed during scheduled/extensive maintenance. [Appendix III to GM1 M.B.303\(b\)](#) provides guidance on KREs that can be used for planning and/or analysis of the inspections.
2. The survey should be a 'deep cut' through the elements or systems selected.
3. The record of an ACAM inspection should identify which KREs were inspected.

## AMC3 M.B.303(b) Aircraft continuing airworthiness monitoring

*ED Decision 2015/029/R*

### KEY RISK ELEMENTS

1. The following KREs should be used for aircraft continuing airworthiness monitoring:
  - (a) Type design and changes to type design
  - (b) Airworthiness limitations
  - (c) Airworthiness Directives
  - (d) Aircraft documents
  - (e) Flight Manual
  - (f) Mass & Balance
  - (g) Markings & placards
  - (h) Operational requirements
  - (i) Defect management

- (j) Aircraft Maintenance Programme
  - (k) Component control
  - (l) Repairs
  - (m) Records
2. These KREs and their detailed components should be adapted to the complexity of the aircraft type being surveyed by retaining only those items that are applicable and relevant for the particular aircraft type.
  3. The further information regarding 'KEY RISK ELEMENTS' can be found in [Appendix III to GM1 M.B.303\(b\)](#).

## GM M.B.303(b) Aircraft continuing airworthiness monitoring

*ED Decision 2016/011/R*

### KEY RISK ELEMENTS

The KREs define the scope of continuing airworthiness. The list of KREs is intended to provide the basis for planning and control of the ACAM survey programme. It will ensure that the programme covers all aspects of continuing airworthiness. While it is not required to cover all KREs during a given inspection, the ACAM survey programme needs to ensure that there is no omission, i.e. certain KRE are never inspected.

The further information on 'KEY RISK ELEMENTS' can be found in [Appendix III to GM1 M.B.303\(b\)](#).

## AMC M.B.303(d) Aircraft continuing airworthiness monitoring (ACAM)

*ED decision 2016/011/R*

### FINDINGS ANALYSIS

1. The process should analyse the findings, or combination thereof, in order to identify:
  - (a) the root causes and their recurrence;
  - (b) the potential impact on flight safety of the individual aircraft or aircraft fleet on the national register, including hazard identification and risk mitigation; and
  - (c) further necessary actions at the level of the organisation(s) or individual(s) interacting with the continuing airworthiness of the aircraft or aircraft fleet.
2. The outcome of the analysis should be used for the further adjustment of the ACAM programme as well as for the purpose of [M.B.303\(e\), \(f\) and \(g\)](#).
3. The purpose of this process is not to analyse individual findings, but to address systemic issues or issues that become apparent at individual, corporate or aggregate level.

## **M.B.304 Revocation and suspension**

*Regulation (EU) 2015/1536*

The competent authority shall:

- (a) suspend an airworthiness review certificate on reasonable grounds in the case of potential safety threat, or;
- (b) suspend or revoke an airworthiness review certificate pursuant to [M.B.903\(1\)](#).

## **SUBPART D — MAINTENANCE STANDARDS**

*Regulation (EU) No 1321/2014*

(to be developed as appropriate)



## **SUBPART E — COMPONENTS**

*Regulation (EU) No 1321/2014*

(to be developed as appropriate)

## SUBPART F — MAINTENANCE ORGANISATION

### M.B.601 Application

Regulation (EU) No 1321/2014

Where maintenance facilities are located in more than one Member State the investigation and continued oversight of the approval shall be carried out in conjunction with the competent authorities designated by the Member States in whose territory the other maintenance facilities are located.

### M.B.602 Initial Approval

Regulation (EU) No 1321/2014

- (a) Provided the requirements of points [M.A.606\(a\) and \(b\)](#) are complied with, the competent authority shall formally indicate its acceptance of the [M.A.606\(a\) and \(b\)](#) personnel to the applicant in writing.
- (b) The competent authority shall establish that the procedures specified in the maintenance organisation manual comply with [Subpart F of Section A](#) of this [Annex \(Part-M\)](#) and ensure the accountable manager signs the commitment statement.
- (c) The competent authority shall verify that the organisation is in compliance with the requirements laid down in [Subpart F of Section A](#) of this [Annex \(Part-M\)](#).
- (d) A meeting with the accountable manager shall be convened at least once during the investigation for approval to ensure that he/she fully understands the significance of the approval and the reason for signing the commitment of the organisation to compliance with the procedures specified in the manual.
- (e) All findings shall be confirmed in writing to the applicant organisation.
- (f) The competent authority shall record all findings, closure actions (actions required to close a finding) and recommendations.
- (g) For initial approval all findings shall be corrected by the organisation and closed by the competent authority before the approval can be issued.

### AMC M.B.602(a) Initial approval

ED Decision 2015/029/R

1. 'Formally indicate in writing' means that an [EASA Form 4 \(Appendix X to AMC M.B.602\(a\) and AMC M.B.702\(a\)\)](#) should be used for this activity. With the exception of the accountable manager, an [EASA Form 4](#) should be completed for each person nominated to hold a position required by [M.A.606\(b\)](#).
2. In the case of the accountable manager approval of the maintenance organisation manual containing the accountable manager's signed commitment statement constitutes formal acceptance.

### AMC M.B.602(b) Initial approval

ED Decision 2015/029/R

The competent authority should indicate approval of the maintenance organisation manual in writing.

## AMC M.B.602(c) Initial approval

ED Decision 2015/029/R

1. The competent authority should determine by whom, and how the audit shall be conducted. For example, it will be necessary to determine whether one large team audit or a short series of small team audits or a long series of single man audits are most appropriate for the particular situation.
2. The audit may be carried out on a product line type basis. For example, in the case of an organisation with Socata TB20 and Piper PA28 ratings, the audit is concentrated on one type only for a full compliance check. Dependent upon the result, the second type may only require a sample check that should at least cover the activities identified as weak for the first type.
3. The competent authority auditing surveyor should always ensure that he/she is accompanied throughout the audit by a senior technical member of the organisation. The reason for being accompanied is to ensure the organisation is fully aware of any findings during the audit.
4. The auditing surveyor should inform the senior technical member of the organisation at the end of the audit visit on all findings made during the audit.

## AMC M.B.602(e) Initial approval

ED Decision 2015/029/R

1. Findings should be recorded on an audit report form with a provisional categorisation as a level 1 or 2. Subsequent to the audit visit that identified the particular findings, the competent authority should review the provisional finding levels, adjusting them if necessary and change the categorisation from 'provisional' to 'confirmed'.
2. All findings should be confirmed in writing to the applicant organisation within 2 weeks of the audit visit.
3. There may be occasions when the competent authority finds situations in the applicant's organisation on which it is unsure about compliance. In this case, the organisation should be informed about possible non-compliance at the time and the fact that the situation will be reviewed within the competent authority before a decision is made. If the review concludes that there is no finding then a verbal confirmation to the organisation will suffice.

## AMC M.B.602(f) Initial approval

ED Decision 2015/029/R

1. The audit report should be made on an [EASA Form 6F](#) (see appendix VI).
2. A quality review of the [EASA Form 6F](#) audit report should be carried out by a competent independent person nominated by the competent authority. The review should take into account the relevant paragraphs of [M.A. Subpart F](#), the categorisation of finding levels and the closure action taken. Satisfactory review of the audit form should be indicated by a signature on the [EASA Form 6F](#).

## AMC M.B.602(g) Initial approval

ED Decision 2015/029/R

The audit reports should include the date each finding was cleared together with reference to the competent authority report or letter that confirmed the clearance.

## M.B.603 Issue of approval

Regulation (EU) No 1321/2014

- (a) The competent authority shall issue to the applicant an EASA Form 3 approval certificate (Appendix V) which includes the extent of approval, when the maintenance organisation is in compliance with the applicable points of this Part.
- (b) The competent authority shall indicate the conditions attached to the approval on the EASA Form 3 approval certificate.
- (c) The reference number shall be included on the EASA Form 3 approval certificate in a manner specified by the Agency.

## AMC M.B.603(a) Issue of approval

ED Decision 2015/029/R

1. For approvals involving more than one competent authority, the approval should be granted in conjunction with the competent authorities of the Member States in whose territories the other maintenance organisation facilities are located. For practical reasons the initial approval should be granted on the basis of a joint audit visit by the approving competent authority and competent authorities of the Member States in whose territories the other maintenance organisation facilities are located. Audits related to the continuation of the approval should be delegated to the competent authorities of the Member States in whose territories the other maintenance organisation facilities are located. The resulting audit form and recommendation should then be submitted to the approving competent authority.
2. The approval should be based upon the organisational capability relative to [M.A. Subpart F](#) compliance and not limited by reference to individual EASA certificated products.  
  
For example, if the organisation is capable of maintaining within the limitation of [M.A. Subpart F](#) the Cessna 100 series aircraft the approval schedule should state A2 Cessna 100 series and not Cessna 172RG which is a particular designator for one of many Cessna 100 series.

### 3. **Special case for ELA1 aircraft:**

In order to promote standardisation, for this category of aircraft the following approach is recommended:

- Possible ratings to be endorsed in EASA Form 3:
  - ELA1 sailplanes;
  - ELA1 powered sailplanes and ELA1 aeroplanes;
  - ELA1 balloons;
  - ELA1 airships.
- Before endorsing any of those ratings (for example, ELA1 sailplanes) in EASA Form 3, the competent authority should audit that the organisation is capable of maintaining at least one aircraft type (for example, one type of sailplanes within the ELA1 category), including the availability of the necessary facilities, equipment, tooling, material, maintenance data, and certifying staff.
- It is acceptable that the detailed scope of work in the Maintenance Organisation Manual (MOM) contains the same ratings endorsed in EASA Form 3 (for example, ELA1 sailplanes), without a need to further limit them. However, the maintenance organisation

will only be able to maintain a certain aircraft type when all the necessary facilities, equipment, tooling, material, maintenance data, and certifying staff are available.

### AMC M.B.603(c) Issue of approval

*ED Decision 2015/029/R*

The numeric sequence of the approval reference should be unique to the particular approved maintenance organisation.

### M.B.604 Continuing oversight

*Regulation (EU) No 1321/2014*

- (a) The competent authority shall keep and update a program listing, for each maintenance organisation approved in accordance with [Subpart F of Section B](#) of this [Annex \(Part-M\)](#) under its supervision, the dates when audit visits are due and when such visits were carried out.
- (b) Each organisation shall be completely audited at periods not exceeding 24 months.
- (c) All findings shall be confirmed in writing to the applicant organisation.
- (d) The competent authority shall record all findings, closure actions (actions required to close a finding) and recommendations.
- (e) A meeting with the accountable manager shall be convened at least once every 24 months to ensure he/she remains informed of significant issues arising during audits.

### AMC M.B.604(b) Continuing oversight

*ED Decision 2015/029/R*

1. Where the competent authority has decided that a series of audit visits are necessary to arrive at a complete audit of an approved maintenance organisation, the program should indicate which aspects of the approval will be covered on each visit.
2. It is recommended that part of an audit concentrates on the organisations internal self monitoring reports produced by the organisational review to determine if the organisation is identifying and correcting its problems.
3. At the successful conclusion of the audit(s) including verification of the manual, an audit report form should be completed by the auditing surveyor including all recorded findings, closure actions and recommendation. An [EASA Form 6F](#) should be used for this activity.
4. Credit may be claimed by the competent authority surveyor(s) for specific item audits completed during the preceding 23-month period subject to four conditions:
  - (a) the specific item audit should be the same as that required by [M.A. Subpart F](#) latest amendment, and
  - (b) there should be satisfactory evidence on record that such specific item audits were carried out and that all corrective actions have been taken, and
  - (c) the competent authority surveyor(s) should be satisfied that there is no reason to believe standards have deteriorated in respect of those specific item audits being granted a back credit;
  - (d) the specific item audit being granted a back credit should be audited not later than 24 months after the last audit of the item.

5. When performing the oversight of organisations that hold both [M.A. Subpart F](#) and [M.A. Subpart G](#) approvals, the competent authority should arrange the audits to cover both approvals avoiding duplicated visit of a particular area.

## M.B.605 Findings

Regulation (EU) No 1321/2014

- (a) When during audits or by other means evidence is found showing non-compliance to a requirement laid down in this [Annex \(Part-M\)](#), the competent authority shall take the following actions:
1. For level 1 findings, immediate action shall be taken by the competent authority to revoke, limit or suspend in whole or in part, depending upon the extent of the level 1 finding, the maintenance organisation approval, until successful corrective action has been taken by the organisation.
  2. For level 2 findings, the competent authority shall grant a corrective action period appropriate to the nature of the finding that shall not be more than three months. In certain circumstances, at the end of this first period and subject to the nature of the finding, the competent authority can extend the three month period subject to a satisfactory corrective action plan.
- (b) Action shall be taken by the competent authority to suspend in whole or part the approval in case of failure to comply within the timescale granted by the competent authority.

## AMC M.B.605(a)(1) Findings

ED Decision 2015/029/R

For a level 1 finding it may be necessary for the competent authority to ensure that further maintenance and re-certification of all affected products is accomplished, dependent upon the nature of the finding.

## M.B.606 Changes

Regulation (EU) No 1321/2014

- (a) The competent authority shall comply with the applicable elements of the initial approval for any change to the organisation notified in accordance with point [M.A.617](#).
- (b) The competent authority may prescribe the conditions under which the approved maintenance organisation may operate during such changes, unless it determines that the approval should be suspended due to the nature or the extent of the changes.
- (c) For any change to the maintenance organisation manual:
1. In the case of direct approval of changes in accordance with point [M.A.604\(b\)](#), the competent authority shall verify that the procedures specified in the manual are in compliance with this [Annex \(Part-M\)](#) before formally notifying the approved organisation of the approval.
  2. In the case an indirect approval procedure is used for the approval of the changes in accordance with point [M.A.604\(c\)](#), the competent authority shall ensure (i) that the changes remain minor and (ii) that it has an adequate control over the approval of the changes to ensure they remain in compliance with the requirements of this [Annex \(Part-M\)](#).

## AMC M.B.606 Changes

ED Decision 2015/029/R

### 1. Changes in nominated persons.

The competent authority should have adequate control over any changes to personnel specified in [M.A.606\(a\) and \(b\)](#). Such changes will require an amendment to the manual.

### 2. It is recommended that a simple manual status sheet is maintained which contains information on when an amendment was received by the competent authority and when it was approved.

### 3. The competent authority should define the minor amendments to the manual which may be incorporated through indirect approval. In this case a procedure should be stated in the amendment section of the maintenance organisation manual.

Changes notified in accordance with [M.A.617](#) are not considered minor.

For all cases other than minor, the applicable part(s) of the [EASA Form 6F](#) should be used for the change.

### 4. The approved maintenance organisation should submit each manual amendment to the competent authority whether it be an amendment for competent authority approval or an indirectly approved amendment. Where the amendment requires competent authority approval, the competent authority when satisfied, should indicate its approval in writing. Where the amendment has been submitted under the indirect approval procedure the competent authority should acknowledge receipt in writing.

## M.B.607 Revocation, suspension and limitation of an approval

Regulation (EU) No 1321/2014

The competent authority shall:

- (a) suspend an approval on reasonable grounds in the case of potential safety threat, or;
- (b) suspend, revoke or limit an approval pursuant to point [M.B.605](#).

## SUBPART G — CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATION

### M.B.701 Application

Regulation (EU) 2015/1536

- (a) For licenced air carriers in accordance with Regulation (EC) No 1008/2008 the competent authority shall receive for approval with the initial application for the air operator's certificate and where applicable any variation applied for and for each aircraft type to be operated:
1. the continuing airworthiness management exposition;
  2. the operator's aircraft maintenance programmes;
  3. the aircraft technical log;
  4. where appropriate the technical specification of the maintenance contracts between the CAMO and [Part-145](#) approved maintenance organisation.
- (b) Where facilities are located in more than one Member State the investigation and continued oversight of the approval shall be carried out in conjunction with the competent authorities designated by the Member States in whose territory the other facilities are located.

### AMC M.B.701(a) Application

ED Decision 2016/011/R

1. The documents listed in [M.B.701\(a\)](#) points (1), (2) and (3) may require approval. Draft documents should be submitted at the earliest opportunity so that assessment of the application can begin. Grant or change cannot be effected until the competent authority has received the completed documents. This information is required to enable the competent authority to conduct its assessment in order to determine the volume of oversight work necessary and the locations at which it will be accomplished.
2. If considered appropriate for the assessment, the competent authority may request that at the time of initial application or change of the approval schedule the CAMO applicant provides a copy of the technical specifications of the contracts with [Part-145](#) organisations to demonstrate that arrangements are in place for all base and scheduled line maintenance for an appropriate period of time.

### M.B.702 Initial approval

Regulation (EU) No 1321/2014

- (a) Provided the requirements of points [M.A.706\(a\), \(c\), \(d\)](#) and [M.A.707](#) are complied with, the competent authority shall formally indicate its acceptance of the [M.A.706\(a\), \(c\), \(d\)](#) and [M.A.707](#) personnel to the applicant in writing.
- (b) The competent authority shall establish that the procedures specified in the continuing airworthiness management exposition comply with [Section A, Subpart G](#) of this [Annex \(Part-M\)](#) and ensure the accountable manager signs the commitment statement.
- (c) The competent authority shall verify the organisation's compliance with requirements laid down in [Section A, Subpart G](#) of this [Annex \(Part-M\)](#).



- (d) A meeting with the accountable manager shall be convened at least once during the investigation for approval to ensure that he/she fully understands the significance of the approval and the reason for signing the exposition commitment of the organisation to compliance with the procedures specified in the continuing airworthiness management exposition.
- (e) All findings shall be confirmed in writing to the applicant organisation.
- (f) The competent authority shall record all findings, closure actions (actions required to close a finding) and recommendations.
- (g) For initial approval all findings shall be corrected by the organisation and closed by the competent authority before the approval can be issued.

### AMC M.B.702(a) Initial approval

ED Decision 2015/029/R

1. 'Formally indicate in writing' means that an [EASA Form 4 \(Appendix X to AMC M.B.602\(a\) and AMC M.B.702\(a\)\)](#) should be used for this activity. With the exception of the accountable manager, an [EASA Form 4](#) should be completed for each person nominated to hold a position required by [M.A.706\(c\)](#), [\(d\)](#) and [M.A.707](#).
2. In the case of the accountable manager, approval of the continuing airworthiness management exposition containing the accountable manager's signed commitment statement constitutes formal acceptance, once the authority has held a meeting with the accountable manager and is satisfied with its results.

### AMC M.B.702(b) Initial approval

ED Decision 2016/011/R

1. The competent authority should indicate approval of the continuing airworthiness management exposition in writing.
2. Contracts for sub-contracting continuing airworthiness management tasks by CAMOs should be included in the continuing airworthiness organisation exposition. The competent authorities should verify that the standards set forth in [AMC M.A.711\(a\)\(3\)](#) have been met when approving the exposition.
3. The competent authority while investigating the acceptability of the proposed subcontracted continuing airworthiness management tasks arrangements will take into account, in the subcontracted organisation, all other such contracts that are in place irrespective of state of registry in terms of sufficiency of resources, expertise, management structure, facilities and liaison between the CAMO, the subcontracted organisation and, where applicable, the contracted maintenance organisation(s).

### AMC M.B.702(c) Initial approval

ED Decision 2015/029/R

1. The competent authority should determine by whom, and how the audit shall be conducted. For example, it will be necessary to determine whether one large team audit or a short series of small team audits or a long series of single man audits are most appropriate for the particular situation.

2. The audit may be carried out on a product line type basis. For example, in the case of an organisation with Airbus A320 and Airbus A310 ratings, the audit is concentrated on one type only for a full compliance check. Dependent upon the result, the second type may only require a sample check that should at least cover the activities identified as weak for the first type.
3. When determining the scope of the audit and which activities of the organisation will be assessed during the audit, the privileges of the approved organisation should be taken into account, e.g. approval to carry out airworthiness reviews.
4. The competent authority auditing surveyor should always ensure that he/she is accompanied throughout the audit by a senior technical member of the organisation. Normally this is the quality manager. The reason for being accompanied is to ensure the organisation is fully aware of any findings during the audit.
5. The auditing surveyor should inform the senior technical member of the organisation at the end of the audit visit on all findings made during the audit.

### AMC M.B.702(e) Initial approval

*ED Decision 2015/029/R*

1. Findings should be recorded on an audit report form with a provisional categorisation as a level 1 or 2. Subsequent to the audit visit that identified the particular findings, the competent authority should review the provisional finding levels, adjusting them if necessary and change the categorisation from 'provisional' to 'confirmed'.
2. All findings should be confirmed in writing to the applicant organisation within 2 weeks of the audit visit.
3. There may be occasions when the competent authority finds situations in the applicant's organisation on which it is unsure about compliance. In this case, the organisation should be informed about possible non-compliance at the time and the fact that the situation will be reviewed within the competent authority before a decision is made. If the review concludes that there is no finding then a verbal confirmation to the organisation will suffice.

### AMC M.B.702(f) Initial approval

*ED Decision 2015/029/R*

1. The audit report form should be the [EASA Form 13](#) (Appendix VII).
2. A quality review of the [EASA Form 13](#) audit report should be carried out by a competent independent person nominated by the competent authority. The review should take into account the relevant paragraphs of [M.A. Subpart G](#), the categorisation of finding levels and the closure action taken. Satisfactory review of the audit form should be indicated by a signature on the [EASA Form 13](#).

### AMC M.B.702(g) Initial approval

*ED Decision 2015/029/R*

The audit reports should include the date each finding was cleared together with reference to the competent authority report or letter that confirmed the clearance.

## M.B.703 Issue of approval

Regulation (EU) 2015/1536

- (a) The competent authority shall issue to the applicant an [EASA Form 14](#) approval certificate (Appendix VI) which includes the extent of approval, when the continuing airworthiness management organisation is in compliance with [Section A, Subpart G](#) of this [Annex \(Part-M\)](#).
- (b) The competent authority shall indicate the validity of the approval on the [EASA Form 14](#) approval certificate.
- (c) The reference number shall be included on the [Form 14](#) approval certificate in a manner specified by the Agency.
- (d) In the case of licenced air carriers in accordance with Regulation (EC) No 1008/2008, the information contained on an [EASA Form 14](#) will be included on the air operator's certificate.

## AMC M.B.703 Issue of approval

ED Decision 2015/029/R

The table shown for the Approval Schedule in [EASA Form 14](#) includes a field designated as 'Aircraft type/series/group'

The intention is to give maximum flexibility to the competent authority to customise the approval to a particular organisation.

Possible alternatives to be included in this field are the following:

- A specific type designation that is part of a type certificate, such as Airbus 340-211 or Cessna 172R.
- A type rating (or series) as listed in [Part-66 Appendix I to AMC](#), which may be further subdivided, such as Boeing 737-600/700/800, Boeing 737-600, Cessna 172 Series.
- An aircraft group such as, for example, 'all sailplanes and powered sailplanes' or 'Cessna single piston engined aircraft' or 'Group 3 aircraft' (as defined in [66.A.5](#)) or 'aircraft below 2 730 kg MTOM'.

Reference to the engine type installed in the aircraft may or may not be included, as necessary.

It is important to note that the scope of work defined in EASA Form 14 is further limited to the one defined in the Continuing Airworthiness Management Exposition (CAME). It is this scope of work in the CAME which ultimately defines the approval of the organisation. As a consequence, it is possible for a competent authority to endorse in EASA Form 14, for example, a scope of work for Group 3 aircraft while the detailed scope of work defined in the CAME does not include all Group 3 aircraft.

Nevertheless, in all cases, the competent authority should be satisfied that the organisation has the capability to manage the types/groups/series endorsed in the [EASA Form 14](#).

Since the activities linked to continuing airworthiness management are mainly process-oriented rather than facility/tooling-oriented, changes to the detailed scope of work defined in the CAME (either directly or through a capability list), within the limits already included in [EASA Form 14](#), may be considered as not affecting the approval and not subject to [M.A.713](#). As a consequence, for these changes the competent authority may allow the use by the CAMO of the indirect approval procedure defined in [M.A.704\(c\)](#).

In the example mentioned above, before endorsing the Group 3 in [EASA Form 14](#) for the first time, the competent authority should make sure that the organisation is capable of managing this category of aircraft as a whole. In particular, the competent authority should ensure that Baseline/Generic

Maintenance Programmes (see [M.A.709](#)) or individual maintenance programmes (for contracted customers) are available for all the aircraft which are intended to be initially included in the scope of work detailed in the CAME. Later on, if changes need to be introduced in the detailed scope of work detailed in the CAME to include new aircraft types (within Group 3), this may be done by the CAMO through the use of the indirect approval procedure.

Since, as mentioned above, the competent authority should make sure that the organisation is capable of managing the requested category as a whole, it is not reasonable to grant a full Group 3 approval based on an intended scope of work which is limited to, for example, a Cessna 172 aircraft. However, it may be reasonable to grant such full Group 3 approval, after showing appropriate capability, for an intended scope of work covering several aircraft types or series of different complexity and which are representative of the full Group 3.

#### Special case for ELA1 aircraft:

In order to promote standardisation, for this category of aircraft the following approach is recommended:

- Possible ratings to be endorsed in [EASA Form 14](#):
  - ELA1 sailplanes;
  - ELA1 powered sailplanes and ELA1 aeroplanes;
  - ELA1 balloons;
  - ELA1 airships.
- Before endorsing any of those ratings (for example, ELA1 sailplanes) in [EASA Form 14](#), the competent authority should audit that the organisation is capable of managing at least one aircraft type (for example, one type of sailplanes within the ELA1 category), including the availability of the necessary facilities, data, maintenance programmes, and staff.
- It is acceptable that the detailed scope of work in the CAME contains the same ratings endorsed in [EASA Form 14](#) (for example, ELA1 sailplanes), without a need to further limit them. However, the CAMO will only be able to manage a certain aircraft type when all the necessary facilities, data, maintenance programmes and staff are available.

### AMC M.B.703(a) Issue of approval

*ED Decision 2015/029/R*

For approvals involving more than one competent authority, the approval should be granted in conjunction with the competent authority of the Member States in whose territories the other continuing airworthiness management organisation facilities are located. For practical reasons the initial approval should be granted on the basis of a joint audit visit by the approving competent authority and competent authority of the Member States in whose territories the other continuing airworthiness management organisation facilities are located. Audits related to the renewal of the approval should be delegated to the competent authority of the Member States in whose territories the other continuing airworthiness management organisation facilities are located. The resulting audit form and recommendation should then be submitted to the approving competent authority.

### AMC M.B.703(c) Issue of approval

*ED Decision 2015/029/R*

The numeric sequence should be unique to the particular CAMO.

## M.B.704 Continuing oversight

Regulation (EU) No 1321/2014

- (a) The competent authority shall keep and update a program listing, for each continuing airworthiness organisation approved under [Section A, Subpart G](#) of this [Annex \(Part-M\)](#) under its supervision, the dates when audit visits are due and when such visits were carried out.
- (b) Each organisation shall be completely audited at periods not exceeding 24 months.
- (c) A relevant sample of the aircraft managed by the organisation approved under [Section B, Subpart G](#) of this [Annex \(Part-M\)](#) shall be surveyed in every 24 month period. The size of the sample will be decided by the competent authority based on the result of prior audits and earlier product surveys.
- (d) All findings shall be confirmed in writing to the applicant organisation.
- (e) The competent authority shall record all findings, closure actions (actions required to close a finding) and recommendations.
- (f) A meeting with the accountable manager shall be convened at least once every 24 months to ensure he/she remains informed of significant issues arising during audits.

## AMC M.B.704(b) Continuing oversight

ED Decision 2016/011/R

1. Where the competent authority has decided that a series of audit visits are necessary to arrive at a complete audit of an approved continuing airworthiness management organisation, the program should indicate which aspects of the approval will be covered on each visit.
2. It is recommended that part of an audit concentrates on two ongoing aspects of the [M.A. Subpart G](#) approval, namely the organisations internal self monitoring quality reports produced by the quality monitoring personnel to determine if the organisation is identifying and correcting its problems and secondly the number of concessions granted by the quality manager.
3. At the successful conclusion of the audit(s) including verification of the exposition, an audit report form should be completed by the auditing surveyor including all recorded findings, closure actions and recommendation. An [EASA Form 13](#) should be used for this activity.
4. Credit may be claimed by the competent authority surveyor(s) for specific item audits completed during the preceding 23 month period subject to four conditions:
  - (a) the specific item audit should be the same as that required by [M.A. Subpart G](#) latest amendment, and
  - (b) there should be satisfactory evidence on record that such specific item audits were carried out and that all corrective actions have been taken, and
  - (c) the competent authority surveyor(s) should be satisfied that there is no reason to believe standards have deteriorated in respect of those specific item audits being granted a back credit;
  - (d) the specific item audit being granted a back credit should be audited not later than 24 months after the last audit of the item.
5. When a CAMO sub-contracts continuing airworthiness management tasks all sub-contracted organisations should also be audited by the competent authority at periods not exceeding 24 months (credits per paragraph 4 above are permitted) to ensure they fully comply with [M.A.](#)

[Subpart G](#). For these audits, the competent authority auditing surveyor should always ensure that he/she is accompanied throughout the audit by a senior technical member of the CAMO. All findings should be sent to and corrected by the CAMO.

6. When performing the oversight of organisations that hold both [M.A. Subpart F](#) and [M.A. Subpart G](#) approvals, the competent authority should arrange the audits to cover both approvals avoiding duplicated visit of a particular area.

## M.B.705 Findings

Regulation (EU) No 1321/2014

- (a) When during audits or by other means evidence is found showing non-compliance to a requirement laid down in this [Annex \(Part-M\)](#), the competent authority shall take the following actions:
  1. For level 1 findings, immediate action shall be taken by the competent authority to revoke, limit or suspend in whole or in part, depending upon the extent of the level 1 finding, the continuing airworthiness management organisation approval, until successful corrective action has been taken by the organisation.
  2. For level 2 findings, the competent authority shall grant a corrective action period appropriate to the nature of the finding that shall not be more than three months. In certain circumstances, at the end of this first period, and subject to the nature of the finding the competent authority can extend the three month period subject to a satisfactory corrective action plan.
- (b) Action shall be taken by the competent authority to suspend in whole or part the approval in case of failure to comply within the timescale granted by the competent authority.

## AMC M.B.705(a)(1) Findings

ED Decision 2016/011/R

For a level 1 finding the competent authority should inform the owner/operator and the competent authority of any potentially affected aircraft in order that corrective action can be taken to ensure possible unsafe conditions on these aircraft are corrected before further flight.

Furthermore, a level 1 finding could lead to a non-compliance to be found on an aircraft as specified in [M.B.303\(f\)](#).

## M.B.706 Changes

Regulation (EU) No 1321/2014

- (a) The competent authority shall comply with the applicable elements of the initial approval for any change to the organisation notified in accordance with point [M.A.713](#).
- (b) The competent authority may prescribe the conditions under which the approved continuing airworthiness management organisation may operate during such changes unless it determines that the approval should be suspended due to the nature or the extent of the changes.
- (c) For any change to the continuing airworthiness management exposition:
  1. In the case of direct approval of changes in accordance with point [M.A.704\(b\)](#), the competent authority shall verify that the procedures specified in the exposition are in compliance with this [Annex \(Part-M\)](#) before formally notifying the approved organisation of the approval.

2. In the case an indirect approval procedure is used for the approval of the changes in accordance with point [M.A.704\(c\)](#), the competent authority shall ensure (i) that the changes remain minor and (ii) that it has an adequate control over the approval of the changes to ensure they remain in compliance with the requirements of this [Annex \(Part-M\)](#).

## AMC M.B.706 Changes

ED Decision 2016/011/R

1. Changes in nominated persons. The competent authority should have adequate control over any changes to the personnel specified in [M.A.706\(a\), \(c\), \(d\) and \(i\)](#). Such changes will require an amendment to the exposition.
2. It is recommended that a simple exposition status sheet is maintained which contains information on when an amendment was received by the competent authority and when it was approved.
3. The competent authority should define the minor amendments to the exposition which may be incorporated through indirect approval. In this case a procedure should be stated in the amendment section of the approved continuing airworthiness management exposition.
4. Changes notified in accordance with [M.A.713](#) are not considered minor. For all cases other than minor, the applicable part(s) of the [EASA Form 13](#) should be used for the change.
5. The CAMO should submit each exposition amendment to the competent authority whether it be an amendment for competent authority approval or an indirectly approved amendment. Where the amendment requires competent authority approval, the competent authority when satisfied, should indicate its approval in writing. Where the amendment has been submitted under the indirect approval procedure the competent authority should acknowledge receipt in writing.

## M.B.707 Revocation, suspension and limitation of an approval

Regulation (EU) No 1321/2014

The competent authority shall:

- (a) suspend an approval on reasonable grounds in the case of potential safety threat, or;
- (b) suspend, revoke or limit an approval pursuant to point [M.B.705](#).

## **SUBPART H — CERTIFICATE OF RELEASE TO SERVICE — CRS**

*Regulation (EU) No 1321/2014*

(to be developed as appropriate)



## SUBPART I — AIRWORTHINESS REVIEW CERTIFICATE

### M.B.901 Assessment of recommendations

Regulation (EU) No 1321/2014

Upon receipt of an application and associated airworthiness review certificate recommendation in accordance with point [M.A.901](#):

1. Appropriate qualified personnel from the competent authority shall verify that the compliance statement contained in the recommendation demonstrates that a complete [M.A.710](#) airworthiness review has been carried out.
2. The competent authority shall investigate and may request further information to support the assessment of the recommendation.

### AMC M.B.901 Assessment of recommendations

ED Decision 2015/029/R

1. The result of the verification and the investigation of a recommendation should be sent to the applicant within 30 days. If corrective action has been requested before the issuance of an airworthiness review certificate, the competent authority may decide a further period for the assessment of the requested corrective action.
2. The verification of the compliance statement required by [M.B.901](#) does not mean repeating the airworthiness review itself. However the competent authority should verify that the CAMO has carried out a complete and accurate assessment of the airworthiness of the aircraft.
3. Depending on the content of the recommendation, the history of the particular aircraft, and the knowledge of the CAMO or [M.A.901\(g\)](#) certifying staff making the recommendation in terms of experience, number and correction of findings and previous recommendations the extent of the investigation will vary. Therefore, whenever possible the person carrying out the investigation should be involved in the oversight of the CAMO making the recommendation.
4. In some cases, the inspector may decide that it is necessary to organise:
  - a physical survey of the aircraft, or;
  - a full or partial airworthiness review.

In this case, the inspector should inform the CAMO or [M.A.901\(g\)](#) certifying staff making the recommendation with sufficient notice so that it may organise itself according to [M.A.901\(j\)](#).

Furthermore, this part of the investigation should be carried out by appropriate airworthiness review staff in accordance with [M.B.902\(b\)](#).

5. Only when satisfied the aircraft is airworthy, should the inspector issue an airworthiness review certificate.

### M.B.902 Airworthiness review by the competent authority

Regulation (EU) 2015/1536

- (a) When the competent authority carries out the airworthiness review and issues the airworthiness review certificate [EASA Form 15a](#) (Appendix III), the competent authority shall carry out an airworthiness review in accordance with point [M.A.710](#).

- (b) The competent authority shall have appropriate airworthiness review staff to carry out the airworthiness reviews.
1. For all aircraft used by licenced air carriers in accordance with Regulation (EC) No 1008/2008, and aircraft above 2730 kg MTOM, except balloons, these staff shall have acquired:
    - (a) at least 5 years' experience in continuing airworthiness, and;
    - (b) an appropriate licence in compliance with [Annex III \(Part-66\)](#) or a nationally recognised maintenance personnel qualification appropriate to the aircraft category (when [Article 5\(6\)](#) refers to national rules) or an aeronautical degree or equivalent, and;
    - (c) formal aeronautical maintenance training, and;
    - (d) a position with appropriate responsibilities.

Notwithstanding points (a) to (d), the requirement laid down in point [M.B.902\(b\)1b](#) may be replaced by 5 years of experience in continuing airworthiness additional to those already required by point [M.B.902\(b\)1a](#).
  2. For aircraft not used by licenced air carriers in accordance with Regulation (EC) No 1008/2008 of 2730 kg MTOM and below, and balloons, these staff shall have acquired:
    - (a) at least 3 years' experience in continuing airworthiness, and;
    - (b) an appropriate licence in compliance with [Annex III \(Part-66\)](#) or a nationally recognised maintenance personnel qualification appropriate to the aircraft category (when [Article 5\(6\)](#) refers to national rules) or an aeronautical degree or equivalent, and;
    - (c) appropriate aeronautical maintenance training, and;
    - (d) a position with appropriate responsibilities.

Notwithstanding points (a) to (d), the requirement shown in point [M.B.902\(b\)2b](#) may be replaced by 4 years of experience in continuing airworthiness additional to those already required by point [M.B.902\(b\)2a](#).
- (c) The competent authority shall maintain a record of all airworthiness review staff, which shall include details of any appropriate qualification held together with a summary of relevant continuing airworthiness management experience and training.
- (d) The competent authority shall have access to the applicable data as specified in points [M.A.305](#), [M.A.306](#) and [M.A.401](#) in the performance of the airworthiness review.
- (e) The staff that carries out the airworthiness review shall issue a [Form 15a](#) after satisfactory completion of the airworthiness review.

### AMC M.B.902(b) Airworthiness review by the competent authority

ED Decision 2015/029/R

1. A person qualified in accordance with [AMC M.B.102\(c\)](#) subparagraph 1.5 should be considered as holding the equivalent to an aeronautical degree.
2. 'experience in continuing airworthiness' means any appropriate combination of experience in tasks related to aircraft maintenance and/or continuing airworthiness management (engineering) and/or surveillance of such tasks.

3. An appropriate licence in compliance with [Annex III \(Part-66\)](#) is a category B or C licence in the subcategory of the aircraft reviewed. It is not necessary to satisfy the recent experience requirements of Part 66 at the time of the review or to hold the type rating on the particular aircraft.
4. To hold a position with appropriate responsibilities means the airworthiness review staff should have a position within the competent authority that authorises that person to sign on behalf that competent authority.
5. A person in the competent authority carrying out airworthiness reviews or airworthiness certificate renewal inspections in a Member State, prior to the date of entry into force of [Part-M](#) should be considered as complying with [M.B.902\(b\)](#).

### AMC M.B.902(b)(1) Airworthiness review by the competent authority

*ED Decision 2016/011/R*

For all aircraft used by air carriers licensed in accordance with Regulation (EC) No 1008/2008 and for any other aircraft, other than balloons, above 2 730 kg MTOM, formal aeronautical maintenance training means training (internal or external) supported by evidence on the following subjects:

- Relevant parts of continuing airworthiness regulations.
- Relevant parts of operational requirements and procedures, if applicable.
- Knowledge of the internal procedures for continuing airworthiness.
- Knowledge of a relevant sample of the type(s) of aircraft gained through a formalised training course. These courses should be at least at a level equivalent to [Part-66 Appendix III](#) Level 1 General Familiarisation.

‘Relevant sample’ means that these courses should cover typical systems embodied in those aircraft being within the scope of approval.

### AMC M.B.902(b)(2) Airworthiness review by the competent authority

*ED Decision 2016/011/R*

For all balloons and any other aircraft of 2 730 kg MTOM and below, not used by air carriers licensed in accordance with Regulation (EC) No 1008/2008, appropriate aeronautical maintenance training means demonstrated knowledge of the following subjects:

- Relevant parts of continuing airworthiness regulations.
- Relevant parts of operational requirements and procedures, if applicable.
- Knowledge of the internal procedures for continuing airworthiness.
- Knowledge of a relevant sample of the type(s) of aircraft gained through training and/or work experience. Such knowledge should be at least at a level equivalent to [Part-66 Appendix III](#) Level 1 General Familiarisation.

‘Relevant sample’ means that these courses should cover typical systems embodied in those aircraft being within the scope of approval.

This knowledge may be demonstrated by documented evidence or by an assessment performed by the competent authority. This assessment should be recorded.

### **AMC M.B.902(c) Airworthiness review by the competent authority**

*ED Decision 2015/029/R*

**The minimum content of the airworthiness review staff record should be:**

- Name,
- Date of Birth,
- Basic Education,
- Experience,
- Aeronautical Degree and/or [Part-66](#)-qualification,
- Initial Training received,
- Type Training received,
- Continuation Training received,
- Experience in continuing airworthiness and within the organisation,
- Responsibilities of current job.

### **M.B.903 Findings**

*Regulation (EU) No 1321/2014*

If during aircraft surveys or by other means evidence is found showing non-compliance to a [Part-M](#) requirement, the competent authority shall take the following actions:

1. for level 1 findings, the competent authority shall require appropriate corrective action to be taken before further flight and immediate action shall be taken by the competent authority to revoke or suspend the airworthiness review certificate.
2. for level 2 findings, the corrective action required by the competent authority shall be appropriate to the nature of the finding.

## APPENDICES TO ANNEX I (PART-M)

### Appendix I — Continuing airworthiness management contract

Regulation (EU) 2015/1536

1. When an owner/operator contracts in accordance with [M.A.201](#) a continuing airworthiness organisation approved pursuant [Part-M](#) Subpart G (CAMO) to carry out continuing airworthiness management tasks, upon request by the competent authority a copy of the contract shall be sent by the owner/operator to the competent authority of the Member State of registry once it has been signed by both parties.
2. The contract shall be developed taking into account the requirements of Part-M and shall define the obligations of the signatories in relation to continuing airworthiness of the aircraft.
3. It shall contain as a minimum the:
  - aircraft registration,
  - aircraft type,
  - aircraft serial number,
  - aircraft owner or registered lessee's name or company details including the address,
  - CAMO details including the address.
  - type of operation
4. It shall state the following:

“The owner/operator entrusts to the CAMO the management of the continuing airworthiness of the aircraft, the development of a maintenance programme that shall be approved by the competent authority as detailed in [M.1](#) and the organisation of the maintenance of the aircraft according to said maintenance programme.

According to the present contract, both signatories undertake to follow the respective obligations of this contract.

The owner/operator declares, to the best of its belief that all the information given to the CAMO concerning the continuing airworthiness of the aircraft is and will be accurate and that the aircraft will not be altered without prior approval of the CAMO

In case of any non-conformity with this contract, by either of the signatories, it will become null. In such a case, the owner/operator will retain full responsibility for every task linked to the continuing airworthiness of the aircraft and the owner will undertake to inform the competent authorities of the Member State of registry within two full weeks.”
5. When an owner/operator contracts a CAMO in accordance with [M.A.201](#) the obligations of each party shall be shared as follows:
  - 5.1. Obligations of the CAMO:
    1. have the aircraft type in the scope of its approval;
    2. respect the conditions to maintain the continuing airworthiness of the aircraft listed below:
      - (a) develop a maintenance programme for the aircraft, including any reliability programme developed, if applicable;

- (b) declare the maintenance tasks (in the maintenance programme) that may be carried out by the pilot-owner in accordance with point [M.A.803\(c\)](#);
  - (c) organise the approval of the aircraft's maintenance programme;
  - (d) once it has been approved, give a copy of the aircraft's maintenance programme to the owner/operator;
  - (e) organise a bridging inspection with the aircraft's prior maintenance programme;
  - (f) organise for all maintenance to be carried out by an approved maintenance organisation;
  - (g) organise for all applicable airworthiness directives to be applied;
  - (h) organise for all defects discovered during scheduled maintenance, airworthiness reviews or reported by the owner to be corrected by an approved maintenance organisation coordinate scheduled maintenance, the application of airworthiness directives, the replacement of life limited parts, and component inspection requirements;
  - (i) inform the owner each time the aircraft shall be brought to an approved maintenance organisation;
  - (j) manage all technical records;
  - (k) archive all technical records;
3. organise the approval of any modification to the aircraft in accordance with Annex I (Part-21) to Regulation (EU) No 748/2012 before it is embodied;
  4. organise the approval of any repair to the aircraft in accordance with the Annex I (Part-21) to Regulation (EU) No 748/2012 before it is carried out;
  5. inform the competent authority of the Member State of registry whenever the aircraft is not presented to the approved maintenance organisation by the owner as requested by the approved organisation;
  6. inform the competent authority of the Member State of registry whenever the present contract has not been respected;
  7. ensure that the airworthiness review of the aircraft is carried out when necessary and ensure that the airworthiness review certificate is issued or a recommendation is sent to the competent authority of the Member State of registry;
  8. send within 10 days a copy of any airworthiness review certificate issued or extended to the competent authority of the Member State of registry;
  9. carry out all occurrence reporting mandated by applicable regulations;
  10. inform the competent authority of the Member State of registry whenever the present contract is denounced by either party.
- 5.2. Obligations of the owner/operator:
1. have a general understanding of the approved maintenance programme;
  2. have a general understanding of this [Annex \(Part-M\)](#);
  3. present the aircraft to the approved maintenance organisation agreed with the CAMO at the due time designated by the CAMO's request;

4. not modify the aircraft without first consulting the CAMO;
5. inform the CAMO of all maintenance exceptionally carried out without the knowledge and control of the CAMO;
6. report to the CAMO through the logbook all defects found during operations;
7. inform the competent authority of the Member State of registry whenever the present contract is denounced by either party;
8. inform the CAMO and competent authority of the Member State of registry whenever the aircraft is sold;
9. carry out all occurrence reporting mandated by applicable regulations;
10. inform on a regular basis the CAMO about the aircraft flying hours and any other utilisation data, as agreed with the CAMO;
11. enter the certificate of release to service in the logbooks as mentioned in point [M.A.803\(d\)](#) when performing pilot-owner maintenance without exceeding the limits of the maintenance tasks list as declared in the approved maintenance programme as laid down in point [M.A.803\(c\)](#);
12. inform the CAMO not later than 30 days after completion of any pilot-owner maintenance task in accordance with point [M.A.305\(a\)](#).

## GM to Appendix I — Continuing airworthiness management contract

ED Decision 2016/011/R

An operator should establish adequate coordination between flight operations and the CAMO to ensure that both will receive all the necessary information on the condition of the aircraft to enable them perform their tasks.

## Appendix II — Authorised Release Certificate — EASA Form 1

*Regulation (EU) 2015/1088*

These instructions relate only to the use of the [EASA Form 1](#) for maintenance purposes. Attention is drawn to Appendix I to Annex I (Part-21) of Regulation (EU) No 748/2012 which covers the use of the EASA Form 1 for production purposes.

### 1. PURPOSE AND USE

- 1.1. The primary purpose of the Certificate is to declare the airworthiness of maintenance work undertaken on products, parts and appliances (hereafter referred to as 'item(s)').
- 1.2. Correlation must be established between the Certificate and the item(s). The originator must retain a Certificate in a form that allows verification of the original data.
- 1.3. The Certificate is acceptable to many airworthiness authorities, but may be dependent on the existence of bilateral agreements and/or the policy of the airworthiness authority. The 'approved design data' mentioned in this Certificate then means approved by the airworthiness authority of the importing country.
- 1.4. The Certificate is not a delivery or shipping note.
- 1.5. Aircraft are not to be released using the Certificate.
- 1.6. The Certificate does not constitute approval to install the item on a particular aircraft, engine, or propeller but helps the end user determine its airworthiness approval status.
- 1.7. A mixture of production released and maintenance released items is not permitted on the same Certificate.

### 2. GENERAL FORMAT

- 2.1. The Certificate must comply with the format attached including block numbers and the location of each block. The size of each block may however be varied to suit the individual application, but not to the extent that would make the Certificate unrecognisable.
- 2.2. The Certificate must be in 'landscape' format but the overall size may be significantly increased or decreased so long as the Certificate remains recognisable and legible. If in doubt consult the Competent Authority.
- 2.3. The User/Installer responsibility statement can be placed on either side of the form.
- 2.4. All printing must be clear and legible to permit easy reading.
- 2.5. The Certificate may either be pre-printed or computer generated but in either case the printing of lines and characters must be clear and legible and in accordance with the defined format.
- 2.6. The Certificate should be in English, and if appropriate, in one or more other languages.
- 2.7. The details to be entered on the Certificate may be either machine/computer printed or hand-written using block letters and must permit easy reading.
- 2.8. Limit the use of abbreviations to a minimum, to aid clarity.
- 2.9. The space remaining on the reverse side of the Certificate may be used by the originator for any additional information but must not include any certification statement. Any use of the reverse side of the Certificate must be referenced in the appropriate block on the front side of the Certificate

### 3. COPIES



- 3.1. There is no restriction in the number of copies of the Certificate sent to the customer or retained by the originator.

#### **4. ERROR(S) ON A CERTIFICATE**

- 4.1. If an end-user finds an error(s) on a Certificate, he must identify it/them in writing to the originator. The originator may issue a new Certificate only if the error(s) can be verified and corrected.
- 4.2. The new Certificate must have a new tracking number, signature and date.
- 4.3. The request for a new Certificate may be honoured without re-verification of the item(s) condition. The new Certificate is not a statement of current condition and should refer to the previous Certificate in block 12 by the following statement; 'This Certificate corrects the error(s) in block(s) [enter block(s) corrected] of the Certificate [enter original tracking number] dated [enter original issuance date] and does not cover conformity/condition/release to service'. Both Certificates should be retained according to the retention period associated with the first.

#### **5. COMPLETION OF THE CERTIFICATE BY THE ORIGINATOR**

##### *Block 1 Approving Competent Authority/Country*

State the name and country of the competent authority under whose jurisdiction this Certificate is issued. When the competent authority is the Agency, only 'EASA' must be stated.

##### *Block 2 EASA Form 1 header*

#### **'AUTHORISED RELEASE CERTIFICATE**

#### **EASA FORM 1'**

##### *Block 3 Form Tracking Number*

Enter the unique number established by the numbering system/procedure of the organisation identified in block 4; this may include alpha/numeric characters.

##### *Block 4 Organisation Name and Address*

Enter the full name and address of the approved organisation (refer to EASA form 3) releasing the work covered by this Certificate. Logos, etc., are permitted if the logo can be contained within the block.

##### *Block 5 Work Order/Contract/Invoice*

To facilitate customer traceability of the item(s), enter the work order number, contract number, invoice number, or similar reference number.

##### *Block 6 Item*

Enter line item numbers when there is more than one line item. This block permits easy cross-referencing to the Remarks block 12.

##### *Block 7 Description*

Enter the name or description of the item. Preference should be given to the term used in the instructions for continued airworthiness or maintenance data (e.g. Illustrated Parts Catalogue, Aircraft Maintenance Manual, Service Bulletin, Component Maintenance Manual).

##### *Block 8 Part Number*

Enter the part number as it appears on the item or tag/packaging. In case of an engine or propeller the type designation may be used.

### *Block 9 Quantity*

State the quantity of items.

### *Block 10 Serial Number*

If the item is required by regulations to be identified with a serial number, enter it here. Additionally, any other serial number not required by regulation may also be entered. If there is no serial number identified on the item, enter 'N/A'.

### *Block 11 Status/Work*

The following describes the permissible entries for block 11. Enter only one of these terms — where more than one may be applicable, use the one that most accurately describes the majority of the work performed and/or the status of the article.

(i)	Overhauled	.	Means a process that ensures the item is in complete conformity with all the applicable service tolerances specified in the type certificate holder's, or equipment manufacturer's instructions for continued airworthiness, or in the data which is approved or accepted by the Authority. The item will be at least disassembled, cleaned, inspected, repaired as necessary, reassembled and tested in accordance with the above specified data.
(ii)	Repaired	.	Rectification of defect(s) using an applicable standard (1).
(iii)	Inspected/Tested	.	Examination, measurement, etc. in accordance with an applicable standard (1) (e.g. visual inspection, functional testing, bench testing etc.).
(iv)	Modified	.	Alteration of an item to conform to an applicable standard (1).
(1) Applicable standard means a manufacturing/design/maintenance/quality standard, method, technique or practice approved by or acceptable to the Competent Authority. The applicable standard shall be described in block 12.			

### *Block 12 Remarks*

Describe the work identified in Block 11, either directly or by reference to supporting documentation, necessary for the user or installer to determine the airworthiness of item(s) in relation to the work being certified. If necessary, a separate sheet may be used and referenced from the main EASA Form 1. Each statement must clearly identify which item(s) in Block 6 it relates to.

Examples of information to be entered in block 12 are:

- (i) Maintenance data used, including the revision status and reference.
- (ii) Compliance with airworthiness directives or service bulletins.
- (iii) Repairs carried out.
- (iv) Modifications carried out.
- (v) Replacement parts installed.
- (vi) Life limited parts status.

- (vii) Deviations from the customer work order.
- (viii) Release statements to satisfy a foreign Civil Aviation Authority maintenance requirement.
- (ix) Information needed to support shipment with shortages or re-assembly after delivery.
- (x) For maintenance organisations approved in accordance with [Subpart F of Annex I \(Part-M\)](#), the component certificate of release to service statement referred to in point [M.A.613](#):

“Certifies that, unless otherwise specified in this block, the work identified in block 11 and described in this block was accomplished in accordance with the requirements of [Section A, Subpart F of Annex I \(Part-M\)](#) to Regulation (EU) No 1321/2014 and in respect to that work the item is considered ready for release to service. THIS IS NOT A RELEASE UNDER ANNEX II (PART-145) TO REGULATION (EU) No 1321/2014”

If printing the data from an electronic EASA Form 1, any appropriate data not fit for other blocks should be entered in this block.

#### *Block 13a-13e*

General Requirements for blocks 13a-13e: Not used for maintenance release. Shade, darken, or otherwise mark to preclude inadvertent or unauthorised use.

#### *Block 14a*

Mark the appropriate box(es) indicating which regulations apply to the completed work. If the box ‘other regulations specified in block 12’ is marked, then the regulations of the other airworthiness authority(ies) must be identified in block 12. At least one box must be marked, or both boxes may be marked, as appropriate.

For all maintenance carried out by maintenance organisations approved in accordance with [Section A, Subpart F of Annex I \(Part-M\)](#) to Regulation (EU) No 1321/2014, the box ‘other regulation specified in block 12’ shall be ticked and the certificate of release to service statement made in block 12. In that case, the certification statement ‘unless otherwise specified in this block’ is intended to address the following cases;

- (a) Where the maintenance could not be completed.
- (b) Where the maintenance deviated from the standard required by [Annex I \(Part-M\)](#).
- (c) Where the maintenance was carried out in accordance with a requirement other than that specified in [Annex I \(Part-M\)](#). In this case block 12 shall specify the particular national regulation.

For all maintenance carried out by maintenance organisations approved in accordance with [Section A of Annex II \(Part-145\)](#) to Regulation (EU) No 1321/2014, the certification statement ‘unless otherwise specified in block 12’ is intended to address the following cases:

- (a) Where the maintenance could not be completed.
- (b) Where the maintenance deviated from the standard required by [Annex II \(Part-145\)](#).
- (c) Where the maintenance was carried out in accordance with a requirement other than that specified in [Annex II \(Part-145\)](#). In this case block 12 shall specify the particular national regulation.

#### *Block 14b Authorised Signature*

This space shall be completed with the signature of the authorised person. Only persons specifically authorised under the rules and policies of the Competent Authority are permitted

to sign this block. To aid recognition, a unique number identifying the authorised person may be added.

*Block 14c Certificate/Approval Number*

Enter the Certificate/Approval number/reference. This number or reference is issued by the Competent Authority.

*Block 14d Name*

Enter the name of the person signing block 14b in a legible form.

*Block 14e Date*

Enter the date on which block 14b is signed, the date must be in the format dd = 2 digit day, mmm = first 3 letters of the month, yyyy = 4 digit year

*User/Installer Responsibilities*

Place the following statement on the Certificate to notify end users that they are not relieved of their responsibilities concerning installation and use of any item accompanied by the form:

‘THIS CERTIFICATE DOES NOT AUTOMATICALLY CONSTITUTE AUTHORITY TO INSTALL.  
WHERE THE USER/INSTALLER PERFORMS WORK IN ACCORDANCE WITH REGULATIONS OF AN AIRWORTHINESS AUTHORITY DIFFERENT THAN THE AIRWORTHINESS AUTHORITY SPECIFIED IN BLOCK 1, IT IS ESSENTIAL THAT THE USER/INSTALLER ENSURES THAT HIS/HER AIRWORTHINESS AUTHORITY ACCEPTS ITEMS FROM THE AIRWORTHINESS AUTHORITY SPECIFIED IN BLOCK 1.  
STATEMENTS IN BLOCKS 13A AND 14A DO NOT CONSTITUTE INSTALLATION CERTIFICATION. IN ALL CASES AIRCRAFT MAINTENANCE RECORDS MUST CONTAIN AN INSTALLATION CERTIFICATION ISSUED IN ACCORDANCE WITH THE NATIONAL REGULATIONS BY THE USER/INSTALLER BEFORE THE AIRCRAFT MAY BE FLOWN.’

1. Approving Competent Authority / Country		<b>2. AUTHORISED RELEASE CERTIFICATE</b> <b>EASA FORM 1</b>			3. Form Tracking Number
4. Organisation Name and Address:				5. Work Order/Contract/Invoice	
6. Item	7. Description	8. Part No.	9. Qty.	10. Serial No.	11. Status/Work
12. Remarks					
13a. Certifies that the items identified above were manufactured in conformity to: <input type="checkbox"/> approved design data and are in a condition for safe operation <input type="checkbox"/> non-approved design data specified in block 12			14a <input type="checkbox"/> <a href="#">Part-145.A.50</a> Release to Service <input type="checkbox"/> Other regulation specified in block 12 Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, was accomplished in accordance with <a href="#">Part-145</a> and in respect to that work the items are considered ready for release to service.		
13b. Authorised Signature		13c. Approval/Authorisation Number	14b. Authorised Signature		14c. Certificate/Approval Ref. No.
13d. Name		13e. Date (dd mmm yyyy)	14d. Name		14e. Date (dd mmm yyyy)
<p><b>USER/INSTALLER RESPONSIBILITIES</b></p> <p>This certificate does not automatically constitute authority to install the item(s). Where the user/installer performs work in accordance with regulations of an airworthiness authority different than the airworthiness authority specified in block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts items from the airworthiness authority specified in block 1. Statements in blocks 13a and 14a do not constitute installation certification. In all cases aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.</p>					

EASA Form 1 -MF/145 Issue 2

## AMC to Appendix II to Part-M — Use of the EASA Form 1 for maintenance

ED Decision 2015/029/R

1. The following formats of an issued [EASA Form 1](#) or equivalent certificate are acceptable:
  - A paper certificate bearing a signature (both originals and copies are accepted);
  - A paper certificate generated from an electronic system (printed from electronically stored data) when complying with the following subparagraph 2;
  - An electronic EASA Form 1 or equivalent when complying with the following subparagraph 2.
2. Electronic signature and electronic exchange of the EASA Form 1
  - a) Submission to the competent authority

Any organisation intending to implement an electronic signature procedure to issue EASA Form 1 and/or to exchange electronically such data contained on the EASA Form 1, should document it and submit it to the competent authority as part of the documents attached to its exposition.
  - b) Characteristics of the electronic system generating the EASA Form 1

The electronic system should:

    - guarantee secure access for each certifying staff;
    - ensure integrity and accuracy of the data certified by the signature on the form and be able to show evidence of the authenticity of the EASA Form 1 (recording and record keeping) with suitable security, safeguards and backups;
    - be active only at the location where the part is being released with an EASA Form 1;
    - not permit to sign a blank form;
    - provide a high degree of assurance that the data has not been modified after signature (if modification is necessary after issuance, i.e., re-certification of a part, a new form with a new number and reference to the initial issuance should be made).
    - provide for a ‘personal’ electronic signature, identifying the signatory. The signature should be generated only in presence of the signatory.

An electronic signature means data in electronic form which is attached to or logically associated with other electronic data and which serves as a method of authentication and should meet the following criteria:

- it is uniquely linked to the signatory;
- it is capable of identifying the signatory;
- it is created using means that the signatory can maintain under his sole control.

This electronic signature should be an electronically generated value based on a cryptographic algorithm and appended to data in a way to enable the verification of the data’s source and integrity.

Organisation(s) are reminded that additional national and/or European requirements may need to be satisfied when operating electronic systems. ‘Directive 1999/93/EC of the European

Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures', as last amended, may constitute a reference.

The electronic system should be based on a policy and management structure (confidentiality, integrity and availability), such as:

- Administrators, signatories;
- Scope of authorisation, rights;
- Password and secure access, authentication, protections, confidentiality;
- Track changes;
- Minimum blocks to be completed, completeness of information;
- Archives;
- etc.

The electronic system generating the EASA Form 1 may contain additional data such as;

- Manufacturer code;
- Customer identification code;
- Workshop report;
- Inspection results;
- etc.

c) Characteristics of the EASA Form 1 generated from the electronic system.

To facilitate understanding and acceptance of the EASA Form 1 released with an electronic signature, the following statement should be in Block 14b: 'Electronic Signature on File'.

In addition to this statement, it is accepted to print or display a signature in any form, such as a representation of the hand-written signature of the person signing (i.e. scanned signature) or a representation of their name.

When printing the electronic form, the EASA Form 1 should meet the general format as specified in [Appendix II to Part-M](#). A watermark-type 'PRINTED FROM ELECTRONIC FILE' should be printed on the document.

When the electronic file contains a hyperlink to data required to determine the airworthiness of the item(s), the data associated to the hyperlink, when printed, should be in a legible format and be identified as a reference from the EASA Form 1.

Additional information not required by the EASA Form 1 completion instructions may be added to the printed copies of EASA Form 1, as long as the additional data do not prevent a person from filling out, issuing, printing, or reading any portion of the EASA Form 1. This additional data should be provided only in block 12 unless it is necessary to include it in another block to clarify the content of that block.

d) Electronic exchange of the electronic EASA Form 1

The electronic exchange of the electronic EASA Form 1 should be accomplished on a voluntary basis. Both parties (issuer and receiver) should agree on electronic transfer of the EASA Form 1.

For that purpose, the exchange needs to include:

- all data of the EASA Form 1, including referenced data required by the EASA Form 1 completion instructions;
- all data required for authentication of the EASA Form 1.

In addition, the exchange may include:

- data necessary for the electronic format;
- additional data not required by the EASA Form 1 completion instructions, such as manufacturer code, customer identification code.

The system used for the exchange of the electronic EASA Form 1 should provide:

- A high level of digital security; the data should be protected, not altered or not corrupted;
- Traceability of data back to its source.

Trading partners wishing to exchange EASA Form 1 electronically should do so in accordance with the means of compliance stated in this document. It is recommended that they use an established, common, industry method such as Air Transport Association (ATA) Spec 2000 Chapter 16.

The organisation(s) are reminded that additional national and/or European requirements may need to be satisfied when operating the electronic exchange of the electronic EASA Form 1.

The receiver should be capable of regenerating the EASA Form 1 from the received data without alteration; if not, the system should revert back to the paper system.

When the receiver needs to print the electronic form, refer to subparagraph c) here above.

## GM to Appendix II to Part-M — Use of the EASA Form 1 for maintenance

*ED Decision 2015/029/R*

### **EASA Form 1 Block 12 ‘Remarks’**

Examples of data to be entered in this block as appropriate:

- Maintenance documentation used, including the revision status, for all work performed and not limited to the entry made in block 11. A statement such as ‘in accordance with the CMM’ is not acceptable.
- NDT methods with appropriate documentation used when relevant.
- Compliance with airworthiness directives or service bulletins.
- Repairs carried out.
- Modifications carried out.
- Replacement parts installed.
- Life-limited parts status.
- Shelf life limitations.



- Deviations from the customer work order.
- Release statements to satisfy a foreign Civil Aviation Authority maintenance requirement.
- Information needed to support shipment with shortages or re-assembly after delivery.
- References to aid traceability, such as batch numbers.

**Appendix III — Airworthiness Review Certificate — EASA Form 15**

EASA Form 15b

*Regulation (EU) 2015/1088*

[MEMBER STATE]  
A Member of the European Union (\*)

**AIRWORTHINESS REVIEW CERTIFICATE**

ARC reference: .....

Pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council for the time being into force, the following continuing airworthiness management organisation, approved in accordance with Section A, [Subpart G](#) of Annex I (Part-M) to Commission Regulation (EU) No 1321/2014

[NAME OF ORGANISATION APPROVED AND ADDRESS]

Approval reference: [MEMBER STATE CODE].MG.[NNNN].

hereby certifies that it has performed an airworthiness review in accordance with point [M.A.710](#) of Annex I to Commission Regulation (EU) No 1321/2014 on the following aircraft:

Aircraft manufacturer: .....  
Manufacturer's designation: .....  
Aircraft registration: .....  
Aircraft serial number: .....

and this aircraft is considered airworthy at the time of the review.

Date of issue: ..... Date of expiry: .....  
Airframe Flight Hours (FH) at date of issue (\*\*): .....  
Signed: ..... Authorisation No: .....

1st Extension: The aircraft has remained in a controlled environment in accordance with point [M.A.901](#) of Annex I to Commission Regulation (EU) No 1321/2014 for the last year. The aircraft is considered to be airworthy at the time of the issue.  
Date of issue: ..... Date of expiry: .....  
Airframe Flight Hours (FH) at date of issue (\*\*): .....  
Signed: ..... Authorisation No: .....  
Company Name: ..... Approval reference: .....

2nd Extension: The aircraft has remained in a controlled environment in accordance with point [M.A.901](#) of Annex I to Commission Regulation (EU) No 1321/2014 for the last year. The aircraft is considered to be airworthy at the time of the issue.  
Date of issue: ..... Date of expiry: .....  
Airframe Flight Hours (FH) at date of issue (\*\*): .....  
Signed: ..... Authorisation No: .....  
Company Name: ..... Approval reference: .....

EASA Form 15b Issue 4

(\*) Delete for non-EU Member States

(\*\*) Except for balloons and airships

**EASA Form 15a***Regulation (EU) 2015/1088*

[MEMBER STATE]  
A Member of the European Union (\*)

**AIRWORTHINESS REVIEW CERTIFICATE**

ARC reference: .....

Pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council for the time being into force, the [COMPETENT AUTHORITY OF THE MEMBER STATE] hereby certifies that the following aircraft:

Aircraft manufacturer: .....  
Manufacturer's designation: .....  
Aircraft registration: .....  
Aircraft serial number: .....  
is considered airworthy at the time of the review.

Date of issue: ..... Date of expiry: .....  
Airframe Flight Hours (FH) at date of issue (\*\*): .....  
Signed: ..... Authorisation No: .....

1st Extension: The aircraft has remained in a controlled environment in accordance with point [M.A.901](#) of Annex I to Commission Regulation (EU) No 1321/2014 for the last year. The aircraft is considered to be airworthy at the time of the issue.

Date of issue: ..... Date of expiry: .....  
Airframe Flight Hours (FH) at date of issue (\*\*): .....  
Signed: ..... Authorisation No: .....  
Company Name: ..... Approval reference: .....

2nd Extension: The aircraft has remained in a controlled environment in accordance with point [M.A.901](#) of Annex I to Commission Regulation (EU) No 1321/2014 for the last year. The aircraft is considered to be airworthy at the time of the issue.

Date of issue: ..... Date of expiry: .....  
Airframe Flight Hours (FH) at date of issue (\*\*): .....  
Signed: ..... Authorisation No: .....  
Company Name: ..... Approval reference: .....

EASA Form 15a Issue 4

(\*) Delete for non-EU Member States.

(\*\*) Except for balloons and airships

**EASA Form 15c***Regulation (EU) 2015/1088*

<p>[MEMBER STATE] A Member of the European Union (*)</p> <p><b>AIRWORTHINESS REVIEW CERTIFICATE (**)</b></p> <p>ARC reference: .....</p> <p>Pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council for the time being into force, the following maintenance organisation, approved in accordance with (mark as applicable):</p> <p><input type="checkbox"/> Section A, <a href="#">Subpart F</a> of Annex I (Part-M) to Commission Regulation (EU) No 1321/2014, or <input type="checkbox"/> <a href="#">Section A of Annex II</a> (Part-145) to Commission Regulation (EU) No 1321/2014</p> <p>[NAME OF ORGANISATION APPROVED AND ADDRESS]</p> <p>Approval reference: [MEMBER STATE CODE].[MF or 145].[NNNN].</p> <p>hereby certifies that it has performed an airworthiness review in accordance with point <a href="#">M.A.901(l)</a> of Annex I to Commission Regulation (EU) No 1321/2014 on the following aircraft:</p> <p>Aircraft manufacturer: ..... Manufacturer's designation: ..... Aircraft registration: ..... Aircraft serial number: .....</p> <p>and this aircraft is considered airworthy at the time of the review.</p> <p>Date of issue: ..... Date of expiry: ..... Airframe Flight Hours (FH) at date of issue (**): ..... Signed: ..... Authorisation No: .....</p>
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EASA Form 15c Issue 1

(\*) Delete for non-EU Member States

(\*\*) Applicable only to ELA1 aircraft not involved in commercial operations

(\*\*\*) Except for balloons and airships

## Appendix IV — Class and Ratings System to be used for the Approval of Maintenance Organisations referred to in Annex I (Part-M) Subpart F and Annex II (Part-145)

Regulation (EU) 2015/1088

1. Except as stated otherwise for the smallest organisations in point 12, the table referred to in point 13 provides the standard system for the approval of maintenance organisation under [Subpart F of Annex I \(Part-M\)](#) and [Annex II \(Part-145\)](#). An organisation must be granted an approval ranging from a single class and rating with limitations to all classes and ratings with limitations.
2. In addition to the table referred to in point 13, the approved maintenance organisation is required to indicate its *scope of work* in its maintenance organisation manual/exposition. See also point 11.
3. Within the approval class(es) and rating(s) granted by the competent authority, the scope of work specified in the maintenance organisation exposition defines the exact limits of approval. It is therefore essential that the approval class(es) and rating(s) and the organisations scope of work are matching.
4. *A category A class rating* means that the approved maintenance organisation may carry out maintenance on the aircraft and any component (including engines and/or Auxiliary Power Units (APUs), in accordance with aircraft maintenance data or, if agreed by the competent authority, in accordance with component maintenance data, only whilst such components are fitted to the aircraft. Nevertheless, such A-rated approved maintenance organisation may temporarily remove a component for maintenance, in order to improve access to that component, except when such removal generates the need for additional maintenance not eligible for the provisions of this point. This will be subject to a control procedure in the maintenance organisation exposition to be approved by the competent authority. The limitation section will specify the scope of such maintenance thereby indicating the extent of approval.
5. *A category B class rating* means that the approved maintenance organisation may carry out maintenance on the uninstalled engine and/or APU and engine and/or APU components, in accordance with engine and/or APU maintenance data or, if agreed by the competent authority, in accordance with component maintenance data, only whilst such components are fitted to the engine and/or APU. Nevertheless, such B-rated approved maintenance organisation may temporarily remove a component for maintenance, in order to improve access to that component, except when such removal generates the need for additional maintenance not eligible for the provisions of this point. The limitation section will specify the scope of such maintenance thereby indicating the extent of approval. A maintenance organisation approved with a category B class rating may also carry out maintenance on an installed engine during 'base' and 'line' maintenance subject to a control procedure in the maintenance organisation exposition to be approved by the competent authority. The maintenance organisation exposition scope of work shall reflect such activity where permitted by the competent authority.
6. *A category C class rating* means that the approved maintenance organisation may carry out maintenance on uninstalled components (excluding engines and APUs) intended for fitment to the aircraft or engine/APU. The limitation section will specify the scope of such maintenance thereby indicating the extent of approval. A maintenance organisation approved with a category C class rating may also carry out maintenance on an installed component during base and line maintenance or at an engine/APU maintenance facility subject to a control procedure

in the maintenance organisation exposition to be approved by the competent authority. The maintenance organisation exposition scope of work shall reflect such activity where permitted by the competent authority.

7. A *category D class rating* is a self contained class rating not necessarily related to a specific aircraft, engine or other component. The D1 — Non Destructive Testing (NDT) rating is only necessary for an approved maintenance organisation that carries out NDT as a particular task for another organisation. A maintenance organisation approved with a class rating in A or B or C category may carry out NDT on products it is maintaining subject to the maintenance organisation exposition containing NDT procedures, without the need for a D1 class rating.
8. In the case of maintenance organisations approved in accordance with [Annex II \(Part-145\)](#), *category A class ratings* are subdivided into ‘Base’ or ‘Line’ maintenance. Such an organisation may be approved for either ‘Base’ or ‘Line’ maintenance or both. It should be noted that a ‘Line’ facility located at a main base facility requires a ‘Line’ maintenance approval.
9. The *limitation* section is intended to give the competent authorities the flexibility to customise the approval to any particular organisation. Ratings shall be mentioned on the approval only when appropriately limited. The table referred to in point 13 specifies the types of limitation possible. Whilst maintenance is listed last in each class rating it is acceptable to stress the maintenance task rather than the aircraft or engine type or manufacturer, if this is more appropriate to the organisation (an example could be avionic systems installations and related maintenance). Such mention in the limitation section indicates that the maintenance organisation is approved to carry out maintenance up to and including this particular type/task.
10. When reference is made to *series, type and group* in the limitation section of class A and B, series means a specific type series such as Airbus 300 or 310 or 319 or Boeing 737-300 series or RB211-524 series or Cessna 150 or Cessna 172 or Beech 55 series or continental O-200 series etc; type means a specific type or model such as Airbus 310-240 type or RB 211-524 B4 type or Cessna 172RG type; any number of series or types may be quoted; group means for example Cessna single piston engine aircraft or Lycoming non-supercharged piston engines etc.
11. When a *lengthy capability* list is used which could be subject to frequent amendment, then such amendment may be in accordance with the indirect approval procedure referred to in points [M.A.604\(c\)](#) and [M.B.606\(c\)](#) or [145.A.70\(c\)](#) and [145.B.40](#), as applicable.
12. A *maintenance organisation which employs only one person* to both plan and carry out all maintenance can only hold a limited scope of approval rating. The maximum permissible limits are:

CLASS	RATING	LIMITATION
CLASS AIRCRAFT	RATING A2 AEROPLANES 5700 KG AND BELOW	PISTON ENGINE 5700 KG AND BELOW
CLASS AIRCRAFT	RATING A3 HELICOPTERS	SINGLE PISTON ENGINE 3175 KG AND BELOW
CLASS AIRCRAFT	RATING A4 AIRCRAFT OTHER THAN A1, A2 AND A3	NO LIMITATION
CLASS ENGINES	RATING B2 PISTON	LESS THAN 450 HP
CLASS COMPONENTS RATING OTHER THAN COMPLETE ENGINES OR APU'S.	C1 TO C22	AS PER CAPABILITY LIST
CLASS SPECIALISED	D1 NDT	NDT METHOD(S) TO BE SPECIFIED.

It should be noted that such an organisation may be further limited by the competent authority in the scope of approval dependent upon the capability of the particular organisation.

13. Table

CLASS	RATING	LIMITATION	BASE	LINE
AIRCRAFT	A1 Aeroplanes above 5 700 kg	[Rating reserved to Maintenance Organisations approved in accordance with Annex II (Part-145)] [Shall state aeroplane manufacturer or group or series or type and/or the maintenance tasks] <i>Example: Airbus A320 Series</i>	[YES/NO] (*)	[YES/NO] (*)
	A2 Aeroplanes 5 700 kg and below	[Shall state aeroplane manufacturer or group or series or type and/or the maintenance tasks] <i>Example: DHC-6 Twin Otter Series</i> State whether the issue of recommendations and airworthiness review certificates is authorised or not (only possible for ELA1 aircraft not involved in commercial operations)	[YES/NO] (*)	[YES/NO] (*)
	A3 Helicopters	[Shall state helicopter manufacturer or group or series or type and/or the maintenance task(s)] <i>Example: Robinson R44</i>	[YES/NO] (*)	[YES/NO] (*)
	A4 Aircraft other than A1, A2 and A3	[Shall state aircraft category (sailplane, balloon, airship, etc.), manufacturer or group or series or type and/or the maintenance task(s).] State whether the issue of recommendations and airworthiness review certificates is authorised or not (only possible for ELA1 aircraft not involved in commercial operations)	[YES/NO] (*)	[YES/NO] (*)
ENGINES	B1 Turbine	[Shall state engine series or type and/or the maintenance task(s)] <i>Example: PT6A Series</i>		
	B2 Piston	[Shall state engine manufacturer or group or series or type and/or the maintenance task(s)]		
	B3 APU	[Shall state engine manufacturer or series or type and/or the maintenance task(s)]		
COMPONENTS OTHER THAN	C1 Air Cond & Press	[Shall state aircraft type or aircraft manufacturer or component manufacturer or the particular component and/or cross refer		

CLASS	RATING	LIMITATION	BASE	LINE
COMPLETE ENGINES OR APUs	C2 Auto Flight	to a capability list in the exposition and/or the maintenance task(s).] <i>Example: PT6A Fuel Control</i>		
	C3 Comms and Nav			
	C4 Doors — Hatches			
	C5 Electrical Power & Lights			
	C6 Equipment			
	C7 Engine — APU			
	C8 Flight Controls			
	C9 Fuel			
	C10 Helicopter — Rotors			
	C11 Helicopter — Trans			
	C12 Hydraulic Power			
	C13 Indicating — recording system			
	C14 Landing Gear			
	C15 Oxygen			
	C16 Propellers			
	C17 Pneumatic & Vacuum			
	C18 Protection ice/rain/fire			
	C19 Windows			
	C20 Structural			
	C21 Water ballast			
	C22 Propulsion Augmentation			
	SPECIALISED SERVICES			
(*) Delete as appropriate				



## Appendix V — Maintenance organisation approval referred to in annex I (Part-M) Subpart F

*Regulation (EU) 2015/1088*

Page 1 of 2

[MEMBER STATE (\*)]  
A Member of the European Union (\*\*)

### MAINTENANCE ORGANISATION APPROVAL CERTIFICATE

Reference: [MEMBER STATE CODE (\*)].MF.[XXXX]

Pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council and to Commission Regulation (EU) No 1321/2014 for the time being in force and subject to the condition specified below, the [COMPETENT AUTHORITY OF THE MEMBER STATE (\*)] hereby certifies:

[COMPANY NAME AND ADDRESS]

as a maintenance organisation in compliance with [Section A, Subpart F of Annex I \(Part-M\)](#) of Regulation (EU) No 1321/2014, approved to maintain the products, parts and appliances listed in the attached approval schedule and issue related certificates of release to service using the above references and, when stipulated, to issue recommendations and airworthiness review certificates after an airworthiness review as specified in point [M.A.901\(I\)](#) of [Annex I \(Part-M\)](#) of the same Regulation for those aircraft listed in the attached approval schedule.

#### CONDITIONS:

1. This approval is limited to that specified in the scope of work section of the approved maintenance organisation manual as referred to in Section A of [Subpart F of Annex I \(Part-M\)](#), and
2. This approval requires compliance with the procedures specified in the approved maintenance organisation manual, and
3. This approval is valid whilst the approved maintenance organisation remains in compliance with [Annex I \(Part-M\)](#) of Regulation (EU) No 1321/2014.
4. Subject to compliance with the foregoing conditions, this approval shall remain valid for an unlimited duration unless the approval has previously been surrendered, superseded, suspended or revoked.

Date of original issue: .....

Date of this revision: .....

Revision No: .....

Signed: .....

For the competent authority: [COMPETENT AUTHORITY OF THE MEMBER STATE (\*)]

EASA Form 3-MF Issue 3

(\*) Or EASA if EASA is the competent authority

(\*\*) Delete for non-EU Member States or EASA.

**MAINTENANCE ORGANISATION APPROVAL SCHEDULE**

Reference: [MEMBER STATE CODE (\*)].MF.XXXX

Organisation: [COMPANY NAME AND ADDRESS]

CLASS	RATING	LIMITATION
AIRCRAFT (**)	(***)	(****)
	(***)	(****)
ENGINES (**)	(***)	(***)
	(***)	(***)
COMPONENTS OTHER THAN COMPLETE ENGINES OR APUs (**)	(***)	(***)
	(***)	(***)
	(***)	(***)
	(***)	(***)
	(***)	(***)
	(***)	(***)
SPECIALISED SERVICES (**)	(***)	(***)
	(***)	(***)

This approval is limited to the products, parts and appliances and to the activities specified in the scope of work section of the approved maintenance organisation manual,

Maintenance Organisation Manual reference: .....

Date of original issue: .....

Date of last revision approved: ..... Revision No: .....

Signed: .....

For the competent authority: [COMPETENT AUTHORITY OF THE MEMBER STATE (\*)]

EASA Form 3-MF Issue 3

(\*) Or EASA if EASA is the competent authority

(\*\*) Delete as appropriate if the organisation is not approved.

(\*\*\*) Complete with the appropriate rating and limitation

(\*\*\*\*) Complete with the appropriate limitation and state whether the issue of recommendations and airworthiness review certificates is authorised or not (only possible for ELA1 aircraft not involved in commercial operations when the organisation performs the airworthiness review together with the annual inspection contained in the maintenance programme)

## AMC to Appendix V to Part-M — Maintenance Organisation Approval referred to in Annex I (Part-M) Subpart F

*ED Decision 2015/029/R*

The following fields on page 2 'Maintenance Organisation Approval Schedule' of the maintenance organisation approval certificate should be completed as follows:

- Date of original issue: It refers to the date of the original issue of the maintenance organisation manual.
- Date of last revision approved: It refers to the date of the last revision of the maintenance organisation manual affecting the content of the certificate. Changes to the maintenance organisation manual which do not affect the content of the certificate do not require the reissuance of the certificate.
- Revision No: It refers to the revision No of the last revision of the maintenance organisation manual affecting the content of the certificate. Changes to the maintenance organisation manual which do not affect the content of the certificate do not require the reissuance of the certificate.

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## **Appendix VI — Continuing airworthiness management organisation approval referred to in annex I (Part-M) Subpart G**

*Regulation (EU) 2015/1536*

[MEMBER STATE (\*)]

A Member of the European Union (\*\*)

**CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATION  
APPROVAL CERTIFICATE**

Reference: [MEMBER STATE CODE (\*)].MG.XXXX (ref. AOC XX.XXXX)

Pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council and to Commission Regulation (EU) No 1321/2014 for the time being in force and subject to the condition specified below, the [COMPETENT AUTHORITY OF THE MEMBER STATE (\*)] hereby certifies:

**[COMPANY NAME AND ADDRESS]**

as a continuing airworthiness management organisation in compliance with [Section A, Subpart G of Annex I \(Part-M\)](#) of Regulation (EU) No 1321/2014, approved to manage the continuing airworthiness of the aircraft listed in the attached schedule of approval and, when stipulated, to issue recommendations and airworthiness review certificates after an airworthiness review as specified in point [M.A.710 of Annex I \(Part-M\)](#), and, when stipulated, to issue permits to fly as specified in point [M.A.711\(c\) of Annex I \(Part-M\)](#) of the same regulation.

**CONDITIONS**

1. This approval is limited to that specified in the scope of approval section of the approved continuing airworthiness management exposition as referred to in Section A, Subpart G of Annex I (Part-M) of Regulation (EU) No 1321/2014.
2. This approval requires compliance with the approved continuing airworthiness management exposition procedures specified in Annex I (Part-M) and, if applicable, Annex Va (Part-T) to Regulation (EU) No 1321/2014.
3. This approval is valid whilst the approved continuing airworthiness management organisation remains in compliance with Annex I (Part-M), and if applicable, Annex Va (Part-T) to Regulation (EU) No 1321/2014.
4. Where the continuing airworthiness management organisation contracts under its Quality System the service of an/several organisation(s), this approval remains valid subject to such organisation(s) fulfilling applicable contractual obligations.
5. Subject to compliance with the conditions 1 to 4 above, this approval shall remain valid for an unlimited duration unless the approval has previously been surrendered, superseded, suspended or revoked.  
  
If this form is also used for licenced air carriers in accordance with Regulation (EC) No 1008/2008, the Air Operator Certificate (AOC) number shall be added to the reference, in addition to the standard number, and the condition 5 shall be replaced by the following extra conditions:
6. This approval does not constitute an authorisation to operate the types of aircraft referred in paragraph 1. The authorisation to operate the aircraft is the AOC.
7. Termination, suspension or revocation of the AOC automatically invalidates the present approval in relation to the aircraft registrations specified in the AOC, unless otherwise explicitly stated by the competent authority.
8. Subject to compliance with the previous conditions, this approval shall remain valid for an unlimited duration unless the approval has previously been surrendered, superseded, suspended or revoked.

Date of original issue: .....

Signed: .....

Date of this revision: ..... Revision No: .....

For the Competent Authority: [COMPETENT AUTHORITY OF THE MEMBER STATE (\*)]

Page 1 of 2

**CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATION  
APPROVAL SCHEDULE**

Reference: [MEMBER STATE CODE (\*).MG.XXXX  
(ref. AOC XX.XXXX)]

Organisation: [COMPANY NAME AND ADDRESS]

Aircraft type/series/group	Airworthiness review authorised	Permits to fly authorised	Organisation(s) working under quality system
	[YES/NO] (***)	[YES/NO] (***)	
	[YES/NO] (***)	[YES/NO] (***)	
	[YES/NO] (***)	[YES/NO] (***)	
	[YES/NO] (***)	[YES/NO] (***)	

This approval schedule is limited to that specified in the scope of approval contained in the approved Continuing Airworthiness Management Exposition section .....

Continuing Airworthiness Management Exposition Reference: .....

Date of original issue: .....

Signed: .....

Date of this revision: ..... Revision No: .....

For the Competent Authority: [COMPETENT AUTHORITY OF THE MEMBER STATE \*]

EASA Form 14 Issue 4

(\*) Or EASA if EASA is the competent authority

(\*\*) Delete for non-EU Member State or EASA

(\*\*\*) Delete as appropriate if the organisation is not approved.

## AMC to Appendix VI to Part-M — Continuing Airworthiness Management Organisation Approval referred to in Annex I (Part-M) Subpart G

ED Decision 2015/029/R

The following fields on page 2 'Continuing Airworthiness Management Organisation Approval Schedule' of the continuing airworthiness management organisation approval certificate should be completed as follows:

- Date of original issue: It refers to the date of the original issue of the continuing airworthiness management exposition
- Date of last revision: It refers to the date of the last revision of the continuing airworthiness management exposition affecting the content of the certificate. Changes to the continuing

airworthiness management exposition which do not affect the content of the certificate do not require the reissuance of the certificate.

- Revision No: It refers to the revision No of the last revision of the continuing airworthiness management exposition affecting the content of the certificate. Changes to the continuing airworthiness management exposition which do not affect the content of the certificate do not require the reissuance of the certificate.

## Appendix VII — Complex Maintenance Tasks

*Regulation (EU) No 1321/2014*

The following constitutes the complex maintenance tasks referred to in points [M.A.502\(d\)3](#), [M.A.801\(b\)2](#) and [M.A.801\(c\)](#):

1. The modification, repair or replacement by riveting, bonding, laminating, or welding of any of the following airframe parts:
  - (a) a box beam;
  - (b) a wing stringer or chord member;
  - (c) a spar;
  - (d) a spar flange;
  - (e) a member of a truss-type beam;
  - (f) the web of a beam;
  - (g) a keel or chine member of a flying boat hull or a float;
  - (h) a corrugated sheet compression member in a wing or tail surface;
  - (i) a wing main rib;
  - (j) a wing or tail surface brace strut;
  - (k) an engine mount;
  - (l) a fuselage longeron or frame;
  - (m) a member of a side truss, horizontal truss or bulkhead;
  - (n) a seat support brace or bracket;
  - (o) a seat rail replacement;
  - (p) a landing gear strut or brace strut;
  - (q) an axle;
  - (r) a wheel; and
  - (s) a ski or ski pedestal, excluding the replacement of a low-friction coating.
2. The modification or repair of any of the following parts:
  - (a) aircraft skin, or the skin of an aircraft float, if the work requires the use of a support, jig or fixture;
  - (b) aircraft skin that is subject to pressurization loads, if the damage to the skin measures more than 15 cm (6 inches) in any direction;
  - (c) a load-bearing part of a control system, including a control column, pedal, shaft, quadrant, bell crank, torque tube, control horn and forged or cast bracket, but excluding
    - (i) the swaging of a repair splice or cable fitting, and
    - (ii) the replacement of a push-pull tube end fitting that is attached by riveting; and
  - (d) any other structure, not listed in (1), that a manufacturer has identified as primary structure in its maintenance manual, structural repair manual or instructions for continuing airworthiness.



3. The performance of the following maintenance on a piston engine:
  - (a) dismantling and subsequent reassembling of a piston engine other than (i) to obtain access to the piston/cylinder assemblies; or (ii) to remove the rear accessory cover to inspect and/or replace oil pump assemblies, where such work does not involve the removal and re-fitment of internal gears;
  - (b) dismantling and subsequent reassembling of reduction gears;
  - (c) welding and brazing of joints, other than minor weld repairs to exhaust units carried out by a suitably approved or authorised welder but excluding component replacement;
  - (d) the disturbing of individual parts of units which are supplied as bench tested units, except for the replacement or adjustment of items normally replaceable or adjustable in service.
4. The balancing of a propeller, except:
  - (a) for the certification of static balancing where required by the maintenance manual;
  - (b) dynamic balancing on installed propellers using electronic balancing equipment where permitted by the maintenance manual or other approved airworthiness data;
5. Any additional task that requires:
  - (a) specialized tooling, equipment or facilities; or
  - (b) significant coordination procedures because of the extensive duration of the tasks and the involvement of several persons.

## AMC to Appendix VII — Complex Maintenance Tasks

*ED Decision 2015/029/R*

The sentence 'suitably approved or authorised welder' contained in Appendix VII, paragraph 3(c), means that the qualification should meet an officially recognised standard or, otherwise, should be accepted by the competent authority.

## Appendix VIII — Limited Pilot-owner maintenance

Regulation (EU) 2015/1536

In addition to the requirements laid down in [Annex I \(Part-M\)](#), the following basic principles are to be complied with before any maintenance task is carried out under the terms of Pilot-owner maintenance:

(a) Competence and responsibility

1. The Pilot-owner is always responsible for any maintenance that he performs.
2. Before carrying out any Pilot-owner maintenance tasks, the Pilot-owner must satisfy himself that he is competent to do the task. It is the responsibility of Pilot-owners to familiarize themselves with the standard maintenance practices for their aircraft and with the aircraft maintenance programme. If the Pilot-owner is not competent for the task to be carried out, the task cannot be released by the Pilot-owner.
3. The Pilot-owner (or his contracted continuing airworthiness management organisation referred to in [Subpart G, Section A](#) of this Annex) is responsible for identifying the Pilot-owner tasks according to these basic principles in the maintenance programme and for ensuring that the document is updated in a timely manner.
4. The approval of the maintenance programme has to be carried out in accordance with point [M.A.302](#).

(b) Tasks

The Pilot-owner may carry out simple visual inspections or operations to check for general condition and obvious damage and normal operation of the airframe, engines, systems and components.

Maintenance tasks shall not be carried out by the Pilot-owner when the task:

1. is a critical maintenance task;
2. requires the removal of major components or major assembly and/or;
3. is carried out in compliance with an Airworthiness Directive or an Airworthiness Limitation Item, unless specifically allowed in the AD or the ALI and/or;
4. requires the use of special tools, calibrated tools (except torque wrench and crimping tool) and/or;
5. requires the use of test equipments or special testing (e.g. NDT, system tests or operational checks for avionic equipment) and/or;
6. is composed of any unscheduled special inspections (e.g. heavy landing check) and/or;
7. is effecting systems essential for the IFR operations and/or;
8. is listed in [Appendix VII to this Annex](#) or is a component maintenance task in accordance with points [M.A.502\(a\), \(b\), \(c\) or \(d\)](#) and/or;
9. is part of the annual or 100h check contained in the Minimum Inspection Programme described in [M.A.302\(i\)](#).

The criteria 1 to 9 cannot be overridden by less restrictive instructions issued in accordance with '[M.A.302\(d\)](#) Maintenance Programme'.

Any task described in the aircraft flight manual as preparing the aircraft for flight (Example: assembling the glider wings or pre-flight), is considered to be a pilot task and is not considered

a Pilot-owner maintenance task and therefore does not require a Certificate of Release to Service.

(c) Performance of the maintenance Pilot-owner tasks and records

The maintenance data as specified in point [M.A.401](#) must be always available during the conduct of Pilot-owner maintenance and must be complied with. Details of the data referred to in the conduct of Pilot-owner maintenance must be included in the Certificate of Release to Service in accordance with point [M.A.803\(d\)](#).

The Pilot-owner must inform the approved continuing airworthiness management organisation responsible for the continuing airworthiness of the aircraft (if applicable) not later than 30 days after completion of the Pilot-owner maintenance task in accordance with point [M.A.305\(a\)](#).

## AMC to Appendix VIII — Limited Pilot Owner Maintenance

*ED Decision 2015/029/R*

1. The lists here below specify items that can be expected to be completed by an owner who holds a current and valid pilot licence for the aircraft type involved and who meets the competence and responsibility requirements of [Appendix VIII to Part-M](#).
2. The list of tasks may not address in a detailed manner the specific needs of the various aircraft categories. In addition, the development of technology and the nature of the operations undertaken by these categories of aircraft cannot be always adequately considered.
3. Therefore, the following lists are considered to be the representative scope of limited Pilot-owner maintenance referred to in [M.A.803](#) and Appendix VIII:
  - Part A applies to aeroplanes;
  - Part B applies to rotorcraft;
  - Part C applies to sailplanes and powered sailplanes;
  - Part D applies to balloons and airships.
4. Inspection tasks/checks of any periodicity included in an approved maintenance programme can be carried out providing that the specified tasks are included in the generic lists of Parts A to D of this AMC and remains compliant with Part M Appendix VIII basic principles.

The content of periodic inspections/checks as well as their periodicity is not regulated or standardised in an aviation specification. It is the decision of the manufacturer/Type Certificate Holder (TCH) to recommend a schedule for each specific type of inspection/check.

For an inspection/check with the same periodicity for different TCHs, the content may differ, and in some cases may be critically safety-related and may need the use of special tools or knowledge and thus would not qualify for Pilot-owner maintenance. Therefore, the maintenance carried out by the Pilot-owner cannot be generalised to specific inspections such as 50 Hrs, 100 Hrs or 6 Month periodicity.

The Inspections to be carried out are limited to those areas and tasks listed in this [AMC to Appendix VIII](#); this allows flexibility in the development of the maintenance programme and does not limit the inspection to certain specific periodic inspections. A 50 Hrs/6 Month periodic inspection for a fixed wing aeroplane as well as the one-year inspection on a glider may normally be eligible for Pilot-owner maintenance.

### TABLES

Note: Tasks in Part A or Part B shown with \*\* exclude IFR operations following Pilot-owner maintenance. For these aircraft to operate under IFR operations, these tasks should be released by an appropriate licensed engineer.

**Part A/ PILOT-OWNER MAINTENANCE TASKS for POWERED AIRCRAFT (AEROPLANES)**

ATA	Area	Task	Aeroplanes <=2 730kg
09	Towing	Tow release unit and tow cable retraction mechanism – Cleaning, lubrication and tow cable replacement (including weak links).	Yes
		Mirror – Installation and replacement of mirrors.	Yes
11	Placards	Placards, Markings – Installation and renewal of placards and markings required by AFM and AMM.	Yes
12	Servicing	Lubrication – Those items not requiring a disassembly other than of non-structural items such as cover plates, cowlings and fairings.	Yes
20	Standard Practices	Safety Wiring – Replacement of defective safety wiring or cotter keys, excluding those in engine controls, transmission controls and flight control systems.	Yes
		Simple Non-Structural Standard Fasteners – Replacement and adjustment, excluding the replacement of receptacles and anchor nuts requiring riveting.	Yes
21	Air Conditioning	Replacement of flexible hoses and ducts.	Yes
23	Communication	Communication devices – Remove and replace self contained, instrument panel mount communication devices with quick disconnect connectors, excluding IFR operations.	Yes**
24	Electrical power	Batteries – Replacement and servicing, excluding servicing of Ni-Cd batteries and IFR operations.	Yes**
		Wiring – Repairing broken circuits in non critical equipment, excluding ignition system, primary generating system and required communication, navigation system and primary flight instruments.	Yes
		Bonding – Replacement of broken bonding cable.	Yes
		Fuses – Replacement with the correct rating.	Yes
25	Equipment	Safety Belts – Replacement of safety belts and harnesses excluding belts fitted with airbag systems.	Yes
		Seats – Replacement of seats or seat parts not involving disassembly of any primary structure or control system.	Yes
		Non-essential instruments and/or equipment - Replacement of self contained, instrument panel mount equipment with quick disconnect connectors.	Yes
		Oxygen System – Replacement of portable oxygen bottles and systems in approved mountings, excluding permanently installed bottles and systems.	Yes
		ELT – Removal/Reinstallation.	Yes
27	Flight controls	Removal or reinstallation of co-pilot control column and rudder pedals where provision for quick disconnect is made by design.	Yes
28	Fuel System	Fuel Filter elements – Cleaning and/or replacement.	Yes
30	Ice and Rain Protection	Windscreen Wiper – Replacement of wiper blade.	Yes
31	Instruments	Instrument Panel – Removal and reinstallation provided this it is a design feature with quick disconnect connectors, excluding IFR operations.	Yes**

ATA	Area	Task	Aeroplanes <=2 730kg
		Pitot Static System – Simple sense and leak check, excluding IFR operations.	Yes**
		Drainage – Drainage of water drainage traps or filters within the Pitot Static system excluding IFR operations.	Yes**
		Instruments – Check for legibility of markings and those readings are consistent with ambient conditions.	Yes
32	Landing Gear	Wheels – Removal, replacement and servicing, including replacement of wheel bearings and lubrication.	Yes
		Servicing – Replenishment of hydraulic fluid	Yes
		Shock Absorber – Replacement of elastic cords or rubber dampers.	Yes
		Shock Struts – Replenishment of oil or air.	Yes
		Skis – Changing between wheel and ski landing gear.	Yes
		Landing skids – Replacement of landing skids and skid shoes.	Yes
		Wheel fairings (spats) – Removal and reinstallation.	Yes
		Mechanical brakes – Adjustment of simple cable operated systems.	Yes
		Brake – Replacement of worn brake pads.	Yes
33	Lights	Lights – Replacement of internal and external bulbs, filaments, reflectors and lenses.	Yes
34	Navigation	Software – Updating self contained, instrument panel mount navigational software databases, excluding automatic flight control systems and transponders.	Yes
		Navigation devices – Removal and replacement of self contained, instrument panel mount navigation devices with quick disconnect connectors, excluding automatic flight control systems, transponders, primary flight control system and IFR operations.	Yes**
		Self contained data logger – Installation, data restoration.	Yes
51	Structure	Fabric patches – Simple patches extending over not more than one rib and not requiring rib stitching or removal of structural parts or control surfaces.	Yes
		Protective Coating – Applying preservative material or coatings where no disassembly of any primary structure or operating system is involved.	Yes
		Surface finish - Minor restoration where no disassembly of any primary structure or operating system is involved This includes application of signal coatings or thin foils as well as registration markings.	Yes
		Fairings – Simple repairs to non-structural fairings and cover plates which do not change the contour.	Yes
52	Doors and Hatches	Doors - Removal and reinstallation	Yes
53	Fuselage	Upholstery, furnishing – Minor repairs which do not require disassembly of primary structure or operating systems, or interfere with control systems.	Yes
56	Windows	Side Windows - Replacement if it does not require riveting, bonding or any special process	Yes
61	Propeller	Spinner – Removal and reinstallation.	Yes

ATA	Area	Task	Aeroplanes ≤2 730kg
71	Powerplant installation	Cowling – Removal and reinstallation not requiring removal of propeller or disconnection of flight controls.	Yes
		Induction System – Inspection and replacement of induction air filter.	Yes
72	Engine	Chip detectors – Removal, checking and reinstallation provided the chip detector is a self-sealing type and not electrically indicated.	Yes
73	Engine fuel	Strainer or Filter elements – Cleaning and/or replacement.	Yes
		Fuel - Mixing of required oil into fuel.	Yes
74	Ignition	Spark Plugs – Removal, cleaning, adjustment and reinstallation.	Yes
75	Cooling	Coolant - Replenishment of coolant fluid.	Yes
77	Engine Indicating	Engine Indicating – Removal and replacement of self contained, instrument panel mount indicators that have quick-release connectors and do not employ direct reading connections.	Yes
79	Oil System	Strainer or filter elements – Cleaning and/or replacement.	Yes
		Oil – Changing or replenishment of engine oil and gearbox fluid.	Yes

**Part B/ PILOT-OWNER MAINTENANCE TASKS for ROTORCRAFT**

ATA	Area	Task	Single Engine Rotorcraft ≤2 730kg
11	Placards	Placards, Markings – Installation and renewal of placards and markings required by AFM and AMM.	Yes
12	Servicing	Fuel, oil, hydraulic, de-iced and windshield liquid replenishment.	Yes
		Lubrication – Those items not requiring a disassembly other than of non-structural items such as cover plates, cowlings and fairings.	Yes
20	Standard Practices	Safety Wiring – Replacement of defective safety wiring or cotter keys, excluding those in engine controls, transmission controls and flight control systems.	Yes
		Simple non-structural standard fasteners – Replacement and adjustment, excluding latches and the replacement of receptacles and anchor nuts requiring riveting.	Yes
21	Air Conditioning	Replacement of flexible hoses and ducts.	Yes
23	Communication	Communication devices – Remove and replace self contained, instrument panel mount communication devices with quick disconnect connectors, excluding IFR operations.	Yes**
24	Electrical power	Batteries – Replacement and servicing, excluding servicing of Ni-Cd batteries and IFR operations.	Yes**
		Wiring – Repairing broken circuits in noncritical equipment, excluding ignition system, primary generating system and required communication, navigation system and primary flight instruments.	Yes
		Bonding – Replacement of broken bonding cable excluding bonding on rotating parts and flying controls.	Yes
		Fuses – Replacement with the correct rating.	Yes

ATA	Area	Task	Single Engine Rotorcraft <=2 730kg
25	Equipment	Safety Belts - Replacement of safety belts and harnesses excluding belts fitted with airbag systems.	Yes
		Seats – Replacement of seats or seat parts not involving disassembly of any primary structure or control system excluding flight crew seats.	Yes
		Removal/installation of emergency flotation gears with quick disconnect connectors.	Yes
		Non-essential instruments and/or equipment - Replacement of self contained, instrument panel mount equipment with quick disconnect connectors.	Yes
		ELT - Removal/Reinstallation.	Yes
30	Ice and rain protection	Windshield wiper replacement	Yes
31	Instruments	Instrument Panel– Removal and reinstallation provided this it is a design feature with quick disconnect connectors, excluding IFR operations.	Yes**
		Pitot Static System – Simple sense and leak check, excluding IFR operations.	Yes**
		Drainage – Drainage of water drainage traps or filters within the Pitot Static system excluding IFR operations.	Yes**
		Instruments – Check for legibility of markings and those readings are consistent with ambient conditions.	Yes
32	Landing Gears	Wheels – Removal, replacement and servicing, including replacement of wheel bearings and lubrication.	Yes
		Replacement of skid wear shoes.	Yes
		Fit and remove snow landing pads.	Yes
		Servicing – Replenishment of hydraulic fluid.	Yes
		Brake – Replacement of worn brake pads.	Yes
33	Lights	Lights – replacement of internal and external bulbs, filaments, reflectors and lenses.	Yes
34	Navigation	Software – Updating self contained, instrument panel mount navigational software databases, excluding automatic flight control systems and transponders.	Yes
		Navigation devices – Remove and replace self contained, instrument panel mount navigation devices with quick disconnect connectors, excluding automatic flight control systems, transponders, primary flight control system and IFR operations.	Yes**
		Self contained data logger – Installation, data restoration.	Yes
51	Structure	Protective Coating – Applying preservative material or coatings where no disassembly of any primary structure or operating system is involved.	Yes
		Surface finish - Minor restoration where no disassembly of any primary structure or operating system is involved, excluding intervention on main and tail rotors. This includes application of signal coatings or thin foils as well as Registration markings.	Yes

ATA	Area	Task	Single Engine Rotorcraft <=2 730kg
		Fairings – Simple repairs to non-structural fairings and cover plates which do not change the contour.	Yes
52	Doors	Doors - Removal and reinstallation.	Yes
53	Fuselage	Upholstery, furnishing – Minor repairs which do not require disassembly of primary structure or operating systems, or interfere with control systems.	Yes
56	Windows	Side Windows - Replacement if it does not require riveting, bonding or any special process.	Yes
62	Main rotor	Removal/installation of main rotor blades that are designed for removal where special tools are not required (tail rotor blades excluded) limited to installation of the same blades previously removed refitted in the original position.	Yes
63 65	Transmission	Chip detectors – Remove, check and replace provided the chip detector is a self-sealing type and not electrically indicated.	Yes
67	Flight control	Removal or reinstallation of co-pilot cyclic and collective controls and yaw pedals where provision for quick disconnect is made by design.	Yes
71	Powerplant installation	Cowlings - Removal and re-fitment.	Yes
72	Engine	Chip detectors –removal, checking and reinstallation provided the chip detector is a self sealing type and not electrically indicated.	Yes
79	Oil System	Filter elements – Replacement, provided that the element is of the “spin on/off” type.	Yes
		Oil - Changing or replenishment of engine oil.	Yes

### Part C/ PILOT-OWNER MAINTENANCE TASKS for SAILPLANES AND POWERED SAILPLANES

Abbreviations applicable to this Part:

N/A not applicable for this category

SP sailplane

SSPS self-sustained powered sailplane

SLPS/TM self-launching powered sailplane/touring motorglider

ATA	Area	Task	SP	SSPS	SLPS/TM
08	Weighing	Recalculation – Small changes of the Trim plan without needing a reweighing.	Yes	Yes	Yes
09	Towing	Tow release unit and tow cable retraction mechanism – Cleaning, lubrication and tow cable replacement (including weak links).	Yes	Yes	Yes
		Mirror - Installation and replacement of mirrors.	Yes	Yes	Yes
11	Placards	Placards, Markings – Installation and renewal of placards and markings required by AFM and AMM.	Yes	Yes	Yes



ATA	Area	Task	SP	SSPS	SLPS/TM
12	Servicing	Lubrication – Those items not requiring a disassembly other than of non-structural items such as cover plates, cowlings and fairings.	Yes	Yes	Yes
20	Standard. Practices	Safety Wiring – Replacement of defective safety wiring or cotter keys, excluding those in engine controls, transmission controls and flight control systems.	Yes	Yes	Yes
		Simple Non-Structural Standard Fasteners – Replacement and adjustment, excluding the replacement of receptacles and anchor nuts requiring riveting.	Yes	Yes	Yes
		Free play – Measurement of the free play in the control system and the wing to fuselage attachment including minor adjustments by simple means provided by the manufacturer.	Yes	Yes	Yes
21	Air Conditioning	Replacement of flexible hoses and ducts.	Yes	Yes	Yes
23	Communication	Communication devices – Remove and replace self contained, instrument panel mount communication devices with quick disconnect connectors.	Yes	Yes	Yes
24	Electrical power	Batteries and solar panels – Replacement and servicing.	Yes	Yes	Yes
		Wiring - Installation of simple wiring connections to the existing wiring for additional non-required equipment such as electric variometers, flight computers but excluding required communication, navigation systems and engine wiring.	Yes	Yes	Yes
		Wiring – Repairing broken circuits in landing light and any other wiring for non-required equipment such as electrical variometers or flight computers, excluding ignition system, primary generating system and required communication, navigation system and primary flight instruments.	Yes	Yes	Yes
		Bonding – Replacement of broken bonding cable.	Yes	Yes	Yes
		Switches – This includes soldering and crimping of non- required equipment such as electrical variometers or flight computers, but excluding ignition system, primary generating system and required communication, navigation system and primary flight instruments.	Yes	Yes	Yes
		Fuses – Replacement with the correct rating.	Yes	Yes	Yes
25	Equipment	Safety Belts – Replacement of safety belt and harnesses.	Yes	Yes	Yes
		Seats – Replacement of seats or seat parts not involving disassembly of any primary structure or control system.	Yes	Yes	Yes
		Non-essential instruments and/or equipment - Replacement of self contained, instrument panel mount equipment with quick disconnect connectors.	Yes	Yes	Yes
		Removal and installation of non-required instruments and/or equipment.	Yes	Yes	Yes

ATA	Area	Task	SP	SSPS	SLPS/TM
		Wing Wiper, Cleaner – Servicing, removal and reinstallation not involving disassembly or modification of any primary structure, control.	Yes	Yes	Yes
		Static Probes – Removal or reinstallation of variometer static and total energy compensation probes.	Yes	Yes	Yes
		Oxygen System – Replacement of portable oxygen bottles and systems in approved mountings, excluding permanently installed bottles and systems.	Yes	Yes	Yes
		Air Brake Chute – Installation and servicing	Yes	Yes	Yes
		ELT – Removal / Reinstallation.	Yes	Yes	Yes
26	Fire Protection	Fire Warning – Replacement of sensors and indicators.	N/A	Yes	Yes
27	Flight Control	Gap Seals – Installation and servicing if it does not require complete flight control removal.	Yes	Yes	Yes
		Control System – Measurement of the control system travel without removing the control surfaces.	Yes	Yes	Yes
		Control Cables – Simple optical Inspection for Condition.	Yes	Yes	Yes
		Gas Dampener – Replacement of Gas Dampener in the Control or Air Brake System.	Yes	Yes	Yes
		Co-pilot stick and pedals - Removal or reinstallation where provision for quick disconnect is made by design.	Yes	Yes	Yes
28	Fuel System	Fuel lines – Replacement of prefabricated fuel lines fitted with self-sealing couplings.	N/A	Yes	NO
		Fuel Filter – Cleaning and/or replacement.	N/A	Yes	Yes
31	Instruments	Instrument Panel– Removal and reinstallation provided this is a design feature with quick disconnect, excluding IFR operations.	Yes	Yes	Yes
		Pitot Static System – Simple sense and leak check.	Yes	Yes	Yes
		Instrument Panel vibration damper/shock absorbers- Replacement.	Yes	Yes	Yes
		Drainage – Drainage of water drainage traps or filters within the Pitot static system.	Yes	Yes	Yes
		Flexible tubes - Replacement of damaged tubes.	Yes	Yes	Yes
32	Landing Gear	Wheels – Removal, replacement and servicing, including replacement of wheel bearings and lubrication.	Yes	Yes	Yes
		Servicing – Replenishment of hydraulic fluid	Yes	Yes	Yes
		Shock Absorber – Replacement or servicing of elastic cords or rubber dampers.	Yes	Yes	Yes
		Shock Struts – Replenishment of oil or air.	Yes	Yes	Yes
		Landing gear doors - Removal or reinstallation and repair including operating straps.	Yes	Yes	Yes
		Skis – Changing between wheel and ski landing gear.	Yes	Yes	Yes
		Skids – Removal or reinstallation and servicing of main, wing and tail skids.	Yes	Yes	Yes
		Wheels fairing (spats) – Removal and reinstallation.	Yes	Yes	Yes

ATA	Area	Task	SP	SSPS	SLPS/TM
		Mechanical brakes – Adjustment of simple cable operated systems.	Yes	Yes	Yes
		Brake – Replacement of worn brake pads.	Yes	Yes	Yes
		Springs – Replacement of worn or aged springs.	Yes	Yes	Yes
		Gear Warning –Removal or reinstallation of simple gear warning systems.	Yes	Yes	Yes
33	Lights	Lights – Replacement of internal and external bulbs, filaments, reflectors and lenses.	N/A	N/A	Yes
34	Navigation	Software – Updating self contained, instrument panel mount navigational software databases, excluding automatic flight control systems and transponders and including update of non-required instruments/equipment.	Yes	Yes	Yes
		Navigation devices – Removal and replacement of self contained, instrument panel mount navigation devices with quick disconnect connectors, excluding automatic flight control systems, transponders, primary flight control system.	Yes	Yes	Yes
		Self contained data logger – Installation, data restoration.	Yes	Yes	Yes
51	Structure	Fabric patches – Simple patches extending over not more than one rib and not requiring rib stitching or removal of structural parts or control surfaces.	Yes	Yes	Yes
		Protective Coating – Applying preservative material or coatings where no disassembly of any primary structure or operating system is involved.	Yes	Yes	Yes
		Surface finish - Minor restoration of paint or coating where the underlying primary structure is not affected. This includes application of signal coatings or thin foils as well as Registration markings.	Yes	Yes	Yes
		Fairings – Simple repairs to non-structural fairings and cover plates which do not change the contour.	Yes	Yes	Yes
52	Doors	Doors - Removal and reinstallation.	Yes	Yes	Yes
53	Fuselage	Upholstery, furnishing – Minor repairs which do not require disassembly of primary structure or operating systems, or interfere with control systems.	Yes	Yes	Yes
56	Windows	Side Windows - Replacement if it does not require riveting, bonding or any special process.	Yes	Yes	Yes
		Canopies - Removal and re-fitment.	Yes	Yes	Yes
		Gas dampener – Replacement of Canopy Gas dampener.	Yes	Yes	Yes
57	Wings	Wing Skids – Removal or reinstallation and service of lower wing skids or wing roller including spring assembly.	Yes	Yes	Yes
		Water ballast – Removal or reinstallation of flexible tanks.	Yes	Yes	Yes
		Turbulator and sealing tapes – Removal or reinstallation of approved sealing tapes and turbulator tapes.	Yes	Yes	Yes
61	Propeller	Spinner – Removal and reinstallation.	N/A	Yes	Yes

ATA	Area	Task	SP	SSPS	SLPS/TM
71	Powerplant installation	Removal or installation of Powerplant unit including engine and propeller.	N/A	Yes	NO
		Cowling - Removal and reinstallation not requiring removal of propeller or disconnection of flight controls.	N/A	Yes	Yes
		Induction System – Inspection and replacement of induction air filter.	N/A	Yes	Yes
72	Engine	Chip detectors – Removal, checking and reinstallation provided the chip detector is a self-sealing type and not electrically indicated.	N/A	Yes	Yes
73	Engine fuel	Strainer or Filter elements – Cleaning and/or replacement.	N/A	Yes	Yes
		Fuel - Mixing of required oil into fuel.	N/A	Yes	Yes
74	Ignition	Spark Plugs – Removal, cleaning, adjustment and reinstallation.	N/A	Yes	Yes
75	Cooling	Coolant – Replenishment of coolant fluid.	N/A	Yes	Yes
76	Engine Controls	Controls – Minor adjustments of non-flight or propulsion controls whose operation is not critical for any phase of flight.	N/A	Yes	NO
77	Engine Indicating	Engine Indicating – Removal and replacement of self-contained instrument panel mount indicators that have quick-release connectors and do not employ direct reading connections.	N/A	Yes	Yes
79	Oil System	Strainer or Filter elements – Cleaning and/or replacement.	N/A	Yes	Yes
		Oil – Changing or replenishment of engine oil and gearbox fluid.	N/A	Yes	Yes

**Part D/ PILOT-OWNER MAINTENANCE TASKS for BALLOONS/AIRSHIPS**

Area and Task	Hot Air Airship	Hot Air Balloon	Gas Balloon
<b>A) ENVELOPE</b>			
1- Fabric repairs - excluding complete panels (as defined in, and in accordance with, Type Certificate holders' instructions) not requiring load tape repair or replacement.	Yes	Yes	No
2- Nose line - Replacement	Yes	N/A	N/A
3- Banners - fitment, replacement or repair (without sewing).	Yes	Yes	Yes
4- Melting link (temperature flag) - replacement.	Yes	Yes	N/A
5- Temperature transmitter and temperature indication cables - removal or reinstallation.	Yes	Yes	N/A
6- Crown line - replacement (where permanently attached to the crown ring).	No	Yes	N/A
7- Scoop or skirt-replacement or repair of (including fasteners).	Yes	Yes	N/A
<b>B) BURNER</b>			
8- Burner - cleaning and lubrication.	Yes	Yes	N/A
9- Piezo igniters - adjustment.	Yes	Yes	N/A
10- Burner jets - cleaning and replacement.	Yes	Yes	N/A
11- Burner frame corner buffers - replacement or reinstallation.	Yes	Yes	N/A

Area and Task	Hot Air Airship	Hot Air Balloon	Gas Balloon
12- Burner Valves - adjustment of closing valve not requiring special tools or test equipment.	Yes	Yes	N/A
<b>C) BASKET AND GONDOLA</b>			
13- Basket/gondola frame trim - repair or replacement.	Yes	Yes	Yes
14- Basket/gondola runners (including wheels) - repair or replacement.	Yes	Yes	Yes
15- External rope handles - repair.	Yes	Yes	Yes
16- Replacement of seat covers - upholsteries and safety belts.	Yes	Yes	Yes
<b>D) FUEL CYLINDER</b>			
17- Liquid valve - replacement of O-rings in the outlet.	Yes	Yes	No
<b>E) INSTRUMENTS AND EQUIPMENT</b>			
18- Batteries - replacement of for self-contained instruments and communication equipment.	Yes	Yes	Yes
19- Communication, navigation devices, instruments and/or equipment – Remove and replace self-contained, instrument panel mounted communication devices with quick disconnect connectors.	Yes	Yes	Yes
<b>F) ENGINES</b>			
20- Cleaning and Lubrication not requiring disassembly other than removal of non-structural items such as cover plates, cowlings and fairings.	Yes	N/A	N/A
21- Cowling-removal and re-fitment not requiring removal of the propeller	Yes	N/A	N/A
22- Fuel and oil strainers and/or filter elements - Removal, cleaning and/or replacement	Yes	N/A	N/A
23- Batteries - replacing and servicing (excluding servicing of Ni-Cd batteries).	Yes	N/A	N/A
24- Propeller Spinner – removal and installation for inspection.	Yes	N/A	N/A
25- Powerplant - Removal or installation of powerplant unit including engine and propeller.	Yes	N/A	N/A
26- Engine- Chip detectors – remove, check and replace.	Yes	N/A	N/A
27- Ignition Spark Plug – removal or installation and adjustment including gap clearance.	Yes	N/A	N/A
28- Coolant fluid - replenishment.	Yes	N/A	N/A
29- Engine Controls - minor adjustments of non-flight or propulsion controls whose operation is not critical for any phase of flight.	Yes	N/A	N/A
30- Engine instruments - removal and replacement.	Yes	N/A	N/A
31- Lubrication oil – changing or replenishment of engine oil and gearbox fluid.	Yes	N/A	N/A
32- Fuel lines - replacement of prefabricated hoses with self-sealing couplings.	Yes	N/A	N/A
33- Air filters (if installed) – removal, cleaning and replacement.	Yes	N/A	N/A

## APPENDICES TO AMCs AND GM TO ANNEX I (PART-M)

### Appendix I to AMC M.A.302 and AMC M.B.301(b) — Content of the maintenance programme

ED Decision 2016/011/R

#### 1. General requirements

- 1.1. The maintenance programme should contain the following basic information.
  - 1.1.1. The type/model and registration number of the aircraft, engines and, where applicable, auxiliary power units and propellers.
  - 1.1.2. The name and address of the owner, operator or CAMO managing the aircraft airworthiness.
  - 1.1.3. The reference, the date of issue and issue number of the approved maintenance programme.
  - 1.1.4. A statement signed by the owner, operator or CAMO managing the aircraft airworthiness to the effect that the specified aircraft will be maintained to the programme and that the programme will be reviewed and updated as required.
  - 1.1.5. Contents/list of effective pages and their revision status of the document.
  - 1.1.6. Check periods, which reflect the anticipated utilisation of the aircraft. Such utilisation should be stated and include a tolerance of not more than 25%. Where utilisation cannot be anticipated, calendar time limits should also be included.
  - 1.1.7. Procedures for the escalation of established check periods, where applicable and acceptable to the competent authority of registry.
  - 1.1.8. Provision to record the date and reference of approved amendments incorporated in the maintenance programme.
  - 1.1.9. Details of pre-flight maintenance tasks that are accomplished by maintenance staff.
  - 1.1.10. The tasks and the periods (intervals/frequencies) at which each part of the aircraft, engines, APU's, propellers, components, accessories, equipment, instruments, electrical and radio apparatus, together with the associated systems and installations should be inspected. This should include the type and degree of inspection required.
  - 1.1.11. The periods at which components should be checked, cleaned, lubricated, replenished, adjusted and tested.
  - 1.1.12. If applicable details of ageing aircraft system requirements together with any specified sampling programmes.
  - 1.1.13. If applicable details of specific structural maintenance programmes where issued by the type certificate holder including but not limited to:
    - (a) Maintenance of structural Integrity by damage Tolerance and Supplemental Structural Inspection Programmes (SSID).
    - (b) Structural maintenance programmes resulting from the SB review performed by the TC holder.
    - (c) Corrosion prevention and control.

- (d) Repair Assessment.
- (e) Widespread Fatigue Damage.

1.1.14. If applicable, details of Critical Design Configuration Control Limitations together with appropriate procedures.

1.1.15. If applicable a statement of the limit of validity in terms of total flight cycles/calendar date/flight hours for the structural programme in 1.1.13.

1.1.16. The periods at which overhauls and/or replacements by new or overhauled components should be made.

1.1.17. A cross-reference to other documents approved by the Agency which contain the details of maintenance tasks related to mandatory life limitations, Certification Maintenance Requirements (CMR's) and ADs.

Note: To prevent inadvertent variations to such tasks or intervals these items should not be included in the main portion of the maintenance programme document, or any planning control system, without specific identification of their mandatory status.

1.1.18. Details of, or cross-reference to, any required reliability programme or statistical methods of continuous Surveillance.

1.1.19. A statement that practices and procedures to satisfy the programme should be to the standards specified in the TC holder's Maintenance Instructions. In the case of approved practices and procedures that differ, the statement should refer to them.

1.1.20. Each maintenance task quoted should be defined in a definition section of the programme.

## **2. Programme basis**

2.1. An owner or a CAMO aircraft maintenance programme should normally be based upon the MRB report, where applicable, and the TC holder's maintenance planning document or Chapter 5 of the maintenance manual, (i.e. the manufacturer's recommended maintenance programme).

The structure and format of these maintenance recommendations may be re-written by the owner or the CAMO to better suit the operation and control of the particular maintenance programme.

2.2. For a newly type-certificated aircraft where no previously approved maintenance programme exists, it will be necessary for the owner or the CAMO to comprehensively appraise the manufacturer's recommendations (and the MRB report where applicable), together with other airworthiness information, in order to produce a realistic programme for approval.

2.3. For existing aircraft types it is permissible for the owner or CAMO to make comparisons with maintenance programmes previously approved. It should not be assumed that a programme approved for one owner or the CAMO would automatically be approved for another.

Evaluation should be made of the aircraft/fleet utilisation, landing rate, equipment fit and, in particular, the experience of the owner or the CAMO when assessing an existing programme.

Where the competent authority is not satisfied that the proposed maintenance programme can be used as is, the competent authority should request appropriate changes such as additional maintenance tasks or de-escalation of check frequencies as necessary.

2.4. Critical Design Configuration Control Limitations (CDCCL)

If CDCCL have been identified for the aircraft type by the TC/STC holder, maintenance instructions should be developed. CDCCL's are characterised by features in an aircraft installation or component that should be retained during modification, change, repair, or scheduled maintenance for the operational life of the aircraft or applicable component or part.

### **3. Amendments**

Amendments (revisions) to the approved maintenance programme should be made by the owner or the CAMO, to reflect changes in the TC holder's recommendations, modifications, service experience, or as required by the competent authority.

### **4. Permitted variations to maintenance periods**

The owner or the CAMO may only vary the periods prescribed by the programme with the approval of the competent authority or through a procedure developed in the maintenance programme and approved by the competent authority.

### **5. Periodic review of maintenance programme contents**

- 5.1. The owner or the CAMO approved maintenance programmes should be subject to periodic review to ensure that they reflect current TC holder's recommendations, revisions to the MRB report if applicable, mandatory requirements and the maintenance needs of the aircraft.
- 5.2. The owner or the CAMO should review the detailed requirements at least annually for continued validity in the light of operating experience.

### **6. Reliability Programmes**

#### **6.1. Applicability**

6.1.1. A reliability programme should be developed in the following cases:

- (a) the aircraft maintenance programme is based upon MSG-3 logic;
- (b) the aircraft maintenance programme includes condition monitored components;
- (c) the aircraft maintenance programme does not contain overhaul time periods for all significant system components;
- (d) when specified by the Manufacturer's maintenance planning document or MRB.

6.1.2. A reliability Programme need not be developed in the following cases:

- (a) the maintenance programme is based upon the MSG-1 or 2 logic but only contains hard time or on condition items;
- (b) the aircraft is not a complex motor-powered aircraft according to [Part-M](#);
- (c) the aircraft maintenance programme provides overhaul time periods for all significant system components;
- (d) Note: for the purpose of this paragraph, a significant system is a system the failure of which could hazard the aircraft safety.

6.1.3. Notwithstanding paragraphs 6.1.1 and 6.1.2 above, a CAMO may however, develop its own reliability monitoring programme when it may be deemed beneficial from a maintenance planning point of view.

#### **6.2. Applicability for CAMO/operator of small fleets of aircraft.**

6.2.1. For the purpose of this paragraph, a small fleet of aircraft is a fleet of less than 6 aircraft of the same type.



- 6.2.2. The requirement for a reliability programme is irrespective of the CAMO fleet size.
- 6.2.3. Complex reliability programmes could be inappropriate for a small fleet. It is recommended that such CAMOs tailor their reliability programmes to suit the size and complexity of operation.
- 6.2.4. One difficulty with a small fleet of aircraft consists in the amount of available data which can be processed: when this amount is too low, the calculation of alert level is very coarse. Therefore 'alert levels' should be used carefully.
- 6.2.5. A CAMO of a small fleet of aircraft, when establishing a reliability programme, should consider the following:
- (a) The programme should focus on areas where a sufficient amount of data is likely to be processed.
  - (b) When the amount of available data is very limited, the CAMO engineering judgement is then a vital element. In the following examples, careful engineering analysis should be exercised before taking decisions:
    - A '0' rate in the statistical calculation may possibly simply reveal that enough statistical data is missing, rather than there is no potential problem.
    - When alert levels are used, a single event may have the figures reach the alert level. Engineering judgement is necessary so as to discriminate an artefact from an actual need for a corrective action.
    - In making his engineering judgement, a CAMO is encouraged to establish contact and make comparisons with other CAMOs of the same aircraft, where possible and relevant. Making comparison with data provided by the manufacturer may also be possible.
- 6.2.6. In order to obtain accurate reliability data, it should be recommended to pool data and analysis with one or more other CAMO(s). Paragraph 6.6 of this paragraph specifies under which conditions it is acceptable that CAMOs share reliability data.
- 6.2.7. Notwithstanding the above there are cases where the CAMO will be unable to pool data with other CAMO, e.g. at the introduction to service of a new type. In that case the competent authority should impose additional restrictions on the MRB/MPD tasks intervals (e.g. no variations or only minor evolution are possible, and with the competent authority approval).
- 6.3. Engineering judgement
- 6.3.1. Engineering judgement is itself inherent to reliability programmes as no interpretation of data is possible without judgement. In approving the CAMO maintenance and reliability programmes, the competent authority is expected to ensure that the organisation which runs the programme (it may be CAMO, or an [Part-145](#) organisation under contract) hires sufficiently qualified personnel with appropriate engineering experience and understanding of reliability concept (see [AMC M.A.706](#)).
- 6.3.2. It follows that failure to provide appropriately qualified personnel for the reliability programme may lead the competent authority to reject the approval of the reliability programme and therefore the aircraft maintenance programme.
- 6.4. Contracted maintenance

6.4.1. Whereas [M.A.302](#) specifies that, the aircraft maintenance programme -which includes the associated reliability programme-, should be managed and presented by the CAMO to the competent authority, the CAMO may subcontract certain functions to the maintenance organisation under contract, provided this organisation proves to have the appropriate expertise.

6.4.2. These functions are:

- (a) Developing the aircraft maintenance and reliability programmes,
- (b) Performing the collection and analysis of the reliability data,
- (c) Providing reliability reports, and
- (d) Proposing corrective actions to the CAMO.

6.4.3. Notwithstanding the above decision to implement a corrective action (or the decision to request from the competent authority the approval to implement a corrective action) remains the CAMO prerogative and responsibility. In relation to paragraph 6.4.2(d) above, a decision not to implement a corrective action should be justified and documented.

6.4.4. The arrangement between the CAMO and the maintenance organisation should be specified in the maintenance contract (see [Appendix XI to AMC M.A.708\(c\)](#)) and the relevant CAME, and maintenance organisation procedures.

## 6.5. Reliability programme

In preparing the programme details, account should be taken of this paragraph. All associated procedures should be clearly defined.

### 6.5.1. Objectives

6.5.1.1. A statement should be included summarising as precisely as possible the prime objectives of the programme. To the minimum it should include the following:

- (a) to recognise the need for corrective action,
- (b) to establish what corrective action is needed and,
- (c) to determine the effectiveness of that action.

6.5.1.2. The extent of the objectives should be directly related to the scope of the programme. Its scope could vary from a component defect monitoring system for a small CAMO, to an integrated maintenance management programme for a big CAMO. The manufacturer's maintenance planning documents may give guidance on the objectives and should be consulted in every case.

6.5.1.3. In case of a MSG-3 based maintenance programme, the reliability programme should provide a monitor that all MSG-3 related tasks from the maintenance programme are effective and their periodicity is adequate.

### 6.5.2. Identification of items.

The items controlled by the programme should be stated, e.g. by ATA Chapters. Where some items (e.g. aircraft structure, engines, APU) are controlled by separate programmes, the associated procedures (e.g. individual sampling or life development programmes, constructor's structure sampling programmes) should be cross referenced in the programme.

### 6.5.3. Terms and definitions.

The significant terms and definitions applicable to the Programme should be clearly identified. Terms are already defined in MSG-3, [Part-145](#) and [Part-M](#).

### 6.5.4. Information sources and collection.

6.5.4.1. Sources of information should be listed and procedures for the transmission of information from the sources, together with the procedure for collecting and receiving it, should be set out in detail in the CAME or MOE as appropriate.

6.5.4.2. The type of information to be collected should be related to the objectives of the Programme and should be such that it enables both an overall broad based assessment of the information to be made and also allow for assessments to be made as to whether any reaction, both to trends and to individual events, is necessary. The following are examples of the normal prime sources:

- (a) Pilots Reports.
- (b) Technical Logs.
- (c) Aircraft Maintenance Access Terminal / On-board Maintenance System readouts.
- (d) Maintenance Worksheets.
- (e) Workshop Reports.
- (f) Reports on Functional Checks.
- (g) Reports on Special Inspections.
- (h) Stores Issues/Reports.
- (i) Air Safety Reports.
- (j) Reports on Technical Delays and Incidents.
- (k) Other sources: ETOPS, RVSM, CAT II/III.

6.5.4.3. In addition to the normal prime sources of information, due account should be taken of continuing airworthiness and safety information promulgated under Part-21.

### 6.5.5. Display of information.

Collected information may be displayed graphically or in a tabular format or a combination of both. The rules governing any separation or discarding of information prior to incorporation into these formats should be stated. The format should be such that the identification of trends, specific highlights and related events would be readily apparent.

6.5.5.1. The above display of information should include provisions for 'nil returns' to aid the examination of the total information.

6.5.5.2. Where 'standards' or 'alert levels' are included in the programme, the display of information should be oriented accordingly.

### 6.5.6. Examination, analysis and interpretation of the information.

The method employed for examining, analysing and interpreting the programme information should be explained.

#### 6.5.6.1. Examination.

Methods of examination of information may be varied according to the content and quantity of information of individual programmes. These can range from examination of the initial indication of performance variations to formalised detailed procedures at specific periods, and the methods should be fully described in the programme documentation.

#### 6.5.6.2. Analysis and Interpretation.

The procedures for analysis and interpretation of information should be such as to enable the performance of the items controlled by the programme to be measured; they should also facilitate recognition, diagnosis and recording of significant problems. The whole process should be such as to enable a critical assessment to be made of the effectiveness of the programme as a total activity. Such a process may involve:

- (a) Comparisons of operational reliability with established or allocated standards (in the initial period these could be obtained from in-service experience of similar equipment of aircraft types).
- (b) Analysis and interpretation of trends.
- (c) The evaluation of repetitive defects.
- (d) Confidence testing of expected and achieved results.
- (e) Studies of life-bands and survival characteristics.
- (f) Reliability predictions.
- (g) Other methods of assessment.

#### 6.5.6.3. The range and depth of engineering analysis and interpretation should be related to the particular programme and to the facilities available. The following, at least, should be taken into account:

- (a) Flight defects and reductions in operational reliability.
- (b) Defects occurring on-line and at main base.
- (c) Deterioration observed during routine maintenance.
- (d) Workshop and overhaul facility findings.
- (e) Modification evaluations.
- (f) Sampling programmes.
- (g) The adequacy of maintenance equipment and publications.
- (h) The effectiveness of maintenance procedures.
- (i) Staff training.
- (j) Service bulletins, technical instructions, etc.

#### 6.5.6.4. Where the CAMO relies upon contracted maintenance and/or overhaul facilities as an information input to the programme, the arrangements for availability and continuity of such information should be established and details should be included.

#### 6.5.7. Corrective Actions.

6.5.7.1. The procedures and time scales both for implementing corrective actions and for monitoring the effects of corrective actions should be fully described. Corrective actions shall correct any reduction in reliability revealed by the programme and could take the form of:

- (a) Changes to maintenance, operational procedures or techniques.
- (b) Maintenance changes involving inspection frequency and content, function checks, overhaul requirements and time limits, which will require amendment of the scheduled maintenance periods or tasks in the approved maintenance programme. This may include escalation or de-escalation of tasks, addition, modification or deletion of tasks.
- (c) Amendments to approved manuals (e.g. maintenance manual, crew manual).
- (d) Initiation of modifications.
- (e) Special inspections of fleet campaigns.
- (f) Spares provisioning.
- (g) Staff training.
- (h) Manpower and equipment planning.

Note: Some of the above corrective actions may need the competent authority's approval before implementation.

6.5.7.2. The procedures for effecting changes to the maintenance programme should be described, and the associated documentation should include a planned completion date for each corrective action, where applicable.

#### 6.5.8. Organisational Responsibilities.

The organisational structure and the department responsible for the administration of the programme should be stated. The chains of responsibility for individuals and departments (Engineering, Production, Quality, Operations etc.) in respect of the programme, together with the information and functions of any programme control committees (reliability group), should be defined. Participation of the competent authority should be stated. This information should be contained in the CAME as appropriate.

#### 6.5.9. Presentation of information to the competent authority.

The following information should be submitted to the competent authority for approval as part of the reliability programme:

- (a) The format and content of routine reports.
- (b) The time scales for the production of reports together with their distribution.
- (c) The format and content of reports supporting request for increases in periods between maintenance (escalation) and for amendments to the approved maintenance programme. These reports should contain sufficient detailed information to enable the competent authority to make its own evaluation where necessary.

#### 6.5.10. Evaluation and review.

Each programme should describe the procedures and individual responsibilities in respect of continuous monitoring of the effectiveness of the programme as a whole. The time periods and the procedures for both routine and non-routine reviews of maintenance control should be detailed (progressive, monthly, quarterly, or annual reviews, procedures following reliability 'standards' or 'alert levels' being exceeded, etc.).

6.5.10.1. Each Programme should contain procedures for monitoring and, as necessary, revising the reliability 'standards' or 'alert levels'. The organisational responsibilities for monitoring and revising the 'standards' should be specified together with associated time scales.

6.5.10.2. Although not exclusive, the following list gives guidance on the criteria to be taken into account during the review.

- (a) Utilisation (high/low/seasonal).
- (b) Fleet commonality.
- (c) Alert Level adjustment criteria.
- (d) Adequacy of data.
- (e) Reliability procedure audit.
- (f) Staff training.
- (g) Operational and maintenance procedures.

#### 6.5.11. Approval of maintenance programme amendment

The competent authority may authorise the CAMO to implement in the maintenance programme changes arising from the reliability programme results prior to their formal approval by the authority when satisfied that;

- (a) the Reliability Programme monitors the content of the Maintenance Programme in a comprehensive manner, and
- (b) the procedures associated with the functioning of the 'Reliability Group' provide the assurance that appropriate control is exercised by the CAMO over the internal validation of such changes.

#### 6.6. Pooling Arrangements.

6.6.1. In some cases, in order that sufficient data may be analysed it may be desirable to 'pool' data: i.e. collate data from a number of CAMOs of the same type of aircraft. For the analysis to be valid, the aircraft concerned, mode of operation, and maintenance procedures applied should be substantially the same: variations in utilisation between two CAMOs may, more than anything, fundamentally corrupt the analysis. Although not exhaustive, the following list gives guidance on the primary factors which need to be taken into account.

- (a) Certification factors, such as: aircraft TCDS compliance (variant)/modification status, including SB compliance.
- (b) Operational Factors, such as: operational environment/utilisation, e.g. low/high/seasonal, etc./respective fleet size operating rules applicable (e.g. ETOPS/RVSM/All Weather etc.)/operating procedures/MEL and MEL utilisation.

- (c) Maintenance factors, such as: aircraft age maintenance procedures; maintenance standards applicable; lubrication procedures and programme; MPD revision or escalation applied or maintenance programme applicable
- 6.6.2. Although it may not be necessary for all of the foregoing to be completely common, it is necessary for a substantial amount of commonality to prevail. Decision should be taken by the competent authority on a case by case basis.
- 6.6.3. In case of a short term lease agreement (less than 6 month) more flexibility against the para 6.6.1 criteria may be granted by the competent authority, so as to allow the owner/CAMO to operate the aircraft under the same programme during the lease agreement effectivity.
- 6.6.4. Changes by any one of the CAMO to the above, requires assessment in order that the pooling benefits can be maintained. Where a CAMO wishes to pool data in this way, the approval of the competent authority should be sought prior to any formal agreement being signed between CAMOs.
- 6.6.5. Whereas this paragraph 6.6 is intended to address the pooling of data directly between CAMOs, it is acceptable that the CAMO participates in a reliability programme managed by the aircraft manufacturer, when the competent authority is satisfied that the manufacturer manages a reliability programme which complies with the intent of this paragraph.



## Appendix II to AMC M.A.711(a)(3) — Sub-contracting of continuing airworthiness management tasks

ED Decision 2016/011/R

### 1. Subcontracted continuing airworthiness management tasks

- 1.1. To actively control the standards of the subcontracted organisation, the CAMO should employ a person or group of persons who are trained and competent in the disciplines associated with [M.A. Subpart G](#). As such, they are responsible for determining what maintenance is required, when it has to be performed, by whom and to what standard in order to ensure the continuing airworthiness of the aircraft to be operated.
- 1.2. The CAMO should conduct a pre-subcontract audit to establish that the organisation to be subcontracted can achieve the standards required by [M.A. Subpart G](#) in connection with those activities to be subcontracted.
- 1.3. The CAMO should ensure that the organisation to be subcontracted has sufficient and qualified personnel who are trained and competent in the functions to be sub-contracted. In assessing the adequacy of personnel resources, the CAMO should consider the particular needs of those activities that are to be subcontracted, while taking into account the subcontracted organisations existing commitments.
- 1.4. To be appropriately approved to subcontract continuing airworthiness management tasks, the CAMO should have procedures for the management control of these arrangements. The continuing airworthiness management exposition should contain relevant procedures to reflect its control of those arrangements made with the sub-contracted organisation.
- 1.5. Subcontracted continuing airworthiness management tasks should be addressed in a contract between the CAMO and the subcontracted organisation. The contract should also specify that the subcontracted organisation is responsible for informing the CAMO, that is in turn responsible for notifying the respective competent authority, of any subsequent changes that affect their ability to fulfil the contract.
- 1.6. The subcontracted organisation should use procedures which set out the manner of fulfilling its responsibilities with regard to the subcontracted activities. Such procedures may be developed by either the subcontracted organisation or the CAMO.
- 1.7. Where the subcontracted organisation develops its own procedures, they should be compatible with the continuing airworthiness management exposition and the terms of the contract. These should be accepted by the competent authority as extended procedures of the CAMO and as such should be cross-referenced from the continuing airworthiness management exposition. One current copy of the subcontracted organisation's relevant procedures should be kept by the CAMO and should be accessible to the competent authority when needed.

Note: Should any conflict arise between the subcontracted organisation's procedures and those of the CAMO, then the policy and procedures of the continuing airworthiness management exposition will prevail.

- 1.8. The contract should also specify that the subcontracted organisation's procedures may only be amended with the agreement of the CAMO. The CAMO should ensure that these amendments are compatible with its continuing airworthiness management exposition and comply with [M.A. Subpart G](#).

The CAMO should nominate the person responsible for continued monitoring and acceptance of the subcontracted organisation's procedures and their amendments. The controls used to



fulfil this function should be clearly set out in the amendment section of the continuing airworthiness management exposition detailing the level of CAMO involvement.

- 1.9. Whenever any elements of the continuing airworthiness management tasks are subcontracted, the CAMO personnel should have access to all relevant data in order to fulfil their responsibilities.

Note: The CAMO retains the authority to override, whenever necessary for the continuing airworthiness of their aircraft, any recommendation of the subcontracted organisation.

- 1.10. The CAMO should ensure that the subcontracted organisation continues to have qualified technical expertise and sufficient resources to perform the sub-contracted tasks while complying with the relevant procedures. Failure to do so may invalidate the CAMO approval.
- 1.11. The contract should provide for competent authority monitoring.
- 1.12. The contract should address the respective responsibilities to ensure that any findings arising from the competent authority monitoring will be closed to the satisfaction of the competent authority.

## **2. Accomplishment**

This paragraph describes the topics which may be applicable to such subcontracting arrangements.

### **2.1. Scope of work**

The type of aircraft and their registrations, engine types and/or components subject to the continuing airworthiness management tasks contract should be specified.

### **2.2. Maintenance programme development and amendment**

The CAMO may subcontract the preparation of the draft maintenance programme and any subsequent amendments. However, the CAMO remains responsible for assessing that the draft proposals meet its needs and for obtaining competent authority approval; the relevant procedures should specify these responsibilities. The contract should also stipulate that any data necessary to substantiate the approval of the initial programme or an amendment to this programme should be provided for CAMO agreement and/or competent authority upon request.

### **2.3. Maintenance programme effectiveness and reliability**

The CAMO should have a system in place to monitor and assess the effectiveness of the maintenance programme based on maintenance and operational experience. The collection of data and initial assessment may be made by the subcontracted organisation; the required actions are to be endorsed by the CAMO.

Where reliability monitoring is used to establish the effectiveness of the maintenance programme, this may be provided by the subcontracted organisation and should be specified in the relevant procedures. Reference should be made to the approved maintenance and reliability programme. Participation of the CAMO's personnel in reliability meetings with the subcontracted organisation should also be specified.

When providing reliability data, the subcontracted organisation is limited to working with primary data/documents provided by the CAMO or data provided by the CAMO's contracted maintenance organisation(s) from which the reports are derived. The pooling of reliability data is permitted if it is acceptable to the competent authority.

### **2.4. Permitted variations to the maintenance programme**

The reasons and justification for any proposed variation to scheduled maintenance may be prepared by the subcontracted organisation. Acceptance of the proposed variation should be granted by the CAMO. The means by which the CAMO acceptance is given should be specified in the relevant procedures. When outside the limits set out in the maintenance programme, the CAMO is required to obtain approval by the competent authority.

#### 2.5. Scheduled maintenance

Where the subcontracted organisation plans and defines maintenance checks or inspections in accordance with the approved maintenance programme, the required liaison with the CAMO, including feedback, should be defined.

The planning control and documentation should be specified in the appropriate supporting procedures. These procedures should typically set out the CAMO's level of involvement in each type of check. This will normally involve the CAMO assessing and agreeing to a work specification on a case-by-case basis for base maintenance checks. For routine line maintenance checks, this may be controlled on a day-to-day basis by the subcontracted organisation subject to appropriate liaison and CAMO controls to ensure timely compliance. This may typically include but is not necessarily limited to:

- applicable work package, including job cards;
- scheduled component removal list;
- ADs to be incorporated;
- modifications to be incorporated.

The associated procedures should ensure that the CAMO is informed in a timely manner on the accomplishment of such tasks.

#### 2.6. Quality monitoring

The CAMO's quality system should monitor the adequacy of the subcontracted continuing airworthiness management task performance for compliance with the contract and with

[M.A. Subpart G](#). The terms of the contract should therefore include a provision allowing the CAMO to perform a quality surveillance (including audits) of the subcontracted organisation. The aim of the surveillance is primarily to investigate and judge the effectiveness of those subcontracted activities and thereby to ensure compliance with M.A Subpart G and the contract. Audit reports may be subject to review when requested by the competent authority.

#### 2.7. Access to the competent authority

The contract should specify that the subcontracted organisation should always grant access to the competent authority.

#### 2.8. Maintenance data

The maintenance data used for the purpose of the contract should be specified, together with those responsible for providing such documentation and the competent authority responsible for the acceptance/approval of such data, when applicable. The CAMO should ensure that such data, including revisions, is readily available to the CAMO personnel and to those in the subcontracted organisation who may be required to assess such data. The CAMO should establish a 'fast track' means to ensure that urgent data is transmitted to the subcontractor in a timely manner. Maintenance data may include but is not necessarily limited to:

- the maintenance programme,

- airworthiness directives,
- service bulletins,
- major repairs/modification data,
- aircraft maintenance manual,
- engine overhaul manual,
- aircraft illustrated parts catalogue (IPC),
- wiring diagrams,
- troubleshooting manual.

#### 2.9. Airworthiness directives (ADs)

While the various aspects of AD assessment, planning and follow-up may be accomplished by the subcontracted organisation, AD embodiment is performed by a maintenance organisation. The CAMO is responsible for ensuring timely embodiment of the applicable ADs and is to be provided with notification of compliance. It, therefore, follows that the CAMO should have clear policies and procedures on AD embodiment supported by defined procedures which will ensure that the CAMO agrees to the proposed means of compliance.

The relevant procedures should specify:

- what information (e.g. AD publications, continuing airworthiness records, flight hours/cycles, etc.) the subcontracted organisation needs from the CAMO;
- what information (e.g. AD planning listing, detailed engineering order, etc.) the CAMO needs from the subcontracted organisation in order to ensure timely compliance with the ADs.

To fulfil the above responsibility, the CAMO should ensure that it receives current mandatory continued airworthiness information for the aircraft and equipment it is managing.

#### 2.10. Service bulletin (SB) modifications

The subcontracted organisation may be required to review and make recommendations on the embodiment of an SB and other associated non-mandatory material based on a clear policy established by the CAMO. This should be specified in the contract.

#### 2.11. Service life limit controls and component control/removal forecast

Where the subcontracted organisation performs planning activities, it should be specified that the organisation should receive the current flight cycles, flight hours, landings and/or calendar controlled details, as applicable, at a frequency to be specified in the contract. The frequency should be such that it allows the organisation to properly perform the subcontracted planning functions. It, therefore, follows that there will need to be adequate liaison between the CAMO, the contracted maintenance organisation(s) and the subcontracted organisation. Additionally, the contract should specify how the CAMO will be in possession of all current flight cycles, flight hours, etc., so that it may assure the timely accomplishment of the required maintenance.

#### 2.12. Engine health monitoring

If the CAMO subcontracts the on-wing engine health monitoring, the subcontracted organisation should receive all the relevant information to perform this task, including any parameter reading deemed necessary to be supplied by the CAMO for this control. The contract

should also specify what kind of feedback information (such as engine limitation, appropriate technical advice, etc.) the organisation should provide to the CAMO.

#### 2.13. Defect control

Where the CAMO has subcontracted the day-to-day control of technical log deferred defects, this should be specified in the contract and should be adequately described in the appropriate procedures. The operator's MEL/CDL provides the basis for establishing which defects may be deferred and the associated limits. The procedures should also define the responsibilities and actions to be taken for defects such as AOG situations, repetitive defects, and damage beyond the type certificate holder's limits.

For all other defects identified during maintenance, the information should be brought to the attention of the CAMO which, depending upon the procedural authority granted by the competent authority, may determine that some defects can be deferred. Therefore, adequate liaison between the CAMO, its subcontracted organisation and contracted maintenance organisation should be ensured.

The subcontracted organisation should make a positive assessment of potential deferred defects and consider the potential hazards arising from the cumulative effect of any combination of defects. The subcontracted organisations should liaise with the CAMO to get its agreement following this assessment.

Deferment of MEL/CDL allowable defects can be accomplished by a contracted maintenance organisation in compliance with the relevant technical log procedures, subject to the acceptance by the aircraft commander.

#### 2.14. Mandatory occurrence reporting

All incidents and occurrences that meet the reporting criteria defined in [Part-M](#) and [Part-145](#) should be reported as required by the respective requirements. The CAMO should ensure that adequate liaison exists with the subcontracted organisation and the maintenance organisation.

#### 2.15. Continuing airworthiness records

They may be maintained and kept by the subcontracted organisation on behalf of the CAMO, which remains the owner of these documents. However, the CAMO should be provided with the current status of AD compliance and service life-limited components in accordance with the agreed procedures. The CAMO should also be granted unrestricted and timely access to the original records as and when needed. Online access to the appropriate information systems is acceptable.

The record-keeping requirements of [Part-M](#) should be met. Access to the records by duly authorised members of the competent authority should be granted upon request.

#### 2.16. Check flight procedures

Check flights are performed under the control of the CAMO. Check flight requirements from the subcontracted organisation or contracted maintenance organisation should be agreed by the CAMO.

#### 2.17. Communication between the CAMO and the subcontracted organisation

2.17.1. In order to fulfil its airworthiness responsibility, the CAMO needs to receive all the relevant reports and relevant maintenance data. The contract should specify what information should be provided and when.

2.17.2. Meetings provide one important cornerstone whereby the CAMO can fulfil part of its responsibility for ensuring the airworthiness of the operated aircraft. They should be used to establish good communication between the CAMO, the subcontracted organisation and the contracted maintenance organisation. The terms of the contract should include, whenever appropriate, the provision for a certain number of meetings to be held between the involved parties. Details of the types of liaison meetings and associated terms of reference of each meeting should be documented. The meetings may include but are not limited to all or a combination of:

(a) Contract review

Before the contract is enforced, it is very important that the technical personnel of both parties, that are involved in the fulfilment of the contract, meet in order to be sure that every point leads to a common understanding of the duties of both parties.

(b) Work scope planning meeting

Work scope planning meetings may be organised so that the tasks to be performed are commonly agreed.

(c) Technical meeting

Scheduled meetings should be organised in order to review on a regular basis and agree on actions on technical matters such as ADs, SBs, future modifications, major defects found during shop visit, reliability, etc.

(d) Quality meeting

Quality meetings should be organised in order to examine matters raised by the CAMO's quality surveillance and the competent authority's monitoring activity and to agree on necessary corrective actions.

(e) Reliability meeting

When a reliability programme exists, the contract should specify the involvement of the CAMO and of the subcontracted organisation in that programme, including their participation in reliability meetings. Provision to enable competent authority participation in the periodical reliability meetings should also be made.

## Appendix III to GM M.B.303(b) — KEY RISK ELEMENTS

ED Decision 2016/011/R

	Title	Description
<b>A. AIRCRAFT CONFIGURATION</b>		
A.1	Type design and changes to type design	The type design is the part of the approved configuration of a product, as laid down in the TCDS, common to all products of that type. With the exception of changes contained in the certification specifications referred to in Part 21 point 21A.90B or 21A.431B of the Annex (Part 21) any changes to type design shall be approved and, for those embodied, shall be recorded with the reference to the approval.
A.2	Airworthiness limitations	An airworthiness limitation is a boundary beyond which an aircraft or a component thereof must not be operated, unless the instruction(s) associated to this airworthiness limitation is (are) complied with.
A.3	Airworthiness Directives	An Airworthiness Directive means a document issued or adopted by the Agency, which mandates actions to be performed on an aircraft to restore an acceptable level of safety, when evidence shows that the safety level of this aircraft may otherwise be compromised. (Part 21A.3B)
<b>B. AIRCRAFT OPERATION</b>		
B.1	Aircraft documents	Aircraft certificates and documents necessary for operations.
B.2	Flight Manual	A manual, associated with the certificate of airworthiness, containing limitations within which operation of the aircraft is to be considered airworthy and, instructions and information necessary to the flight crew members for the safe operation of the aircraft.
B.3	Mass & balance	Mass and balance data is required to make sure the aircraft is capable of operating within the approved envelope.
B.4	Markings & placards	Markings and placards are defined in the individual aircraft type design. Some information may also be found in the Type Certificate Data Sheet, the Supplemental Type Certificates, the Flight Manual, the Aircraft Maintenance Manual, the Illustrated Parts Catalogue, etc.
B.5	Operational requirements	Items required to be installed to perform a specific type of operation.
B.6	Defect management	Defect management requires a system whereby information on faults, malfunctions, defects and other occurrences that cause or might cause adverse effects on the continuing airworthiness of the aircraft is captured. This system should be properly documented. It may include, amongst others, the Minimum Equipment List system, the Configuration Deviation List system and deferred defects management.

<b>C. AIRCRAFT MAINTENANCE</b>		
<b>.1</b>	Aircraft Maintenance Programme	A document which describes or incorporates by reference the specific scheduled maintenance tasks and their frequency of completion, the associated maintenance procedures and related standard maintenance practices necessary for the safe operation of those aircraft to which it applies.
<b>.2</b>	Component control	The component control should consider a twofold objective for components maintenance: maintenance for which compliance is mandatory; maintenance for which compliance is recommended.
<b>.3</b>	Repairs	All repairs and unrepaired damage/degradations need to comply with the instructions of the appropriate maintenance manual (e.g. the SRM, the AMM, the CMM). With the exception of repairs contained in the certification specifications referred to in Part 21 point 21A.90B or 21A.431B of the Annex (Part 21), all repairs not defined in the appropriate maintenance manual need to be appropriately approved and recorded with the reference to the approval.  This includes any damage or repairs to the aircraft/engine(s)/propeller(s), and their components.
<b>.4</b>	Records	Continuing Airworthiness records are defined in <a href="#">M.A.305</a> and <a href="#">M.A.306</a> and related AMC.

<b>A.1</b>	<b>Type design and changes to type design</b>	The type design is the part of the approved configuration of a product, as laid down in the TCDS, common to all products of that type. With the exception of changes contained in the certification specifications referred to in Part 21 point 21A.90B or 21A.431B of the Annex (Part 21) any changes to type design shall be approved and, for those embodied, shall be recorded with the reference to the approval.
<b>Supporting information</b>		<b>Typical inspection items</b>
<p>The type design consists of:</p> <ol style="list-style-type: none"> <li>the drawings and specifications, and a listing of those drawings and specifications, necessary to define the configuration and the design features of the product (i.e. the aircraft, its components, etc.) shown to comply with the applicable type-certification basis and environmental protection requirements;</li> <li>information on materials and processes and on methods of manufacture and assembly of the product necessary to ensure the conformity of the product;</li> <li>an approved Airworthiness Limitation Section (ALS) of the Instructions for Continued Airworthiness (ICA); and</li> <li>any other data necessary to allow by comparison the determination of the airworthiness, the characteristics of noise, fuel venting, and exhaust emissions (where applicable) of later products of the same type.</li> </ol> <p>The individual aircraft design is made of the type design supplemented with changes to the type design (e.g. modifications) embodied on the considered aircraft.</p> <p>Depending on the product State of Design, Bilateral Agreements and/or Agency decisions on acceptance of certification findings exist and should be taken into account.</p>		<ol style="list-style-type: none"> <li>Use the current type certificate data sheets (airframe, engine, propeller as applicable) and check that the aircraft conforms to its type design (correct engine installed, seat configuration, etc.).</li> <li>Check that changes have been approved properly (approved data is used, and a direct relation to the approved data).</li> <li>Check for unintentional deviations from the approved type design, sometimes referred to as concessions, divergences, or non-conformances, Technical Adaptations, Technical Variations, etc.</li> <li>Check cabin configuration (LOPA).</li> <li>Check for embodiment of STC's, and, if any Airworthiness Limitations Section (ALS)/ FM/MEL/WBM and revisions are needed, they have been approved and complied with.             <ol style="list-style-type: none"> <li>Aircraft S/N applicable</li> <li>Applicable engines</li> <li>Applicable APU</li> <li>Max. certified weights</li> <li>Seating configuration</li> <li>Exits</li> </ol> </li> <li>Check that the individual aircraft design/configuration is properly established and used as a reference.</li> </ol>
		– 21.A.31



- 21.A.41
- 21.A.61
- 21.A.90A
- 21.A.90B
- [M.A.304](#)
- [M.A.305](#)
- [M.A.401](#)

<b>A.2</b>	<b>Airworthiness limitations</b>	An airworthiness limitation is a boundary beyond which an aircraft or a component thereof must not be operated, unless the instruction(s) associated with this airworthiness limitation is complied with.
<b>Supporting information</b>		<b>Typical inspection items</b>
<p>Airworthiness limitations are exclusively associated with instructions whose compliance is mandatory as part of the type design. They apply to some scheduled or unscheduled instructions that have been developed to prevent and/or to detect the most severe failure. They mainly apply to maintenance (mandatory modification, replacement, inspections, checks, etc.), but can also apply to instructions to control critical design configurations (for example Critical Design Configuration Control Limitations (CDCCL) for the fuel tank safety).</p>		<ol style="list-style-type: none"> <li>1. Check that the Aircraft Maintenance Programme (AMP) reflects airworthiness limitations and associated instructions (standard or alternative) issued by the relevant design approval holders and is approved by the competent authority, if applicable.</li> <li>2. Check that the aircraft and the components thereof comply with the approved AMP.</li> <li>3. Check the current status of life-limited parts. The current status of life-limited parts is to be maintained throughout the operating life of the part.</li> </ol> <p>Typical Airworthiness Limitation items:</p> <ul style="list-style-type: none"> <li>– Safe Life ALI (SL ALI)/Life-limited parts,</li> <li>– Damage Tolerant ALI (DT ALI)/Structure, including ageing aircraft structure,</li> <li>– Certification Maintenance Requirements (CMR),</li> <li>– Ageing Systems Maintenance (ASM), including Airworthiness Limitations for Electrical Wiring Interconnection System (EWIS),</li> <li>– Fuel Tank Ignition Prevention (FTIP)/Flammability Reduction Means (FRM),</li> <li>– CDCCL, check wiring if any maintenance carried out in same area - wiring separation,</li> <li>– Ageing fleet inspections mandated through ALS or AD are included in the AMP.</li> </ul>
<b>Reference documents: EASA</b>		<ul style="list-style-type: none"> <li>– 21.A.31</li> <li>– 21.A.61</li> <li>– CS 22.1529</li> <li>– CS 23.1529, Appendix G, para. G25.4</li> <li>– CS 25.1529, Appendix H, para. H25.4</li> <li>– CS 27.1529, Appendix A, para. A27.4</li> </ul>

- CS 29.1529, Appendix A, para. A29.4
- CS 31HB.82
- CS-APU 30
- CS-E 25
- CS-P 40
- CS VLR.1529, Appendix A, para. A.VLR.4
- [M.A.302](#)
- [M.A.305](#)
- [M.A.710\(a\)\(7\)](#)

<b>A.3</b>	<b>Airworthiness Directives</b>	An Airworthiness Directive means a document issued or adopted by the Agency, which mandates actions to be performed on an aircraft to restore an acceptable level of safety, when evidence shows that the safety level of this aircraft may otherwise be compromised (Part 21A.3B).
<b>Supporting information</b>		<b>Typical inspection items</b>
Any Airworthiness Directive issued by a State of Design for an aircraft imported from a third country, or for an engine, propeller, part or appliance imported from a third country and installed on an aircraft registered in a Member State, shall apply unless the Agency has issued a different Decision before the date of entry into force of that airworthiness directive.		<ol style="list-style-type: none"> <li>1. Check if all ADs applicable to the airframe, engine(s), propeller(s) and equipment have been incorporated in the AD-status, including their revisions.</li> <li>2. Check records for correct AD applicability (including ADs incorrectly listed as non-applicable).</li> <li>3. Check by sampling in the current AD status that applicable ADs have been or are planned to be (as appropriate) carried out within the requirements of these Airworthiness Directives, unless otherwise specified by the Agency (AMOC).</li> <li>4. Check that applicable ADs related to maintenance are included into the Aircraft Maintenance Programme.</li> <li>5. Check that task-cards correctly reflect AD requirements or refer to procedures and standard practises referenced in ADs.</li> <li>6. Sample during a physical survey some ADs for which compliance can be physically checked.</li> </ol>
<b>Reference documents: EASA</b>		<ul style="list-style-type: none"> <li>– 21.A.3B</li> <li>– 21.B.60</li> <li>– 21.B.326</li> <li>– 21.B.327</li> <li>– <a href="#">M.A.303</a></li> <li>– <a href="#">M.A.305(d) &amp; (h)</a></li> <li>– <a href="#">M.A.401(a) &amp; (b)</a></li> <li>– <a href="#">M.A.501(b)</a></li> </ul>

- [M.A.503\(a\)](#)
- [M.A.504\(a\)2](#)
- [M.A.504](#) & [AMC M.A.504\(c\)](#) § 1 (f)
- [M.A.613](#) & [AMC M.A.613\(a\)](#) § 2.4.3, 2.5.2, 2.6.1(h) & 2.8(b)
- [M.A.708\(b\)8](#)
- [M.A.709\(a\)](#)
- [M.A.710\(a\)5](#)
- [M.A.801](#) & [AMC M.A.801\(h\)](#)

<b>B.1</b>	<b>Aircraft documents</b>	Aircraft certificates and documents necessary for operations.
<b>Supporting information</b>		<b>Typical inspection items</b>
<p>The aircraft certificates and documents necessary for operations may include, but are not necessarily limited to:</p> <ul style="list-style-type: none"> <li>– Certificate of Registration;</li> <li>– Certificate of Airworthiness;</li> <li>– Noise certificate;</li> <li>– Aircraft certificate of release to service;</li> <li>– Technical log book, if required;</li> <li>– Airworthiness Review Certificate;</li> <li>– Etc.</li> </ul>		<ol style="list-style-type: none"> <li>1. Check that all certificates and documents pertinent to the aircraft and necessary for operations (or copies, as appropriate) are on board.</li> <li>2. Check C of A modification/Aircraft identification.</li> <li>3. Check that noise certificate corresponds to aircraft configuration.</li> <li>4. Check Permit to fly and Flight Condition when necessary.</li> <li>5. Check that there is an appropriate aircraft certificate of release to service.</li> </ol>
<b>Reference documents: EASA</b>		<ul style="list-style-type: none"> <li>– Part-21 Subpart H</li> <li>– 21.A.175</li> <li>– 21.A.177</li> <li>– 21.A.182</li> <li>– Part-21 Subpart I</li> <li>– Part-21 Subpart P</li> <li>– Part-21 Subpart Q</li> <li>– 21.A.801</li> <li>– 21.A.807</li> <li>– <a href="#">M.A.201(a)(3)</a></li> <li>– <a href="#">M.A.801</a></li> </ul>

<b>B.2</b>	<b>Flight Manual</b>	A manual, associated with the certificate of airworthiness, containing operational limitations, instructions and information necessary for the flight crew members for the safe operation of the aircraft.
<b>Supporting information</b>		<b>Typical inspection items</b>
<p>The Flight Manual needs to reflect the current status/configuration of the aircraft. When it does not, it may provide flight crew members with wrong information.</p> <p>This may lead to errors and/or to override limitations that could contribute to severe failure.</p>		<ol style="list-style-type: none"> <li>1. Check the conformity of the Flight Manual (FM), latest issue, with aircraft configuration, including modification status, (AD, SB, STC etc.).</li> <li>2. Check: <ul style="list-style-type: none"> <li>– the FM approval, revision control, Supplement to FM;</li> <li>– the impact of modification status on noise and weight &amp; balance;</li> <li>– additional required manuals (QRH/FCOM/OM-B etc.);</li> <li>– FM limitations.</li> </ul> </li> </ol>
<b>Reference documents: EASA</b>		<ul style="list-style-type: none"> <li>– 21.A.174(b)2(iii), (b)3(ii)</li> <li>– 21.A.204(b)1(ii), (b)2(i)</li> <li>– <a href="#">M.A.305</a>, <a href="#">AMC M.A.305(d)</a></li> <li>– <a href="#">M.A.710(a)2</a></li> <li>– <a href="#">M.A.710(c)2</a></li> <li>– <a href="#">AMC M.A.710(a)1</a></li> <li>– <a href="#">AMC M.A.901(d) and (g)</a></li> <li>– <a href="#">M.A.902(b)3</a></li> <li>– <a href="#">AMC M.A.904(a)2</a> points 2(c) and 2(k)</li> <li>– <a href="#">AMC M.A.904(b)</a> point (c)</li> </ul>

<b>B.3</b>	<b>Mass &amp; balance</b>	Mass and balance data is required to make sure the aircraft is capable of operating within the approved envelope.
<b>Supporting information</b>		<b>Typical inspection items</b>
The mass and balance report needs to reflect the actual configuration of the aircraft. When it does not, the aircraft might be operated outside the certified operating envelope.		<ol style="list-style-type: none"> <li>1. Check that mass and balance report is valid, considering current configuration.</li> <li>2. Make sure that modifications and repairs are taken into account in the report.</li> <li>3. Check that equipment status is recorded on the mass and balance report.</li> <li>4. Compare current mass and balance report with previous report for consistency.</li> </ol>
<b>Reference documents: EASA</b>		<ul style="list-style-type: none"> <li>– <a href="#">M.A.305(d)5</a></li> <li>– <a href="#">M.A.708(b)(10)</a></li> <li>– <a href="#">M.A.710(a)(9)</a>, <a href="#">AMC M.A.710(a)1</a></li> <li>– Part-CAT: CAT.POL.MAB.100 and related AMC<sub>s</sub>/GM</li> <li>– Part-NCC: NCC.POL.105 and related AMC/GM</li> <li>– Part-NCO: NCO.POL.105 and related AMC/GM</li> <li>– Part-SPO: SPO.POL.105 and related AMC/GM</li> </ul>



<b>B.4</b>	<b>Markings &amp; placards</b>	Markings and placards are defined in the individual aircraft type design. Some information may also be found in the TCDS, the Supplemental Type Certificates (STC), the FM, the AMM, the IPC, etc.
<b>Supporting information</b>		<b>Typical inspection items</b>
<p>Markings and placards on instruments, equipment, controls, etc. shall include such limitations or information as necessary for the direct attention of the crew during flight.</p> <p>Markings and placards or instructions shall be provided to give any information that is essential to the ground handling in order to preclude the possibility of mistakes in ground servicing (e.g. towing, refuelling) that could pass unnoticed and that could jeopardise the safety of the aircraft in subsequent flights.</p> <p>Markings and placards or instructions shall be provided to give any information essential in the prevention of passenger injuries.</p> <p>National registration markings must be installed. They include registration, possible flag, fireproof registration plate.</p> <p>Product data plates must be installed.</p> <p>When markings and placards are missing, or unreadable, or not properly installed, mistakes or aircraft damages may occur and could subsequently contribute to a severe failure.</p>		<ol style="list-style-type: none"> <li>1. Check that the required markings and placards are installed on the aircraft, especially the emergency exit markings instructions and passenger information signs and placards.</li> <li>2. Check that all installed placards are readable.</li> <li>3. Check the Flight Manual versus the instruments. (General Aviation usually).</li> <li>4. Check registration markings, including State of Registry fireproof nameplate.</li> <li>5. Check product data plates.</li> </ol> <p>Examples of markings &amp; placards:</p> <ul style="list-style-type: none"> <li>– door means of opening,</li> <li>– each compartment's weight/load limitation/placards stating limitation on contents,</li> <li>– passenger information signs, including no smoking signs,</li> <li>– emergency exit marking,</li> <li>– pressurised cabin warning,</li> <li>– calibration placards,</li> <li>– cockpit placards and instrument markings,</li> <li>– O<sup>2</sup> system information data,</li> <li>– accesses to the fuel tanks with flammability reduction means (CDCCL),</li> <li>– fuelling markings (fuel vent, fuel dip stick markings),</li> <li>– EWIS identification,</li> <li>– towing limit markings,</li> </ul>

	<ul style="list-style-type: none"><li>– break-in markings,</li><li>– inflate tyres with nitrogen,</li><li>– RVSM + static markings.</li></ul>
<b>Reference documents: EASA</b>	<ul style="list-style-type: none"><li>– 21.A.175</li><li>– 21.A.715</li><li>– 21.A.801</li><li>– 21.A.803</li><li>– 21.A.804</li><li>– 21.A.805</li><li>– 21.A.807</li><li>– relevant CS for the aircraft type being inspected</li><li>– <a href="#">M.A.501</a></li><li>– <a href="#">M.A.710(c)</a></li><li>– <a href="#">AMC M.A.504(e)</a></li><li>– <a href="#">AMC M.A.603(c)</a></li><li>– <a href="#">AMC M.A.904(a)(2)</a> points 2(f) &amp; 2(k)</li></ul>

<b>B.5</b>	<b>Operational requirements</b>	Requirements for the type of operation are complied with (e.g. equipment, documents, approvals).
<b>Supporting information</b>		<b>Typical inspection items</b>
<p>This includes all equipment required by the applicable operational code including national requirements.</p> <p>In case of malfunction, it can create a hazardous situation. Especially emergency equipment needs attention during this inspection.</p>		<ol style="list-style-type: none"> <li>1. Check permits &amp; approvals required for type of operation.</li> <li>2. Check for the presence and serviceability of equipment required by operational approvals.</li> <li>3. Check safety equipment, check that emergency equipment is readily accessible.</li> </ol>
<b>Reference documents: EASA</b>		<ul style="list-style-type: none"> <li>– <a href="#">M.A.201(a)(2)</a></li> <li>– Part-21 Subpart I</li> <li>– Part-CAT, Part-NCC, Part-NCO, Part-SPO Subpart D ‘Instruments, Data and Equipment’.</li> </ul>

<b>B.6</b>	<b>Defect management</b>	Defect management requires a system whereby information on faults, malfunctions, defects and other occurrences that cause or might cause adverse effects on the continuing airworthiness of the aircraft is captured. This system should be properly documented. It includes, amongst others, the MEL system, the CDL system and deferred defects management.
<b>Supporting information</b>		<b>Typical inspection items</b>
This KRE addresses the effectiveness of defect management, it should also consider defects found during the physical inspection.		<ol style="list-style-type: none"> <li>1. Check that the deferred defects have been identified, recorded, and rectified/deferred in accordance with approved procedures and within approved time limits.</li> <li>2. Check that operations outside published approved data have only been performed under a Permit to Fly or under flexibility provisions (Article 14 of Regulation (EC) No 216/2008). Sample on:             <ol style="list-style-type: none"> <li>a. TLB and hold item list,</li> <li>b. maintenance task cards,</li> <li>c. engine shop report,</li> <li>d. (major) component shop report,</li> <li>e. maintenance/repair/modification working party files after embodiment of modifications or repairs,</li> <li>f. occurrence reporting data,</li> <li>g. communications between the user of maintenance data and the maintenance data author in case of inaccurate, incomplete, ambiguous procedures and practices.</li> </ol> </li> <li>3. Check that the consequences of the deferral have been managed with Operation/Crew.</li> <li>4. Check that defects are being deferred in accordance with approved data (current revision of the MEL, CDL, aircraft maintenance programme).</li> <li>5. Compare physical location of parts/serial numbers with recorded locations to identify undocumented parts swaps for troubleshooting.</li> </ol>
<b>Reference documents: EASA /EU</b>		– <a href="#">M.A.301(2)</a>

- [AMC M.A.301-2](#)
- [M.A.403](#)
- [AMC M.A.710\(a\)](#)
- [145.A.60](#)
- AMC 20-8
- Regulation (EU) No 376/2014

<b>C.1</b>	<b>Aircraft Maintenance Programme</b>	A document which describes the specific scheduled maintenance tasks and their frequency of completion, related standard maintenance practices and the associated procedures necessary for the safe operation of those aircraft to which it applies.
<b>Supporting information</b>		<b>Typical inspection items</b>
<p>The Aircraft Maintenance Programme (AMP) is intended to include scheduled maintenance tasks, the associated procedures and standard maintenance practises. It also includes the reliability programme, when required.</p> <p>Tasks included in the maintenance programme can originate from:</p> <ul style="list-style-type: none"> <li>– tasks for which compliance is mandatory: instructions specified in repetitive Airworthiness Directives (AD), or in the Airworthiness Limitations Section (ALS), which may include Certification Maintenance Requirements (CMRs). The ALS is included in the Instructions for Continuing Airworthiness (ICA) of a design approval holder;</li> <li>– tasks for which compliance is recommended: additional instructions specified in the Maintenance Review Board Report (MRBR), the Maintenance Planning Document (MPD), Service Bulletins (SB), or any other non-mandatory continuing airworthiness information issued by the design approval holder;</li> <li>– additional or alternative instructions proposed by the owner or the continuing airworthiness management organisation once approved in accordance with point <a href="#">M.A.302(d)(iii)</a>;</li> </ul> <p>The AMP shall contain details, including frequency, of all maintenance to be carried out, including any specific tasks linked to the type and the specificity of operations.</p>		<p><b>Review of AMP contents:</b></p> <ol style="list-style-type: none"> <li>1. Check that the AMP properly reflects mandatory continuing airworthiness instructions (ALIs, CMRs (the latest source documents' revision. Sample check that tasks are implemented within approved compliance times and that no tasks have been omitted.</li> <li>2. Check how recommended scheduled maintenance tasks (such as TBO intervals, recommended through Service Bulletins, Service Letters, etc..., the latest source documents' revision) are considered when updating the AMP. If applicable, check embodiment policy as required by <a href="#">M.A.301</a> point 7.</li> <li>3. Check that the AMP properly reflects the maintenance tasks specified in repetitive ADs.</li> <li>4. Check that the AMP properly reflects additional instructions for continuing airworthiness resulting from specific installed equipment or modifications embodied.</li> <li>5. Check that the AMP properly reflects additional instructions for continuing airworthiness resulting from repairs embodied.</li> <li>6. If applicable, check that the AMP properly reflects additional maintenance tasks required by specific approvals (e.g. RVSM, ETOPS, MNPS, B-RNAV).</li> <li>7. Check for any additional scheduled maintenance measures required due to the use of the aircraft and the operational environment.</li> <li>8. If applicable, check for proper identification of pilot-owner maintenance tasks and identification of the pilot-owner(s) or the alternative procedure described in <a href="#">AMC M.A.803</a> point 3.</li> <li>9. Check approval status of additional or alternative instructions (<a href="#">M.A.302(d)(iii)</a>).</li> <li>10. Check if a reliability programme is present and active when required.</li> <li>11. Check if the AMP is approved by the competent authority directly, or by the CAMO via indirect approval procedure, or if it is a self-declared maintenance programme.</li> </ol>

	<p><b>Review of aircraft compliance with an AMP:</b></p> <ol style="list-style-type: none"><li>12. Check if the AMP used is valid for the aircraft, and is reviewed annually.</li><li>13. Check if tasks are performed within the value(s) quoted in AMP and the source documents</li><li>14. Sample check that no task has been omitted without justifications accepted by the Competent Authority (at the time of decision).</li><li>15. Check the reporting of performed scheduled maintenance into the records system.</li><li>16. Analyse the effectiveness of the AMP and reliability by reviewing the unscheduled tasks.</li></ol>
<b>Reference documents: EASA</b>	<ul style="list-style-type: none"><li>– <a href="#">M.A.302</a> and its AMC.</li><li>– <a href="#">M.A.708(b)(1), (b)(2) and (b)(4)</a></li><li>– <a href="#">M.A.803</a> and its AMC</li></ul>

<b>C.2</b>	<b>Component control</b>	<p>The component control should consider a twofold objective for components maintenance:</p> <ul style="list-style-type: none"> <li>– maintenance for which compliance is mandatory.</li> <li>– maintenance for which compliance is recommended.</li> </ul>
<b>Supporting information</b>		<b>Typical inspection items</b>
<p>Depending on each maintenance task, accomplishment is scheduled or unscheduled. Refer to KRE C.1 'Aircraft Maintenance Programme'.</p> <p>Components affected by scheduled maintenance:</p> <p>Life-limited components are of two types:</p> <ul style="list-style-type: none"> <li>– components subject to a certified life limit;</li> <li>– components subject to a service life limit.</li> </ul> <p>Components with a certified life-limit must be permanently removed from service when, or before, their operating limitation is exceeded. The life limitation is controlled at the component level (in opposition to aircraft level).</p> <ul style="list-style-type: none"> <li>– Components subject to a service life ('time controlled components') include the following:</li> <li>– components for which removal and restoration are scheduled, regardless of their level of failure resistance. Reference is made to hard time components: They are subject to periodic maintenance dealing with a deterioration that is assumed to be predictable (the overall reliability invariably decreases with age): Failure is less likely to occur before restoration is necessary;</li> <li>– components for which failure resistance can reduce and drop below a defined level: Inspections are scheduled to detect potential failures. Reference is made to 'On-condition' components: They are called such because components, which are inspected, are left in service (no further maintenance action taken)</li> </ul>		<ol style="list-style-type: none"> <li>1. Check that the mandatory maintenance tasks are identified as such and managed separately from recommendations.</li> <li>2. Sample check installed components (PN and SN) against aircraft records:             <ol style="list-style-type: none"> <li>a. Correct Part Number and Serial Number installed.</li> <li>b. Correct authorised release document available.</li> </ol> </li> <li>3. Check the current status of time-controlled components, with due consideration to deferred items. They must identify:             <ol style="list-style-type: none"> <li>a. The affected components (Part Number and Serial Number).</li> <li>b. For components subject to a repetitive task: the task description and reference, the applicable threshold/interval, the last accomplishment data (date, the component's total accumulated life in Hours, Cycles, Landings, Calendar time, as necessary) and the next planned accomplishment data.</li> <li>c. For components subject to an unscheduled task: the task description and reference, the accomplishment data (date, the component's total accumulated life in Hours, Cycles, Landings, Calendar time, as necessary). Pay attention to ETOPS and CDCCL components.</li> </ol> </li> <li>4. Check current status of life-limited components. This status can be requested upon each transfer throughout the operating life of the part:             <ol style="list-style-type: none"> <li>a. The life limitation, the component's total accumulated life, and the life remaining before the component's life limitation is reached (indicating Hours, Cycles, Landings, Calendar time, as necessary).</li> </ol> </li> </ol>



on the condition that they continue to meet specified performance standards.

**Notes:**

1. Restoration tasks for hard time components are not the same as 'On-condition' tasks, since they do not monitor gradual deterioration, but are primarily done to ensure the item may continue to remain in service until the next planned restoration.
2. Components subject to 'condition-monitoring' are permitted to remain in service without preventive maintenance until functional failure occurs. Reference is made to 'fly-to-failure'. Such components are subject to unscheduled tasks.

- b. If relevant for the determination of the remaining life, a full installation history indicating the number of hours, cycles or calendar time relevant to each installation on these different types of aircraft/engine.

5. Check if the aircraft maintenance programme and reliability programme results impact the component control.
6. Check that life-limited and time controlled components are correctly marked during a physical survey.

**Reference documents: EASA**

- 21.A.805
- [M.A.302](#)
- [M.A.305](#)
- [M.A.501](#)
- [M.A.503](#)
- [M.A.710](#)

<p><b>C.3</b></p>	<p><b>Repairs</b></p>	<p>All repairs and unrepaired damage/degradations need to comply with the instructions of the appropriate maintenance manual (e.g. the SRM, the AMM, the CMM). With the exception of repairs contained in the certification specifications referred to in Part 21 point 21A.90B or 21A.431B of the Annex (Part 21), all repairs not defined in the appropriate maintenance manual need to be appropriately approved and recorded with the reference to the approval. This includes any damage or repairs to the aircraft/engine(s)/propeller(s), and their components.</p>
<p><b>Supporting information</b></p>		<p><b>Typical inspection items</b></p>
<p>The data substantiating repairs should include, but is not limited to, the damage assessment, the rationale for the classification of the repair, the evidence the repair has been designed in accordance with approved data, i.e. by reference to the appropriate manual, procedure or to a Part 21 repair design approval, the drawings/material and accomplishment instructions, as well as the maintenance and operational instructions.</p> <p>‘Repair status’ means a list of:</p> <ul style="list-style-type: none"> <li>– the repairs embodied since the original delivery of (and still existent upon) the aircraft/engine/propeller/component; and</li> <li>– the un-repaired damage/degradations.</li> </ul> <p>It also includes, either directly or by reference to supporting documentation (i.e. repair files), the substantiating data supporting compliance with the applicable airworthiness requirements.</p> <p>The repair status should identify the repair file reference, the repair classification, the repaired item (i.e. aircraft/engine/propeller/component, and a precise location if necessary), and the date and total life in FH/FC accumulated by the item at the time of repair or finding of the un-repaired damage/degradations. Cross-reference to the aircraft maintenance programme should also be included, as necessary.</p> <p>Depending on the product State of Design, Bilateral Agreements and/or Agency Decisions on acceptance of certification findings exist and should</p>		<ol style="list-style-type: none"> <li>1. Sample the repair status to confirm it appropriately traces repairs and un-repaired damage/deteriorations.</li> <li>2. Sample repair files (at least one file for each type of repaired items) to check that repaired and unrepaired damage/deterioration have been assessed against the latest published approved repair data.</li> <li>3. Check that repair instructions detailed in the repair file comply with published approved repair data.</li> <li>4. Check that major repairs resulting in new or amended airworthiness limitations and associated mandatory instructions (including ageing aircraft programme) have been included in the aircraft maintenance programme.</li> <li>5. Check that new or amended maintenance instructions resulting from repairs have been considered for inclusion in the aircraft maintenance programme.</li> <li>6. Compare the repair status and the physical status of the repaired aircraft/engine(s)/propeller(s), and their repaired components (physical survey) in order to confirm the accuracy of the repair status. Sample embodied repairs to check their conformity against the repair files (physical survey).</li> </ol>

be taken into account for the determination of acceptable data for repairs.

**Reference documents: EASA**

- 21.A.431A
- 21.A.431B
- [M.A.304](#)
- [AMC M.A.304](#)
- [M.A.305](#)
- [AMC M.A.305](#)
- [M.A.401](#)
- [AMC M.A.401](#)

<b>C.4</b>	<b>Records</b>	Continuing Airworthiness records are defined in <a href="#">M.A.305</a> and <a href="#">M.A.306</a> and related AMC.
<b>Supporting information</b>		<b>Typical inspection items</b>
<p>Retention/Transfer of the records is required so that the status of the aircraft and its components can be readily established at any time.</p> <p>Task accomplishment is scheduled (one time or periodically), or unscheduled (e.g. following an event). Aircraft continuing airworthiness records (refer to logbooks, technical logbooks, component log cards or task cards) shall provide the status with regard to:</p> <ul style="list-style-type: none"> <li>– scheduled tasks: <ul style="list-style-type: none"> <li>– one-time: life-limited parts status, modification status, repair status.</li> <li>– repetitive: maintenance programme status.</li> </ul> </li> <li>– unscheduled tasks.</li> </ul>		<ol style="list-style-type: none"> <li>1. Check the aircraft continuing airworthiness record system: <a href="#">M.A.305</a> and <a href="#">M.A.306</a>, as applicable, require that certain records are kept for defined periods.  Pay attention to the continuity, integrity and traceability of records: <ol style="list-style-type: none"> <li>a. integrity: Check the data recorded is legible,</li> <li>b. continuity: Check that records are available for the applicable retention period,</li> <li>c. traceability: Check the link between operator/CAMO and maintenance documentation, traceability to approved data, traceability to appropriate release documents, etc.</li> </ol> </li> <li>2. If applicable, make sure that the tech log system is used correctly, including: <ol style="list-style-type: none"> <li>a. current aircraft release to service (including the maintenance statement) issued and</li> <li>b. pre-flight inspections signed-off by authorised persons;</li> </ol> </li> <li>3. Check that any maintenance required following abnormal operation/event (such as overspeed, overweight operation, hard landing, excessive turbulence, and operation outside of Flight Manual limitations) has been performed, as applicable.</li> </ol>
<b>Reference documents: EASA</b>		<ul style="list-style-type: none"> <li>– <a href="#">M.A.305</a></li> <li>– <a href="#">M.A.306</a></li> <li>– <a href="#">M.A.307</a></li> <li>– <a href="#">M.A.801</a></li> <li>– <a href="#">AMC M.A.305</a></li> <li>– <a href="#">AMC M.A.306</a></li> <li>– <a href="#">AMC M.A.307</a></li> </ul>

## Abbreviations used:

A/C	Aircraft
ACAM	Aircraft Continuous Airworthiness Monitoring
AD	Airworthiness Directive
ALI	Airworthiness Limitation Items
ALS	Airworthiness Limitations Section
AMM	Aircraft Maintenance Manual
AMP	Aircraft Maintenance Programme
APU	Auxiliary Power Unit
ASM	Ageing Systems Maintenance
B-RNAV	Basic Area Navigation
CAMO	Continuing Airworthiness Management Organisation
CDL	Configuration Deviation List
CDCCL	Critical Design Configuration Control Limitations
CMM	Component Maintenance Manual
CMR	Certification Maintenance Requirement
DT	Damage Tolerant
ED	Executive Director of EASA
ETOPS	Extended Range Operations with Two-engined aeroplanes
ETSO	European Technical Standard Order
EWIS	Electrical Wiring Interconnection System
EZAP	Enhanced Zonal Analysis Procedure

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FCOM	Flight Crew Operations Manual
FDR	Flight Data Recorder
FM	Flight Manual
FRM	Flammability Reduction Means
FTIP	Fuel Tank Ignition Prevention
GA	General Aviation
ICA	Instructions for Continuing Airworthiness
IPCI	Illustrated Parts Catalogue
KRE	Key Risk Element
LHIRF	Lightning High Intensity Radiated Field
LOPA	Layout of Passenger Accommodation
MCAI	Mandatory Continuing Airworthiness Information
MEL	Minimum Equipment List
MNPS	Minimum Navigation Performance Specification
MRB	Maintenance Review Board
MRBR	Maintenance Review Board Report
MPD	Maintenance Planning Document
NAA	National Aviation Authority
OEM	Original Equipment Manufacturer
OM	Operations Manual
OM-B	Operations Manual Part-B
PN	Part Number

QRH	Quick Reference Handbook
PWR	Power
RVSM	Reduced Vertical Separation Minima
SN	Serial Number
SB	Service Bulletin
SM	Service Manual
SRM	Structural Repair Manual
STC	Supplemental Type Certificate
TBO	Time Between Overhauls
TC	Type Certificate
TCDS	Type Certificate Data Sheet
TLB	Technical Logbook
TSO	Technical Standard Order

## Appendix IV to AMC M.A.604 — Maintenance organisation manual

ED Decision 2015/029/R

### 1. Purpose

The maintenance organisation manual is the reference for all the work carried out by the approved maintenance organisation. It should contain all the means established by the organisation to ensure compliance with [Part-M](#) according to the extent of approval and the privileges granted to the organisation.

The maintenance organisation manual should define precisely the work that the approved maintenance organisation is authorised to carry out and the subcontracted work. It should detail the resources used by the organisation, its structure and its procedures.

### 2. Content

A typical Maintenance Organisation Manual for a small organisation (less than 10 maintenance staff) should be designed to be used directly on a day to day basis. The working documents and lists should be directly included into the manual. It should contain the following:

#### Part A. — General

- **Table of contents**
- **List of effective pages**
- **Record of amendments**
- **Amendment procedure**
  - Drafting
  - Amendments requiring direct approval by the competent authority
  - Approval
- **Distribution**
  - Name or title of each person holding a copy of the manual
- **Accountable manager statement**
  - Approval of the manual
  - Statement that the maintenance organisation manual and any incorporated document identified therein reflect the organisation's means of compliance with [Part-M](#)
  - Commitment to work according to the manual
  - Commitment to amend the manual when necessary

#### Part B — Description

- **Organisation's scope of work**
  - Description of the work carried out by the organisation (type of product, type of work) and subcontracted work
  - Identification of the level of work which can be performed at each facility.
- **General presentation of the organisation**



- Legal name and social status
- **Name and title of management personnel**
  - Accountable manager
  - Senior managers
  - Duties and responsibilities
- **Organisation chart**
- **Certifying staff and airworthiness review staff**
  - Minimum qualification and experience
  - List of authorised certifying staff and airworthiness review staff, their scope of qualification and the personal authorisation reference
- **Personnel**
  - Technical personnel (number, qualifications and experience)
  - Administrative personnel (number)
- **General description of the facility**
  - Geographical location (map)
  - Plan of hangars
  - Specialised workshops
  - Office accommodation
  - Stores
  - Availability of all leased facilities.
- **Tools, equipment and material**
  - List of tools, equipment and material used (including access to tools used on occasional basis)
  - Test apparatus
  - Calibration frequencies
- **Maintenance data**
  - List of maintenance data used in accordance with [M.A.402](#), and appropriate amendment subscription information (including access to data used on occasional basis).

#### Part C — General Procedures

- **Organisational review**
  - Purpose (to insure that the approved maintenance organisation continues to meet the requirements of [Part-M](#))
  - Responsibility
  - Organisation, frequency, scope and content (including processing of authority's findings)

- Planning and performance of the review
- Organisational review checklist and forms
- Processing and correction of review findings
- Reporting
- Review of subcontracted work
- **Training**
  - Description of the methods used to ensure compliance with the personnel qualification and training requirements (certifying staff training, specialised training)
  - Description of the personnel records to be retained
- **Subcontracting of specialised services**
  - Selection criteria and control
  - Nature of subcontracted work
  - List of subcontractors
  - Nature of arrangements
  - Assignment of responsibilities for the certification of the work performed
- **One time authorisations**
  - Maintenance checks
  - Certifying staff

#### Part D — Working Procedures

- **Work order acceptance**
- **Preparation and issue of the work package**
  - Control of the work order
  - Preparation of the planned work
  - Work package content (copy of forms, work cards, procedure for their use, distribution)
  - Responsibilities and signatures needed for the authorisation of the work
- **Logistics**
  - Persons/functions involved
  - Criteria for choosing suppliers
  - Procedures used for incoming inspection and storage of parts, tools and materials
  - Copy of forms and procedure for their use and distribution
- **Execution**
  - Persons/functions involved and respective role
  - Documentation (work package and work cards)

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- Copy of forms and procedure for their use and distribution
  - Use of work cards or manufacturer's documentation
  - Procedures for accepting components from stores including eligibility check
  - Procedures for returning unserviceable components to stores
  - **Release to Service – Certifying staff**
    - Authorised certifying staff functions and responsibilities
  - **Release to Service – Supervision**

Detailed description of the system used to ensure that all maintenance tasks, applicable to the work requested of the approved maintenance organisation, have been completed as required.

    - Supervision content
    - Copy of forms and procedure for their use and distribution
    - Control of the work package
  - **Release to Service – Certificate of release to service**
    - Procedure for signing the CRS (including preliminary actions)
    - Certificate of release to service wording and standardised form
    - Completion of the aircraft continuing airworthiness record system
    - Completion of [EASA Form 1](#)
    - Incomplete maintenance
    - Check flight authorisation
    - Copy of CRS and EASA Form 1
  - **Records**
  - **Airworthiness review procedures and records for ELA1 aircraft not involved in commercial operations**
  - **Development and approval processing for maintenance programmes for ELA2 aircraft not involved in commercial operations**
  - **Special procedures**

Such as specialised tasks, disposal of unsalvageable components, re-certification of parts not having an EASA Form 1, etc.
  - **Occurrence reporting**
    - Occurrences to be reported
    - Timeframe of reports
    - Information to be reported
    - Recipients
  - **Management of indirect approval of the manual**

- Amendments content eligible for indirect approval
- Responsibility
- Traceability
- Information to the competent authority
- Final validation

#### Part E – Appendices

- **Sample of all documents used.**
- **List of maintenance locations.**
- **List of Part-145 or [M.A. Subpart F](#) organisations.**
- **List of subcontracted specialised services.**

#### **3. Approval**

The competent authority should approve the manual in writing. This will normally be done by approving a list of effective pages.

Minor amendments, or amendments to a large capability list, can be approved indirectly, through a procedure approved by the member state.

#### **4. Continuous compliance with Part-M**

When a maintenance organisation manual no longer meets the requirements of this [Part-M](#), whether through a change in Part-M, a change in the organisation or its activities, or through an inadequacy shown to exist by verification inspections conducted under the organisational review, or any other reason that affects the manuals conformity to requirements, the approved maintenance organisation is responsible to prepare and have approved an amendment to its manual.

#### **5. Distribution**

The manual describes how the organisation works therefore the manual or relevant parts thereof need to be distributed to all concerned staff in the organisation and contracted organisations.

## Appendix V to AMC M.A.704 — Continuing airworthiness management exposition

*ED Decision 2016/011/R*

### CONTINUING AIRWORTHINESS MANAGEMENT EXPOSITION (CAME)

#### TABLE OF CONTENT

<b>Part 0</b>	<b>General organisation</b>
0.1	Corporate commitment by the accountable manager
0.2	General information
0.3	Management personnel
0.4	Management organisation chart
0.5	Procedure to notify the competent authority of changes to the organisation's activities/approval/location/personnel
0.6	Exposition amendment procedures
<b>Part 1</b>	<b>Continuing airworthiness management procedures</b>
1.1	Aircraft technical log utilisation and MEL application Aircraft continuing airworthiness record system utilisation
1.2	Aircraft maintenance programmes — development amendment and approval
1.3	Time and continuing airworthiness records, responsibilities, retention and access
1.4	Accomplishment and control of airworthiness directives
1.5	Analysis of the effectiveness of the maintenance programme(s)
1.6	Non-mandatory modification embodiment policy
1.7	Major repair and modification standards
1.8	Defect reports
1.9	Engineering activity
1.10	Reliability programmes
1.11	Pre-flight inspections
1.12	Aircraft weighing
1.13	Check flight procedures
<b>Part 2</b>	<b>Quality system</b>
2.1	Continuing airworthiness quality policy, plan and audit procedure
2.2	Monitoring of continuing airworthiness management activities
2.3	Monitoring of the effectiveness of the maintenance programme(s)
2.4	Monitoring that all maintenance is carried out by an appropriate maintenance organisation

2.5	Monitoring that all contracted maintenance is carried out in accordance with the contract, including subcontractors used by the maintenance contractor
2.6	Quality audit personnel
<b>Part 3</b>	<b>Contracted maintenance</b>
3.1	Maintenance contractor selection procedure
3.2	Quality audit of aircraft
<b>Part 4</b>	<b>Airworthiness review procedures</b>
4.1	Airworthiness review staff
4.2	Review of aircraft records
4.3	Physical survey
4.4	Additional procedures for recommendations to competent authorities for the import of aircraft
4.5	Recommendations to competent authorities for the issue of ARC
4.6	Issue of ARC
4.7	Airworthiness review records, responsibilities, retention and access
<b>Part 4B</b>	<b>Permit to fly procedures</b>
4B.1	Conformity with approved flight conditions
4B.2	Issue of the permit to fly under the CAMO privilege
4B.3	Permit to fly authorised signatories
4B.4	Interface with the local authority for the flight
4B.5	Permit to fly records, responsibilities, retention and access
<b>Part 5</b>	<b>Appendices</b>
5.1	Sample documents
5.2	List of airworthiness review staff
5.3	List of subcontractors as per <a href="#">M.A.711(a)(3)</a>
5.4	List of contracted approved maintenance organisations
5.5	Copy of contracts for subcontracted work ( <a href="#">Appendix II to AMC M.A.711(a)(3)</a> )

**LIST OF EFFECTIVE PAGES**

Page	Revision	Page	Revision	Page	Revision
1	Original	3	Original	5	Original
2	Original	4	Original	...	...

**DISTRIBUTION LIST**

*(The document should include a distribution list to ensure proper distribution of the manual and to demonstrate to the competent authority that all personnel involved in continuing airworthiness*

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*activities have access to the relevant information. This does not mean that all personnel have to receive a manual, but that a reasonable amount of manuals is distributed within the organisation(s) so that personnel concerned have quick and easy access to the manual.*

*Accordingly, the continuing airworthiness management exposition should be distributed to:*

- the operator's or the organisation's management personnel and to any person at a lower level as necessary; and*
- the Part-145 or M.A. Subpart F contracted maintenance organisation(s); and*
- the competent authority.)*

**PART 0 — GENERAL ORGANISATION****0.1 Corporate commitment by the accountable manager**

(The accountable manager's exposition statement should embrace the intent of the following paragraph, and in fact this statement may be used without amendment. Any amendment to the statement should not alter its intent.)

*'This exposition defines the organisation and procedures upon which the M.A. Subpart G approval of Joe Bloggs under Part-M is based.*

*These procedures are approved by the undersigned and must be complied with, as applicable, in order to ensure that all continuing airworthiness activities, including maintenance of aircraft managed by Joe Bloggs, are carried out on time to an approved standard.*

*It is accepted that these procedures do not override the necessity of complying with any new or amended regulation published by the Agency or the competent authority from time to time where these new or amended regulations are in conflict with these procedures.*

*The competent authority will approve this organisation whilst it is satisfied that the procedures are followed. It is understood that the competent authority reserves the right to suspend, limit or revoke the M.A. Subpart G continuing airworthiness management approval of the organisation, as applicable, if the competent authority has evidence that the procedures are not followed and the standards not upheld.*

*In the case of air carriers licensed in accordance with Regulation (EC) No 1008/2008, suspension or revocation of the approval of the M.A. Subpart G continuing airworthiness management organisation would invalidate the AOC.'*

**0.2 General Information****a) Brief description of the organisation**

*(This paragraph should describe broadly how the whole organisation (i.e. including the whole operator in the case of air carriers licensed in accordance with Regulation (EC) No 1008/2008 or the whole organisation when other approvals are held) is organised under the management of the accountable manager, and should refer to the organisation charts of paragraph 0.4.)*

**b) Relationship with other organisations**

*(This paragraph may not be applicable to every organisation.)*

**(1) Subsidiaries/mother company**

*(For clarity purposes, where the organisation belongs to a group, this paragraph should explain the specific relationship the organisation may have with other members of that group, e.g. links between Joe Bloggs Airlines, Joe Bloggs Finance, Joe Bloggs Leasing, Joe Bloggs Maintenance, etc.)*

**(2) Consortia**

*(Where the organisation belongs to a consortium, it should be indicated here. The other members of the consortium should be specified, as well as the scope of organisation of the consortium (e.g. operations, maintenance, design (modifications and repairs), production etc.). The reason for specifying this is that consortium maintenance may be controlled through specific contracts and through consortium's policy and/or procedures manuals that might unintentionally override the maintenance contracts. In addition, in respect of international consortia, the*



*respective competent authorities should be consulted and their agreement to the arrangement should be clearly stated. This paragraph should then make reference to any consortium’s continuing airworthiness related manual or procedure and to any competent authority agreement that would apply.)*

c) Scope of work — Aircraft managed

*(This paragraph should specify the scope of the work for which the CAMO is approved. This paragraph may include aircraft type/series, aircraft registrations, owner/operator, contract references, etc. The following is given as an example.)*

Aircraft type/series	Date included in the scope of work	Aircraft maintenance programme or ‘generic/baseline’ maintenance programme	Aircraft registration(s)	Owner/operator	CAMO contract reference

For air carriers licensed in accordance with Regulation (EC) No 1008/2008, this paragraph can make reference to the operations specifications or operations manual where the aircraft registrations are listed.

*(Depending on the number of aircraft, this paragraph may be updated as follows:*

- 1) *the paragraph is revised each time an aircraft is removed from or added in the list;*
- 2) *the paragraph is revised each time a type of aircraft or a significant number of aircraft is removed from or added to the list; in that case, the paragraph should explain where the current list of aircraft managed is available for consultation.)*

d) Type of operation

*(This paragraph should give broad information on the type of operations such as: commercial air transport operations, (commercial) specialised operations, training organisation, NCC, NCO, long haul/short haul/regional, scheduled/charter, regions/countries/continents flown, etc.)*

### 0.3 Management personnel

a) Accountable manager

*(This paragraph should address the duties and responsibilities of the accountable manager as regards M.A. Subpart G approvals and should demonstrate that he/she has corporate authority for ensuring that all continuing airworthiness activities can be financed and carried out to the required standard.)*

b) Nominated postholder for continuing airworthiness referred to in [M.A.706\(d\)](#)

*(This paragraph should:*

- *emphasise that the nominated postholder for continuing airworthiness is responsible to ensure that all maintenance is carried out on time and to an approved standard; and*
- *describe the extent of his/her authority as regards his/her Part-M responsibility for continuing airworthiness.*

c) Continuing airworthiness coordination

*(This paragraph should list in sufficient detail the job functions that constitute the ‘group of persons’ as required by [M.A.706\(c\)](#) so as to show that all the continuing airworthiness responsibilities as described in Part-M are covered by the persons that constitute that group. In the case of small operators where the ‘nominated postholder’ for continuing airworthiness constitutes himself/herself the ‘group of persons’, this paragraph may be merged with the previous one.)*

d) Duties and responsibilities

*(This paragraph should further elaborate the duties and responsibilities of all the nominated persons and of any other management personnel.)*

e) Manpower resources and training policy

**(1) Manpower resources**

*(This paragraph should give broad figures to show that the number of people assigned to the performance of the approved continuing airworthiness activity is adequate. It is not necessary to give the detailed number of employees of the whole company, but only the number of those involved in continuing airworthiness. This could be presented as follows:)*

As of 28 November 2003, the number of employees assigned to the performance of the continuing airworthiness management system is the following:

	Full-time	Part-time in equivalent full-time
Quality monitoring	AA	aa = AA'
Continuing airworthiness management	BB	bb = BB'
<i>(Detailed information about the</i>	BB1	bb1 = BB1'
<i>management of group of persons)</i>	BB2	bb2 = BB2'
Other...	CC	cc = CC'
Total	TT	tt = TT'
Total man-hours	TT + TT'	

*(Note: According to the size and complexity of the organisation, this table may be further developed or simplified.)*

**(2) Training policy**

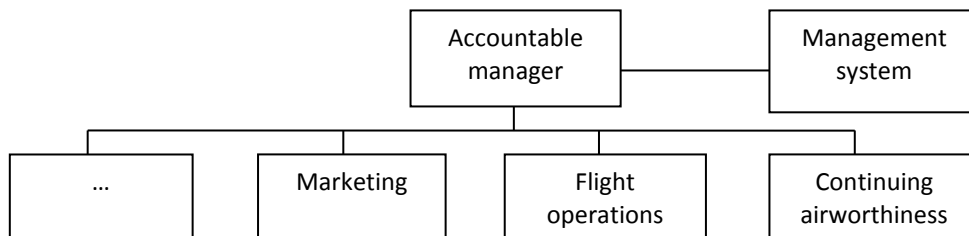
*(This paragraph should show that the training and qualification standards for the personnel mentioned above are consistent with the size and complexity of the organisation. It should also explain how the need for recurrent training is assessed and how training recording and follow-up is performed.)*

**0.4 Management organisation charts**

This flow chart should provide a comprehensive understanding of the whole company's organisation. For example, the case of an air carrier licensed in accordance with Regulation (EC) No 1008/2008:

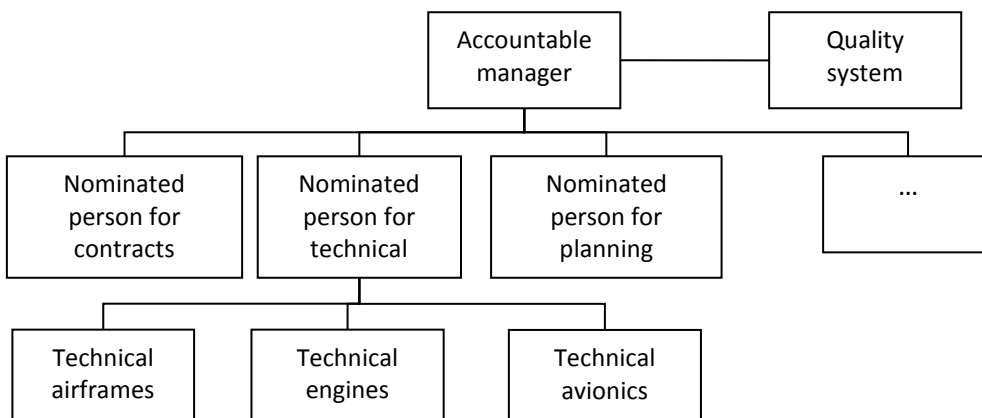
a) General organisation chart

This flow chart should provide a comprehensive understanding of the whole company's organisation. For example, the case of an air carrier licensed in accordance with Regulation (EC) No 1008/2008:



b) Continuing airworthiness management organisation chart

This flow chart should give further details on the continuing airworthiness management system, and should clearly show the independence of the quality monitoring system, including the links between the quality department and the other departments (see example below). This flow chart may be combined with the one above or subdivided as necessary, depending on the size and complexity of the organisation.



**0.5 Procedure to notify the competent authority of changes to the organisation's activities/approval/location/personnel**

*(This paragraph should explain the cases where the company should inform the competent authority prior to incorporating proposed changes, for instance:*

*The accountable manager (or any nominated person such as the nominated postholder or the quality manager) will notify the competent authority of any change concerning:*

- (1) *the company's name and location(s);*
- (2) *the group of persons as specified in paragraph 0.3.c); and*
- (3) *operations, procedures and technical arrangements, as far as they may affect the approval.*

*Joe Bloggs will not incorporate such changes until they have been assessed and approved by the competent authority.)*

## **0.6 Exposition amendment procedure**

*(This paragraph should explain who is responsible for the amendment of the exposition and its submission to the competent authority for approval. This may include, if agreed by the competent authority, the possibility for the approved organisation to approve internally minor amendments that have no impact on the approval held. The paragraph should then specify what types of amendments are considered minor and major, and what the approval procedures for both cases are.)*

### **PART 1 — CONTINUING AIRWORTHINESS MANAGEMENT PROCEDURES**

#### **1.1 Aircraft technical log utilisation and MEL application**

or

#### **1.1 Aircraft continuing airworthiness record system utilisation**

##### **a) Aircraft technical log and/or continuing airworthiness record system**

###### **(1) General**

*(It may be useful to recall, in this introductory paragraph, the purpose of the aircraft technical log system and/or the continuing airworthiness record system, with special attention to the options of [M.A.305](#) and [M.A.306](#).*

*For that purpose, the paragraphs M.A.305 and M.A.306 may be quoted or further explained.)*

###### **(2) Instructions for use**

*(This paragraph should provide instructions for using the aircraft technical log and/or continuing airworthiness record system. It should emphasise the respective responsibilities of the maintenance personnel and operating crew. Samples of the technical log and/or continuing airworthiness record system should be included in Part 5 'Appendices' in order to provide enough detailed instructions.)*

###### **(3) Aircraft technical log approval**

*(This paragraph should explain who is responsible for submitting the aircraft technical log, and any subsequent amendment thereto, to the competent authority for approval and what is the procedure to be followed.)*

##### **b) MEL application**

*(The MEL is a document not controlled by the CAMO and the decision of whether accepting or not the operation with a defect deferred in accordance with the MEL is normally the responsibility of the operating crew. This paragraph should explain in sufficient detail the MEL application procedure, because the MEL is a tool that the personnel involved in continuing airworthiness and maintenance have to be familiar with in order to ensure proper and efficient communication with the crew in case of a defect rectification to be deferred.)*

*(This paragraph does not apply to those types of aircraft that do not have an MEL.)*

###### **(1) General**

*(This paragraph should explain broadly what an MEL document is. The information could be extracted from the aircraft flight manual.)*

**(2) MEL categories**

*(Where an owner/operator uses a classification system placing a time constraint on the rectification of defects, it should be explained here what are the general principles of such a system. It is essential for the personnel involved in continuing airworthiness and maintenance to be familiar with it for the management of the MEL's deferred defect rectification.)*

**(3) Application**

*(This paragraph should explain how the continuing airworthiness and maintenance personnel make the flight crew aware of an MEL limitation. This should refer to the technical log procedures.)*

**(4) Acceptance by the crew**

*(This paragraph should explain how the crew notifies their acceptance or non-acceptance of the MEL deferment in the technical log.)*

**(5) Management of the MEL time limits**

*(Once a technical limitation is accepted by the crew, the defect must be rectified within the time limit specified in the MEL. There should be a system to ensure that the defect will actually be rectified before that time limit. This system could be the aircraft technical log for those (small) operators that use it as a planning document, or a specific follow-up system where control of the maintenance time limit is ensured by other means such as data processed planning systems.)*

**(6) MEL time limitation overrun**

*(The competent authority may allow the owner/operator to overrun the MEL time limitation under specific conditions. Where applicable, this paragraph should describe the specific duties and responsibilities with regard to controlling these extensions.)*

## **1.2 Aircraft maintenance programme — development and amendment**

**a) General**

*(This introductory paragraph should recall that the purpose of a maintenance programme is to provide maintenance planning instructions necessary for the safe operation of the aircraft.)*

**b) Content**

*(This paragraph should explain what is (are) the format(s) of the aircraft maintenance programme(s). [Appendix I to AMC M.A.302\(a\) and M.B.301\(d\)](#) should be used as a guideline to develop this paragraph.)*

**c) Development**

**(1) Sources**

*(This paragraph should explain what are the sources (MRB, MPD, maintenance manual, etc.) used for the development of an aircraft maintenance programme.)*

**(2) Responsibilities**

*(This paragraph should explain who is responsible for the development of an aircraft maintenance programme.)*

**(3) Manual amendments**

*(This paragraph should demonstrate that there is a system for ensuring the continuing validity of the aircraft maintenance programme. Particularly, it should show how any relevant information is used to update the aircraft maintenance programme. This should include, as applicable, MRB report revisions, consequences of modifications, manufacturer and competent authority recommendations, in-service experience, and reliability reports.)*

**(4) Acceptance by the authority**

*(This paragraph should explain who is responsible for the submission of the maintenance programme to the competent authority and what the procedure to follow is. This should in particular address the issue of the approval for variation to maintenance periods either by the competent authority or by a procedure in the maintenance programme for the organisation to approve internally certain changes.)*

**1.3 Time and continuing airworthiness records, responsibilities, retention and access**

a) Hours and cycles recording

*(The recording of flight hours and cycles is essential for the planning of maintenance tasks. This paragraph should explain how the continuing airworthiness management organisation has access to the current flight hours and cycles information and how it is processed through the organisation.)*

b) Records

*(This paragraph should give in detail the type of company documents that are required to be recorded and what are the recording period requirements for each of them. This can be provided by a table or series of tables that would include the following:*

- family of document (if necessary),
- name of document,
- retention period,
- responsible person for retention,
- place of retention.)

c) Preservation of records

*(This paragraph should set out the means provided to protect the records from fire, flood, etc., as well as the specific procedures in place to ensure that the records will not be altered during the retention period (especially computer records).)*

d) Transfer of continuing airworthiness records

*(This paragraph should set out the procedure for the transfer of records in case of purchase/lease-in, sale/lease-out and transfer of an aircraft to another organisation. In particular, it should specify which records have to be transferred and who is responsible for the coordination (if necessary) of the transfer.)*

**1.4 Accomplishment and control of airworthiness directives**

*(This paragraph should demonstrate that there is a comprehensive system in place for the management of airworthiness directives. This paragraph may, for instance, include the following subparagraphs:)*

a) Airworthiness directive information

*(This paragraph should explain what the AD information sources are and who receives them in the company. Where available, multiple sources (e.g. Agency + competent authority + manufacturer or association) may be useful.)*

b) Airworthiness directive decision

*(This paragraph should explain how and by whom the AD information is analysed and what kind of information is provided to the contracted maintenance organisations in order to plan and perform the airworthiness directive. This should include as necessary a specific procedure for the management of emergency airworthiness directives.)*

c) Airworthiness directive control

*(This paragraph should specify how the organisation manages to ensure that all the applicable airworthiness directives are accomplished and that they are accomplished on time. This should include a closed-loop system that allows verifying that for each new or revised airworthiness directive and for each aircraft:*

- *the AD is not applicable, or*
- *if the AD is applicable:*
- *the AD is not yet accomplished but the time limit is not overdue,*
- *the AD is accomplished and any repetitive inspection is identified and performed.*

*This may be a continuous process or may be based on scheduled reviews.)*

### **1.5 Analysis of the effectiveness of the maintenance programme**

*(This paragraph should show what tools are used in order to analyse the efficiency of the maintenance programme, such as:*

- *pilot reports (PIREPS),*
- *air turnbacks,*
- *spare consumption,*
- *repetitive technical occurrence and defect,*
- *technical delays analysis (through statistics, if relevant),*
- *technical incidents analysis (through statistics, if relevant),*
- *etc.*
- *This paragraph should also indicate by whom and how this data is analysed, what is the decision process to take action and what kind of action could be taken. This may include:*
- *amendment of the maintenance programme,*
- *amendment of maintenance or operational procedures,*
- *etc.)*

### **1.6 Non-mandatory modification embodiment policy**



*(This paragraph should specify how non-mandatory modification information is processed through the organisation, who is responsible for its assessment against the operator's/owner's own needs and operational experience, what are the main criteria for decision and who takes the decision of implementing (or not) a non-mandatory modification.)*

### **1.7 Major repair and modification standards**

*(This paragraph should set out a procedure for the assessment of the approval status of any major repair or modification before embodiment. This will include the assessment of the need of an Agency or design organisation approval. It should also identify the type of approval required, and the procedure to follow to have a repair or modification approved by the Agency or design organisation.)*

### **1.8 Defect reports**

#### **a) Analysis**

*(This paragraph should explain how the defect reports provided by the contracted maintenance organisations are processed by the continuing airworthiness management organisation. Analysis should be conducted in order to give elements to activities such as maintenance programme evolution and non-mandatory modification policy.)*

#### **b) Liaison with manufacturers and regulatory authorities**

*(Where a defect report shows that such defect is likely to occur to other aircraft, a liaison should be established with the manufacturer and the certification competent authority so that they may take all the necessary action.)*

#### **c) Deferred defect policy**

*(Defects such as cracks and structural defects are not addressed in the MEL and CDL. However, it may be necessary in certain cases to defer the rectification of a defect. This paragraph should establish the procedure to be followed in order to be sure that the deferment of any defect will not lead to any safety concern. This will include appropriate liaison with the manufacturer.)*

### **1.9 Engineering activity**

*(Where applicable, this paragraph should present the scope of the organisation's engineering activity in terms of approval of modifications and repairs. It should set out a procedure for developing and submitting a modification/repair design for approval to the Agency and include reference to the supporting documentation and forms used. It should identify the person in charge of accepting the design before submission to the Agency or the competent authority.*

*Where the organisation has a DOA capability under Part-21, it should be indicated here and the related manuals should be referred too.)*

### **1.10 Reliability programmes**

*(This paragraph should explain appropriately the management of a reliability programme. It should at least address the following:*

- extent and scope of the reliability programme,*
- specific organisational structure, duties and responsibilities,*
- establishment of reliability data,*
- analysis of reliability data,*



- corrective action system (maintenance programme amendment),
- scheduled reviews (reliability meetings and when the participation of the competent authority is needed.)

*(This paragraph may, where necessary, be subdivided as follows:)*

- a) Airframe
- b) Propulsion
- c) Component

### **1.11 Pre-flight inspections**

*(This paragraph should show how the scope and definition of pre-flight inspection, that is usually performed by the operating crew, are kept consistent with the scope of the maintenance performed by the contracted maintenance organisations. It should show how the evolution of the content of the pre-flight inspection and of the maintenance programme are concurrent.)*

*(The following paragraphs are self-explanatory. Although these activities are normally not performed by continuing airworthiness personnel, these paragraphs have been placed here in order to ensure that the related procedures are consistent with the continuing airworthiness activity procedures.)*

- a) Preparation of aircraft for flight
- b) Subcontracted ground-handling function
- c) Security of cargo and baggage loading
- d) Control of refueling, quantity/quality
- e) Control of snow, ice, residues from de-icing or anti-icing operations, dust and sand contamination to an approved standard

### **1.12 Aircraft weighing**

*(This paragraph should state the cases where an aircraft has to be weighed (for instance, after a major modification because of weight and balance operational requirements, etc.), who performs it, according to which procedure, who calculates the new weight and balance, and how the result is processed in the organisation.)*

### **1.13 Check flight procedures**

*(The criteria for performing a check flight are normally included in the aircraft maintenance programme. This paragraph should explain how the check flight procedure is established in order to meet its intended purpose (for instance, after a heavy maintenance check, after engine or flight control removal installation, etc.), and the release procedures to authorise such a check flight.)*

## **PART 2 — QUALITY SYSTEM**

### **2.1 Continuing airworthiness quality policy, plan and audit procedure**

- a) Continuing airworthiness quality policy

*(This paragraph should include a formal quality policy statement — that is a commitment to what the quality system is intended to achieve. It should include as a minimum the*

*monitoring compliance with Part-M and with any additional standards specified by the organisation.)*

b) Continuing airworthiness quality plan

*(This paragraph should show how the quality plan is established. The quality plan will consist of a quality audit and sampling schedule that should cover all the areas specific to Part-M in a definite period of time. However, the scheduling process should also be dynamic and allow for special evaluations when trends or concerns are identified. In case of subcontracting, this paragraph should also address the planning of the auditing of subcontractors at the same frequency with the rest of the organisation.)*

c) Continuing airworthiness quality audit procedure

*(Quality audit is a key element of the quality system. Therefore, the quality audit procedure should be sufficiently detailed to address all the steps of an audit from preparation to conclusion; it should show the audit report format (e.g. by reference to paragraph 5.1 'Sample of document'), and should explain the rules for the distribution of audit reports in the organisation (e.g. involvement of the quality manager, accountable manager, nominated postholder, etc.).)*

d) Continuing airworthiness quality audit remedial action procedure

*(This paragraph should explain what system is put in place in order to ensure that the corrective actions are implemented on time and that the result of the corrective actions meets the intended purpose. For instance, where this system consists in periodical corrective actions review, instructions should be given on how such reviews should be conducted and what should be evaluated.)*

## **2.2 Monitoring of continuing airworthiness management activities**

*(This paragraph should set out a procedure to periodically review the activities of the continuing airworthiness management personnel and how they fulfil their responsibilities, as defined in Part 0.)*

## **2.3 Monitoring of the effectiveness of the maintenance programme(s)**

*(This paragraph should set out a procedure to periodically review that the effectiveness of the maintenance programme(s) is actually analysed as defined in Part 1.)*

## **2.4 Monitoring that all maintenance is carried out by an appropriate maintenance organisation**

*(This paragraph should set out a procedure to periodically review that the approval of the contracted maintenance organisations is relevant for the maintenance of the operator's fleet. This may include feedback information from any contracted organisation on any actual or contemplated amendment in order to ensure that the maintenance system remains valid and to anticipate any necessary change in the maintenance agreements.*

*If necessary, the procedure may be subdivided as follows:*

- a) Aircraft maintenance
- b) Engines
- c) Components)

## **2.5 Monitoring that all contracted maintenance is carried out in accordance with the contract, including subcontractors used by the maintenance contractor**

*(This paragraph should set out a procedure to periodically review that the continuing airworthiness management personnel are satisfied that all contracted maintenance is carried out in accordance with the contract. This may include a procedure to ensure that the system allows all the personnel involved in the contract (including the contractors and their subcontractors) to familiarise themselves with its terms and that, for any contract amendment, relevant information is distributed in the organisation and to the contractor.)*

## **2.6 Quality audit personnel**

*(This paragraph should establish the required training and qualification standards for auditors. Where persons act as part-time auditors, it should be emphasised that they must not be directly involved in the activity they are auditing.)*

### **PART 3 — CONTRACTED MAINTENANCE**

#### **3.1 Procedures for contracted maintenance**

a) Procedures for the development of maintenance contracts

*(This paragraph should explain the procedures that the organisation follows to develop the maintenance contract. The CAMO processes to implement the different elements described in [Appendix XI to AMC M.A.708\(c\)](#) should be explained. In particular, it should cover responsibilities, tasks and interaction with the maintenance organisation and with the owner/operator.*

*This paragraph should also describe, when necessary, the use of work orders for unscheduled line maintenance and component maintenance as per [M.A.708\(d\)](#). The organisation may develop a work order template to ensure that the applicable elements of Appendix XI to AMC M.A.708(c) are considered. Such a template should be included in Part 5.1.)*

b) Maintenance contractor selection procedure

*(This paragraph should explain how a maintenance contractor is selected by the CAMO. Selection should not be limited to the verification that the contractor is appropriately approved for the specific type of aircraft, but also that the contractor has the industrial capacity to undertake the required maintenance. The selection procedure should preferably include a contract review process in order to ensure that:*

- *the contract is comprehensive and that it has no gaps or unclear areas,*
- *everyone involved in the contract (both at the continuing airworthiness management organisation and at the maintenance contractor) agrees with the terms of the contract and fully understands their responsibilities.*
- *that functional responsibilities of all parties are clearly identified.*

*The CAMO should agree with the operator on the process to select a maintenance organisation before concluding any contract with a maintenance organisation.)*

#### **3.2 Quality audit of aircraft**

*(This paragraph should set out the procedure when performing a quality audit of an aircraft. It should set out the differences between an airworthiness review and a quality audit. This procedure may include:*

- *compliance with approved procedures;*

- contracted maintenance is carried out in accordance with the contract;
- continued compliance with Part-M.)

## PART 4 — AIRWORTHINESS REVIEW PROCEDURES

### 4.1 Airworthiness review staff

*(This paragraph should establish the working procedures for the assessment of the airworthiness review staff. The assessment addresses experience, qualification, training, etc. A description should be given regarding the issue of authorisations for the airworthiness review staff and how records are kept and maintained.)*

### 4.2 Review of aircraft records

*(This paragraph should describe in detail the aircraft records that are required to be reviewed during the airworthiness review. The level of detail that needs to be reviewed as well as the number of records that needs to be reviewed during a sample check should be described.)*

### 4.3 Physical survey

*(This paragraph should describe how the physical survey needs to be performed. It should list the topics that need to be reviewed, the physical areas of the aircraft to be inspected, which documents on board the aircraft need to be reviewed, etc.)*

### 4.4 Additional procedures for recommendations to competent authorities for the import of aircraft

*(This paragraph should describe the additional tasks regarding the recommendation for the issue of an airworthiness review certificate in the case of import of aircraft. This should include: communication with the competent authority of registry, additional items to be reviewed during the airworthiness review of the aircraft, specification of maintenance required to be carried out, etc.)*

### 4.5 Recommendations to competent authorities for the issue of airworthiness review certificates (ARCs)

*(This paragraph should stipulate the communication procedures with the competent authorities in case of a recommendation for the issue of an airworthiness review certificate. In addition, the content of the recommendation should be described.)*

### 4.6 Issue of airworthiness review certificates (ARCs)

*(This paragraph should set out the procedure for the issue of ARCs. It should address record-keeping, distribution of ARC copies, etc. The procedure should ensure that an ARC is issued only after an airworthiness review has been properly carried out.)*

### 4.7 Airworthiness review records, responsibilities, retention and access

*(This paragraph should describe how records are kept, duration of record-keeping, location where records are stored, access to records, and responsibilities.)*

## PART 4B — PERMIT TO FLY PROCEDURES

### 4B.1 Conformity with approved flight conditions

*(The procedure should indicate how conformity with approved flight conditions is established, documented and attested by an authorised person.)*

#### **4B.2 Issue of the permit to fly under the CAMO privilege**

(The procedure should describe the process to complete the EASA Form 20b (see Appendix IV to Part-21) and how compliance with 21.A.711(d) and (e) is established before signing off the permit to fly. It should also describe how the organisation ensures compliance with 21.A.711(g) for the revocation of the permit to fly.)

#### **4B.3 Permit to fly authorised signatories**

(The person(s) authorised to sign off the permit to fly under the privilege of [M.A.711\(c\)](#) should be identified (name, signature and scope of authority) in the procedure, or in an appropriate document linked to the CAME.)

#### **4B.4 Interface with the local authority for the flight**

(The procedure should include provisions describing the communication with the local authority for flight clearance and compliance with the local requirements, since those elements are outside the scope of the conditions of 21.A.708(b) (see Part 21.A.711(e)).)

#### **4B.5 Permit to fly records, responsibilities, retention and access**

(This paragraph should describe how records are kept, duration of record-keeping, location where records are stored, access to records, and responsibilities.)

### **PART 5 — APPENDICES**

#### **5.1 Sample documents**

(A self-explanatory paragraph.)

#### **5.2 List of airworthiness review staff**

(A self-explanatory paragraph.)

#### **5.3 List of subcontractors as per [M.A.711\(a\)\(3\)](#)**

(A self-explanatory paragraph; in addition, it should set out that the list should be periodically reviewed.)

#### **5.4 List of approved maintenance organisations contracted**

(This paragraph should include the list of contracted maintenance organisations, detailing the scope of the contracted work. In addition, it should set out that the list should be periodically reviewed.)

#### **5.5 Copy of contracts for subcontracted work ([Appendix II to AMC M.A.711\(a\)\(3\)](#))**

(A self-explanatory paragraph.)

**Appendix VI to AMC M.B.602(f) — EASA Form 6F**

ED Decision 2015/029/R

M.A. SUBPART F APPROVAL RECOMMENDATION REPORT		EASA FORM 6F
<b>Part 1: General</b>		
Name of organisation:		
Approval reference:		
Requested approval rating/		
EASA Form 3 dated*:		
Other approvals held (If app.)		
Address of facility audited:		
Audit period: from		
		to
Date(s) of audit(s):		
Audit reference(s):		
Persons interviewed:		
Competent authority surveyor:		Signature(s):
Competent authority office:		Date of EASA Form 6F part 1 completion:
*delete where applicable		

M.A. SUBPART F APPROVAL RECOMMENDATION REPORT		EASA FORM 6F				
<b>Part 2: <a href="#">M.A. Subpart F</a> Compliance Audit Review</b>						
The five columns may be labelled and used as necessary to record the approval product line or facility, including subcontractor's, reviewed. Against each column used of the following <a href="#">M.A. Subpart F</a> subparagraphs please either tick (✓) the box if satisfied with compliance or cross (X) the box if not satisfied with compliance and specify the reference of the Part 4 finding next to the box or enter N/A where an item is not applicable, or N/R when applicable but not reviewed.						
Para	Subject					
<a href="#">M.A.603</a>	Extent of approval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.604</a>	Maintenance Organisation Manual (see Part 3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.605</a>	Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.606</a>	Personnel requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.607</a>	Certifying staff and airworthiness review staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.608</a>	Components, Equipment and tools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.609</a>	Maintenance data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.610</a>	Maintenance work orders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.611</a>	Maintenance standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.612</a>	Aircraft certificate of release to service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.613</a>	Component certificate of release to service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.614</a>	Maintenance records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.615</a>	Privileges of the organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.616</a>	Organisational review	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.617</a>	Changes to the approved maintenance organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.619</a>	Findings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competent authority surveyor(s):		Signature(s):				
Competent authority office:		Date of EASA Form 6F part 2 completion:				

<b>M.A. SUBPART F APPROVAL RECOMMENDATION REPORT</b>		<b>EASA FORM 6F</b>
<b>Part 3: Compliance with <a href="#">M.A. Subpart F</a> maintenance organisation manual (MOM)</b>		
Please either tick (√) the box if satisfied with compliance; or cross (x) if not satisfied with compliance and specify the reference of the Part 4 finding; or enter N/A where an item is not applicable; or N/R when applicable but not reviewed.		
Part A	General	
1.1	<input type="checkbox"/>	Table of content
1.2	<input type="checkbox"/>	List of effective pages
1.3	<input type="checkbox"/>	Record of amendments
1.4	<input type="checkbox"/>	Amendment procedure
1.5	<input type="checkbox"/>	Distribution
1.6	<input type="checkbox"/>	Accountable manager's statement
Part B	Description	
2.1	<input type="checkbox"/>	Organisation's scope of work
2.2	<input type="checkbox"/>	General presentation of the organisation
2.3	<input type="checkbox"/>	Name and title of management personnel
2.4	<input type="checkbox"/>	Organisation chart
2.5	<input type="checkbox"/>	Certifying staff and airworthiness review staff
2.6	<input type="checkbox"/>	Personnel
2.7	<input type="checkbox"/>	General description of the facility
2.8	<input type="checkbox"/>	Tools, equipment and material
2.9	<input type="checkbox"/>	Maintenance data
Part C	General procedures	
3.1	<input type="checkbox"/>	Organisational review
3.2	<input type="checkbox"/>	Training
3.3	<input type="checkbox"/>	Subcontracting of specialised services
3.4	<input type="checkbox"/>	One time authorisations



<b>M.A. SUBPART F APPROVAL RECOMMENDATION REPORT</b>		<b>EASA FORM 6F</b>
<b>Part 3: Compliance with <a href="#">M.A. Subpart F</a> maintenance organisation manual (MOM)</b>		
Part D      Working Procedures		
4.1	<input type="checkbox"/>	Work order acceptance
4.2	<input type="checkbox"/>	Preparation and issue of work package
4.3	<input type="checkbox"/>	Logistics
4.4	<input type="checkbox"/>	Execution
4.5	<input type="checkbox"/>	Release to service – Certifying staff
4.6	<input type="checkbox"/>	Release to service – Supervision
4.7	<input type="checkbox"/>	Release to service – Certificate of release to service
4.8	<input type="checkbox"/>	Records
4.9	<input type="checkbox"/>	Airworthiness review procedures and records for ELA1 aircraft not involved in commercial operations
4.10	<input type="checkbox"/>	Procedures for the development and approval processing for maintenance programmes for ELA2 aircraft not involved in commercial operations
4.11	<input type="checkbox"/>	Special procedures
4.12	<input type="checkbox"/>	Occurrence reporting
4.13	<input type="checkbox"/>	Management of indirect approval of the manual
Part E      Appendices		
5.1	<input type="checkbox"/>	Sample of all documents used
5.2	<input type="checkbox"/>	List of subcontractors.
5.3	<input type="checkbox"/>	List of maintenance locations
5.4	<input type="checkbox"/>	List of <a href="#">Part-145</a> or <a href="#">M.A. Subpart F</a> organisations
MOM reference:		MOM amendment:
Competent authority audit staff:		Signature(s):
Competent authority office:		Date of EASA Form 6F part 3 completion:

M.A. SUBPART F APPROVAL RECOMMENDATION REPORT		EASA FORM 6F			
<b>Part 4: Findings regarding <a href="#">M.A. Subpart F</a> compliance status</b> Each level 1 and 2 finding should be recorded whether it has been rectified or not and should be identified by a simple cross reference to the Part 2 requirement. All non-rectified findings should be copied in writing to the organisation for the necessary corrective action.					
Part 2 or 3 ref.	Audit reference(s): Findings	L e v e l	Corrective action		
			Date Due	Date Closed	Reference

<b>M.A. SUBPART F APPROVAL RECOMMENDATION REPORT</b>	<b>EASA FORM 6F</b>
<b>Part 5: <a href="#">M.A. Subpart F</a> approval or continued approval or change recommendation</b>	
<p>Name of organisation:</p> <p>Approval reference:</p> <p>Audit reference(s):</p> <p>The following <a href="#">M.A. Subpart F</a> scope of approval is recommended for this organisation:</p>    <p>Or, it is recommended that the <a href="#">M.A. Subpart F</a> scope of approval specified in EASA Form 3 referenced ..... be continued.</p>  <p>Name of recommending competent authority surveyor:</p> <p>Signature of recommending competent authority surveyor:</p> <p>Competent authority office:</p> <p>Date of recommendation:</p> <p>EASA Form 6F review (quality check):                      Date:</p>	

**Appendix VII to AMC M.B.702(f) — EASA Form 13**

ED Decision 2016/011/R

M.A. SUBPART G APPROVAL RECOMMENDATION REPORT		EASA FORM 13
<b>Part 1: General</b>		
Name of organisation:		
Approval reference:		
Requested approval rating/ <a href="#">EASA Form 14</a> or AOC dated*:		
Other approvals held (if app.)		
Address of facility(ies) audited:		
Audit period: from		
		to
Date(s) of audit(s):		
Audit reference(s):		
Persons interviewed:		
Competent authority surveyor:		Signature(s):
Competent authority office:		Date of EASA Form 13 Part 1 completion:
*delete as appropriate		

M.A. SUBPART G APPROVAL RECOMMENDATION REPORT		EASA FORM 13				
<b>Part 2: <a href="#">M.A. Subpart G</a> Compliance Audit Review</b>						
The five columns may be labelled and used as necessary to record the approval product line or facility, including subcontractor's, reviewed. Against each column used of the following <a href="#">M.A. Subpart G</a> subparagraphs please either tick (✓) the box if satisfied with compliance, or cross (X) the box if not satisfied with compliance and specify the reference of the Part 4 finding next to the box, or enter N/A where an item is not applicable, or N/R when applicable but not reviewed.						
Para	Subject					
<a href="#">M.A.703</a>	Extent of approval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.704</a>	Continuing airworthiness management exposition (see Part 3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.705</a>	Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.706</a>	Personnel requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.707</a>	Airworthiness review staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.708</a>	Continuing airworthiness management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.201</a>	Responsibilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.202</a>	Occurrence reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.302</a>	Aircraft maintenance programme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.303</a>	Airworthiness directives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.304</a>	Data for modifications and repairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.305</a>	Aircraft continuing airworthiness record system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.306</a>	Aircraft technical log system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.307</a>	Transfer of aircraft continuing airworthiness records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.709</a>	Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.710</a>	Airworthiness review	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.711</a>	Privileges of the organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.712</a>	Quality system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.713</a>	Changes to the approved continuing airworthiness organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<a href="#">M.A.714</a> Record-keeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.716</a> Findings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competent authority surveyor(s):			Signature(s):		
Competent authority office:			Date of EASA Form 13 Part 2 completion:		

M.A. SUBPART G APPROVAL RECOMMENDATION REPORT		EASA FORM 13
<b>Part 3: Compliance with M.A. Subpart G continuing airworthiness management exposition (CAME)</b>		
Please either tick (√) the box if satisfied with compliance; or cross (x) if not satisfied with compliance and specify the reference of the Part 4 finding; or enter N/A where an item is not applicable; or N/R when applicable but not reviewed.		
PART 0	General organisation	
0.1	<input type="checkbox"/>	Corporate commitment by the accountable manager
0.2	<input type="checkbox"/>	General information
0.3	<input type="checkbox"/>	Management personnel
0.4	<input type="checkbox"/>	Management organisation chart
0.5	<input type="checkbox"/>	Notification procedure to the competent authority regarding changes to the organisation's activities/approval/location/personnel
0.6	<input type="checkbox"/>	Exposition amendment procedures
PART 1	Continuing airworthiness management procedures	
1.1	<input type="checkbox"/>	Aircraft technical log utilisation and MEL application Aircraft continuing airworthiness record system utilisation
1.2	<input type="checkbox"/>	Aircraft maintenance programmes – development amendment and approval
1.3	<input type="checkbox"/>	Time and continuing airworthiness records, responsibilities, retention, access
1.4	<input type="checkbox"/>	Accomplishment and control of airworthiness directives
1.5	<input type="checkbox"/>	Analysis of the effectiveness of the maintenance programme(s)
1.6	<input type="checkbox"/>	Non mandatory modification embodiment policy
1.7	<input type="checkbox"/>	Major repair and modification standards
1.8	<input type="checkbox"/>	Defect reports
1.9	<input type="checkbox"/>	Engineering activity
1.10	<input type="checkbox"/>	Reliability programmes
1.11	<input type="checkbox"/>	Pre-flight inspections
1.12	<input type="checkbox"/>	Aircraft weighing
1.13	<input type="checkbox"/>	Check flight procedures
PART 2	Quality system	
2.1	<input type="checkbox"/>	Continuing airworthiness quality policy, plan and audits procedure
2.2	<input type="checkbox"/>	Monitoring of continuing airworthiness management activities
2.3	<input type="checkbox"/>	Monitoring of the effectiveness of the maintenance programme(s)
2.4	<input type="checkbox"/>	Monitoring that all maintenance is carried out by an appropriate maintenance organisation
2.5	<input type="checkbox"/>	Monitoring that all contracted maintenance is carried out in accordance with the contract, including subcontractors used by the maintenance contractor
2.6	<input type="checkbox"/>	Quality audit personnel

<b>PART 3</b>	<b>Contracted Maintenance</b>	
3.1	<input type="checkbox"/>	Procedures for contracted maintenance
3.2	<input type="checkbox"/>	Quality audit of aircraft
<b>PART 4</b>	<b>Airworthiness review procedures</b>	
4.1	<input type="checkbox"/>	Airworthiness review staff
4.2	<input type="checkbox"/>	Review of aircraft records
4.3	<input type="checkbox"/>	Physical survey
4.4	<input type="checkbox"/>	Additional procedures for recommendations to competent authorities for the import of aircraft
4.5	<input type="checkbox"/>	Recommendations to competent authorities for the issue of airworthiness review certificates
4.6	<input type="checkbox"/>	Issuance of airworthiness review certificates
4.7	<input type="checkbox"/>	Airworthiness review records, responsibilities, retention and access
<b>PART 4B</b>	<b>Permit to fly procedures</b>	
4B.1	<input type="checkbox"/>	Conformity with approved flight conditions
4B.2	<input type="checkbox"/>	Issue of permit to fly under the CAMO privilege
4B.3	<input type="checkbox"/>	Permit to fly authorised signatories
4B.4	<input type="checkbox"/>	Interface with the local authority for the flight
4B.5	<input type="checkbox"/>	Permit to fly records, responsibilities, retention and access
<b>PART 5</b>	<b>Appendices</b>	
5.1	<input type="checkbox"/>	Sample Documents
5.2	<input type="checkbox"/>	List of airworthiness review staff
5.3	<input type="checkbox"/>	List of subcontractors as per <a href="#">M.A.711(a)(3)</a>
5.4	<input type="checkbox"/>	List of approved maintenance organisations contracted
5.5	<input type="checkbox"/>	Copy of contracts for subcontracted work ( <a href="#">Appendix II to AMC M.A.711(a)(3)</a> )
CAME Reference: _____ CAME Amendment: _____		
Competent authority audit staff: _____ Signature(s): _____		
Competent authority office: _____ Date of EASA Form 13 Part 3 completion: _____		



M.A. SUBPART G APPROVAL RECOMMENDATION REPORT		EASA FORM 13			
<b>Part 4: Findings regarding <a href="#">M.A. Subpart G</a> compliance status</b> Each level 1 and 2 finding should be recorded whether it has been rectified or not and should be identified by a simple cross reference to the Part 2 requirement. All non-rectified findings should be copied in writing to the organisation for the necessary corrective action.					
Part 2 or 3 ref.	Audit reference(s): Findings	L e v e l	Corrective action		
			Date Due	Date Closed	Reference

M.A. SUBPART G APPROVAL RECOMMENDATION REPORT		EASA FORM 13
<b>Part 5: <a href="#">M.A. Subpart G</a> approval or continued approval or change recommendation*</b>		
Name of organisation:		
Approval reference:		
Audit reference(s):		
The following <a href="#">M.A. Subpart G</a> scope of approval is recommended for this organisation:		
Or, it is recommended that the <a href="#">M.A. Subpart G</a> scope of approval specified in <a href="#">EASA Form 14</a> referenced ..... be continued.		
Name of recommending competent authority surveyor:		
Signature of recommending competent authority surveyor:		
Competent authority office:		
Date of recommendation:		
EASA Form 13 review (quality check):		Date:
*delete as appropriate		

## Appendix VIII to AMC M.A.616 — Organisational Review

ED Decision 2015/029/R

**This is only applicable to organisations with less than 10 maintenance staff members. For larger organisations, the principles and practices of an independent quality system should be used.**

Depending on the complexity of the small organisation (number and type of aircraft, number of different fleets, subcontracting of specialised services, etc.), the organisational review system may vary from a system using the principles and practices of a quality system (except for the requirement of independence) to a simplified system adapted to the low complexity of the organisation and the aircraft managed.

As a core minimum, the organisational review system should have the following features, which should be described in the Maintenance Organisation Manual (MOM):

- a. Identification of the person responsible for the organisational review programme.

By default, this person should be the accountable manager, unless he delegates this responsibility to (one of) the [M.A.606\(b\)](#) person(s).

- b. Identification and qualification criteria for the person(s) responsible for performing the organisational reviews.

These persons should have a thorough knowledge of the regulations and of the maintenance organisation procedures. They should also have knowledge of audits, acquired through training or through experience (preferably as an auditor, but also possibly because they actively participated in several audits conducted by the competent authority).

- c. Elaboration of the organisational review programme:

- Checklist(s) covering all items necessary to be satisfied that the organisation delivers a safe product and complies with the regulation. All procedures described in the MOM should be addressed.
- A schedule for the accomplishment of the checklist items. Each item should be checked at least every 12 months. The organisation may choose to conduct one full review annually or to conduct several partial reviews.

- d. Performance of organisational reviews

Each checklist item should be answered using an appropriate combination of:

- review of records, documentation, etc;
- sample check of aircraft under contract or being maintained under a work order;
- interview of personnel involved;
- review of discrepancies and difficulty internal reports (e.g. notified difficulties in using current procedures and tools, systematic deviations from procedures, etc.);
- review of complaints filed by customers after delivery.

- e. Management of findings and occurrence reports.

- All findings should be recorded and notified to the affected persons.
- All level 1 findings, in the sense of [M.A.619\(a\)](#), should be immediately notified to the competent authority and all necessary actions on aircraft in service should be immediately taken.

- All occurrence reports should be reviewed with the aim for continuous improvement of the system by identifying possible corrective and preventive actions. This should be done in order to find prior indicators (e.g., notified difficulties in using current procedures and tools, systematic deviations from procedures, unsafe behaviours, etc.), and dismissed alerts that, had they been recognised and appropriately managed before the event, could have resulted in the undesired event being prevented.
- Corrective and preventive actions should be approved by the person responsible for the organisational review programme and implemented within a specified time frame.
- Once the person responsible for the organisational review programme is satisfied that the corrective action is effective, closure of the finding should be recorded along with a summary of the corrective action.
- The accountable manager should be notified of all significant findings and, on a regular basis, of the global results of the organisational review programme.

Following is a typical example of a simplified organisational review checklist, **to be adapted as necessary to cover the MOM procedures:**

#### **1 – Scope of work**

Check that:

- All aircraft and components under maintenance or under contract are covered in EASA Form 3.
- The scope of work in the MOM does not disagree with EASA Form 3.
- No work has been performed outside the scope of EASA Form 3 and the MOM.

#### **2 – Maintenance data**

- Check that maintenance data to cover the aircraft in the scope of work of the MOM are present and up-to-date.
- Check that no change has been made to the maintenance data from the TC holder without being notified.

#### **3 – Equipment and Tools**

- Check the equipment and tools against the lists in the MOM and check if still appropriate to the TC holder's instructions.
- Check tools for proper calibration (sample check).

#### **4 – Stores**

- Do the stores meet the criteria in the procedures of the MOM?
- Check by sampling some items in the store for presence of proper documentation and any overdue items.

#### **5 – Certification of maintenance, airworthiness review and development and approval processing of maintenance programmes**

- Has maintenance on products and components been properly certified?
- Have implementation of modifications/repairs been carried out with appropriate approval of such modifications/repairs (sample check)?

- Have airworthiness reviews been properly performed and the airworthiness review certificate properly been issued?
- Have maintenance programmes for ELA2 aircraft not involved in commercial operations been properly developed?

#### **6 – Relations with the owners/operators**

- Has maintenance been carried out with suitable work orders?
- When a contract has been signed with an owner/operator, has the obligations of the contracts been respected on each side?

#### **7 – Personnel**

- Check that the current accountable manager and other nominated persons are correctly identified in the approved MOM.
- If the number of personnel has decreased or if the activity has increased, check that the staff are still adequate to ensure a safe product.
- Check that the qualification of all new personnel (or personnel with new functions) has been appropriately assessed.
- Check that the staff have been trained, as necessary, to cover changes in:
  - regulations,
  - competent authority publications,
  - the MOM and associated procedures,
  - the products in the scope of work,
  - maintenance data (significant ADs, SBs, etc.).

#### **8 – Maintenance contracted**

- Sample check of maintenance records:
  - Existence and adequacy of the work order,
  - Data received from the maintenance organisation:
    - Valid CRS including any deferred maintenance,
    - List of removed and installed equipment and copy of the associated [EASA Form 1](#) or equivalent.
- Obtain a copy of the current approval certificate (EASA Form 3) of the maintenance organisations contracted.

#### **9 – Maintenance subcontracted**

Check that subcontractors for specialised services are properly controlled by the organisation.

#### **10 – Technical records and record-keeping**

- Have the maintenance actions been properly recorded?
- Have the certificates (EASA Form 1 and Conformity certificates) been properly collected and recorded?

- Perform a sample check of technical records to ensure completeness and storage during the appropriate periods.
- Is storage of computerised data properly ensured?

**11 – Occurrence reporting procedures**

- Check that reporting is properly performed.

Actions taken and recorded.

**Appendix IX to AMC M.A.602 and AMC M.A.702 — EASA Form 2***ED Decision 2015/029/R*

Application for

Competent authority	Part-M Subpart F Approval* <a href="#">Part-145</a> Approval* <a href="#">Part-M Subpart G</a> Approval*	initial grant*/ Change* initial grant*/ Change* initial grant*/ Change*
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1. Registered name of applicant:

2. Trading name (if different):

3. Addresses requiring approval:

4. Tel. .... Fax .....

E-mail .....

5. Scope of approval relevant to this application: see page 2 for possibilities in the case of a Subpart F/Part-145 approval:

6. Position and name of the (proposed\*) Accountable Manager:

.....

7. Signature of the (proposed\*) Accountable Manager: .....

8. Place: .....

9. Date: .....

Note (1): A note giving the address(es) to which the EASA Form(s) should be sent.Note (2): An optional note to give information on any fees payable.

\* delete as applicable

SCOPE OF APPROVAL AVAILABLE				
CLASS	RATING	LIMITATION	BASE	LINE
AIRCRAFT	A1 Aeroplanes above 5 700 kg	[Rating reserved to Maintenance Organisations approved in accordance with <a href="#">Annex II (Part-145)</a> [State aeroplane manufacturer or group or series or type and/or the maintenance tasks] Example: Airbus A320 Series	[YES/ NO]*	[YES/ NO]*
	A2 Aeroplanes 5 700 kg and below	[State aeroplane manufacturer or group or series or type and/or the maintenance tasks] Example: DHC-6 Twin Otter Series State whether the issue of airworthiness review certificates is requested or not (only possible for ELA1 aircraft not involved in commercial operations)	[YES/ NO]*	[YES/ NO]*
	A3 Helicopters	[State helicopter manufacturer or group or series or type and/or the maintenance task(s)] Example: Robinson R44	[YES/ NO]*	[YES/ NO]*
	A4 Aircraft other than A1, A2 and A3	[State aircraft category (sailplane, balloon, airship, etc.), manufacturer or group or series or type and/or the maintenance task(s).] State whether the issue of airworthiness review certificates is requested or not (only possible for ELA1 aircraft not involved in commercial operations).	[YES/ NO]*	[YES/ NO]*
ENGINES	B1 Turbine	[State engine series or type and/or the maintenance task(s)] Example: PT6A Series		
	B2 Piston	[State engine manufacturer or group or series or type and/or the maintenance task(s)]		
	B3 APU	[State engine manufacturer or series or type and/or the maintenance task(s)]		
COMPONENTS OTHER THAN COMPLETE ENGINES OR APUS	C1 Air Cond & Press	[State aircraft type or aircraft manufacturer or component manufacturer or the particular component and/or cross refer to a capability list in the exposition and/or the maintenance task(s).]  Example: PT6A Fuel Control		
	C2 Auto Flight			
	C3 Comms and Nav			
	C4 Doors - Hatches			
	C5 Electrical Power & Lights			
	C6 Equipment			
	C7 Engine - APU			
	C8 Flight Controls			
	C9 Fuel			
	C10 Helicopter - Rotors			
	C11 Helicopter - Trans			



	C12 Hydraulic Power	
	C13 Indicating - recording system	
	C14 Landing Gear	
	C15 Oxygen	
	C16 Propellers	
	C17 Pneumatic & Vacuum	
	C18 Protection ice/rain/fire	
	C19 Windows	
	C20 Structural	
	C21 Water ballast	
	C22 Propulsion Augmentation	
SPECIALISED SERVICES	D1 Non-Destructive Testing	

\* Delete as appropriate.

EASA Form 2 Page 2 of 2

## Appendix X to AMC M.B.602(a) and AMC M.B.702(a) — EASA Form 4

*ED Decision 2015/029/R*

### [COMPETENT AUTHORITY]

Details of Management Personnel required to be accepted as specified in Part-.....

1. Name:
2. Position:
3. Qualifications relevant to the item (2) position:
4. Work experience relevant to the item (2) position:

Signature: ..... Date: .....

On completion, please send this form under confidential cover to the competent authority

Competent authority use only

Name and signature of authorised competent authority staff member accepting this person:

Signature: ..... Date: .....

Name: ..... Office: .....

## Appendix XI to AMC M.A.708(c) — Contracted maintenance

ED Decision 2016/011/R

### 1. Maintenance contracts

The following paragraphs are not intended to provide a standard maintenance contract, but to provide a list of the main points that should be addressed, when applicable, in a maintenance contract between the CAMO and the maintenance organisation. The following paragraphs only address technical matters and exclude matters such as costs, delay, warranty, etc.

When maintenance is contracted to more than one maintenance organisation (for example, aircraft base maintenance to X, engine maintenance to Y, and line maintenance to Z1, Z2 and Z3), attention should be paid to the consistency of the different maintenance contracts.

A maintenance contract is not normally intended to provide appropriate detailed work instructions to personnel. Accordingly, there should be established organisational responsibilities, procedures and routines in the CAMO and the maintenance organisation to cover these functions in a satisfactory way such that any person involved is informed about his/her responsibilities and the procedures that apply. These procedures and routines can be included/appended to the CAME and to the maintenance organisation's manual/MOE, or can consist in separate procedures. In other words, procedures and routines should reflect the conditions of the contract.

### 2. Aircraft/engine maintenance

The following subparagraphs may be adapted to a maintenance contract that applies to aircraft base maintenance, aircraft line maintenance, and engine maintenance.

Aircraft maintenance also includes the maintenance of the engines and APU while they are installed on the aircraft.

#### 2.1. Scope of work

The type of maintenance to be performed by the maintenance organisation should be specified unambiguously. In case of line and/or base maintenance, the contract should specify the aircraft type and, preferably, should include the aircraft's registrations.

In case of engine maintenance, the contract should specify the engine type.

#### 2.2. Locations identified for the performance of maintenance/certificates held

The place(s) where base, line or engine maintenance, as applicable, will be performed should be specified. The certificate held by the maintenance organisation at the place(s) where maintenance will be performed should be referred to in the contract. If necessary, the contract may address the possibility of performing maintenance at any location subject to the need for such maintenance arising either from the unserviceability of the aircraft or from the necessity to support occasional line maintenance.

#### 2.3. Subcontracting

The maintenance contract should specify under which conditions the maintenance organisation may subcontract tasks to a third party (regardless if this third party is approved or not). At least the contract should make reference to [M.A.615](#) and [145.A.75](#). Additional guidance is provided by the associated AMC/GM. In addition, the CAMO may require the maintenance organisation to obtain the CAMO approval before subcontracting to a third party. Access should be given to the CAMO to any information (especially the quality monitoring information) about the maintenance organisation's subcontractors involved in the contract. It should, however, be noted that under the CAMO responsibility both the CAMO and its competent authority are

entitled to be fully informed about subcontracting, although the competent authority will normally only be concerned with aircraft, engine and APU subcontracting.

#### 2.4. Maintenance programme

The maintenance programme, under which maintenance has to be performed, has to be specified.

The CAMO should have that maintenance programme approved by its competent authority.

#### 2.5. Quality monitoring

The terms of the contract should include a provision allowing the CAMO to perform a quality surveillance (including audits) of the maintenance organisation. The maintenance contract should specify how the results of the quality surveillance are taken into account by the maintenance organisation (see also paragraph 2.22. 'Meetings').

#### 2.6. Competent authority involvement

The contract should identify the competent authority(ies) responsible for the oversight of the aircraft, the operator, the CAMO, and the maintenance organisation. Additionally, the contract should allow competent authority(ies) access to the maintenance organisation.

#### 2.7. Maintenance data

The contract should specify the maintenance data and any other manual required for the fulfilment of the contract, and how these data and manuals are made available and kept current (regardless if they are provided by the CAMO or by the maintenance organisation).

This may include but is not limited to:

- maintenance programme,
- airworthiness directives,
- major repairs/modification data,
- aircraft maintenance manual,
- aircraft illustrated parts catalogue (IPC),
- wiring diagrams,
- troubleshooting manual,
- Minimum Equipment List (normally on board the aircraft),
- operator's manual,
- flight manual,
- engine maintenance manual,
- engine overhaul manual.

#### 2.8. Incoming conditions

The contract should specify in which condition the aircraft should be made available to the maintenance organisation. For extensive maintenance, it may be beneficial that a work scope planning meeting be organised so that the tasks to be performed may be commonly agreed (see also paragraph 2.23 'Meetings').

#### 2.9. Airworthiness directives and service bulletins/modifications

The contract should specify the information that the CAMO is responsible to provide to the maintenance organisation, such as:

- the status of the ADs including due date and the selected means of compliance, if applicable; and
- status of modifications and the decision to embody a modification or an SB.

In addition, the contract should specify the type of information the CAMO will need in return to complete the control of ADs and modification status.

#### 2.10. Hours and cycles control

Hours and cycles control is the responsibility of the CAMO, and the contract should specify how the CAMO should provide the current hours and cycles to the maintenance organisation and whether the maintenance organisation should receive the current flight hours and cycles on a regular basis so that it may update the records for its own planning functions (see also paragraph 2.22 ‘Exchange of information’).

#### 2.11. Service life-limited components

The control of service life-limited components is the responsibility of the CAMO. The contract should specify whether the CAMO should provide the status of service life-limited parts to the maintenance organisation, and the information that the approved organisation will have to provide to the CAMO about the service life-limited components’ removal/installation so that the CAMO may update its records (see also paragraph 2.22 ‘Exchange of information’).

#### 2.12. Supply of parts

The contract should specify whether a particular type of material or component is supplied by the CAMO or by the maintenance organisation, which type of component is pooled, etc. The contract should clearly state that it is the maintenance organisation’s responsibility to be in any case satisfied that the component in question meets the approved data/standard and to ensure that the aircraft component is in a satisfactory condition for installation. Additional guidance on the acceptance of components is provided in [M.A.402](#) and [145.A.42](#).

#### 2.13. Pooled parts at line stations

If applicable, the contract should specify how the subject of pooled parts at line stations should be addressed.

#### 2.14. Scheduled maintenance

For planning scheduled maintenance checks, the support documentation to be given to the maintenance organisation should be specified. This may include but is not limited to:

- applicable work package, including job cards;
- scheduled component removal list;
- modifications to be incorporated.

When the maintenance organisation determines, for any reason, to defer a maintenance task, it has to be formally agreed with the CAMO. If the deferment goes beyond an approved limit, please refer to paragraph 2.17 ‘Deviation from the maintenance schedule’. This should be addressed, where applicable, in the maintenance contract.

#### 2.15. Unscheduled maintenance/defect rectification

The contract should specify to which level the maintenance organisation may rectify a defect without reference to the CAMO. It should describe, as a minimum, the management of approval of repairs and the incorporation of major repairs. The deferment of any defect rectification should be submitted to the CAMO.

#### 2.16. Deferred tasks

See paragraphs 2.14 and 2.15 above, as well as [145.A.50\(e\)](#) and [M.A.801\(g\)](#). In addition, for aircraft line and base maintenance, the use of the operator's MEL and the liaison with the CAMO in case of a defect that cannot be rectified at the line station should be addressed.

#### 2.17. Deviation from the maintenance schedule

Deviations from the maintenance schedule have to be managed by the CAMO in accordance with the procedures established in the maintenance programme. The contract should specify the support the maintenance organisation may provide to the operator in order to substantiate the deviation request.

#### 2.18. Test flight

If any test flight is required after aircraft maintenance, it should be performed in accordance with the procedures established in the continuing airworthiness management exposition or the operator's manual.

#### 2.19. Bench test

The contract should specify the acceptability criterion and whether a representative of the CAMO should witness an engine undergoing test.

#### 2.20. Release to service documentation

The release to service has to be performed by the maintenance organisation in accordance with its maintenance organisation procedures. The contract should, however, specify which support forms have to be used (aircraft technical log, maintenance organisation's release format, etc.) and the documentation that the maintenance organisation should provide to the CAMO upon delivery of the aircraft. This may include but is not limited to:

- certificate of release to service,
- flight test report,
- list of modifications embodied,
- list of repairs,
- list of ADs accomplished,
- maintenance visit report,
- test bench report.

#### 2.21. Maintenance record-keeping

The CAMO may subcontract the maintenance organisation to retain some of the maintenance records required by [Part-M Subpart C](#). This means that the CAMO subcontracts under its quality system part of its record-keeping tasks and, therefore, the provisions of [M.A.711\(a\)\(3\)](#) apply.

#### 2.22. Exchange of information

Each time exchange of information between the CAMO and the maintenance organisation is necessary, the contract should specify what information should be provided and when (i.e. in which case or at what frequency), how, by whom and to whom it has to be transmitted.

## 2.23. Meetings

The maintenance contract should include the provision for a certain number of meetings to be held between the CAMO and the maintenance organisation.

### 2.23.1. Contract review

Before the contract is enforced, it is very important that the technical personnel of both parties, that are involved in the fulfilment of the contract, meet in order to be sure that every point leads to a common understanding of the duties of both parties

### 2.23.2. Work scope planning meeting

Work scope planning meetings may be organised so that the tasks to be performed may be commonly agreed.

### 2.23.3. Technical meeting

Scheduled meetings may be organised in order to review on a regular basis technical matters such as ADs, SBs, future modifications, major defects found during maintenance check, aircraft and component reliability, etc.

### 2.23.4. Quality meeting

Quality meetings may be organised in order to examine matters raised by the CAMO's quality surveillance and to agree upon necessary corrective actions.

### 2.23.5. Reliability meeting

When a reliability programme exists, the contract should specify the CAMO's and maintenance organisation's respective involvement in that programme, including the participation in reliability meetings.

## Appendix XII to AMC M.A.706(f) and AMC1 M.B.102(c) — Fuel Tank Safety training

ED Decision 2016/011/R

This appendix includes general instructions for providing training on Fuel Tank Safety issues.

### A) Effectivity:

- Large aeroplanes as defined in Decision 2003/11/RM of the Executive Director of the Agency (CS-25) and certified after 1 January 1958 with a maximum type certified passenger capacity of 30 or more or a maximum certified payload capacity of 7500 lbs (3402 kg) cargo or more, and
- Large aeroplanes as defined in Decision 2003/11/RM of the Executive Director of the Agency (CS-25) which contains CS-25 amendment 1 or later in their certification basis.

### B) Affected organisations:

- CAMOs involved in the continuing airworthiness management of aeroplanes specified in paragraph A).
- Competent authorities responsible for the oversight as per [M.B.704](#) of aeroplanes specified in paragraph A) and for the oversight of the CAMOs specified in this paragraph B).

### C) Persons from affected organisations who should receive training:

#### Phase 1 only:

- The quality manager and quality personnel.
- Personnel of the competent authorities responsible for the oversight as per [M.B.704](#) of aeroplanes specified in paragraph A) and in the oversight of CAMOs specified in paragraph B).

#### Phase 1 + Phase 2 + Continuation training:

- Personnel of the CAMO involved in the management and review of the continuing airworthiness of aircraft specified in paragraph A);

### D) General requirements of the training courses

#### Phase 1 – Awareness

The training should be carried out before the person starts to work without supervision but not later than 6 months after joining the organisation. The persons who have already attended the Level 1 Familiarisation course in compliance with ED Decision 2007/001/R Appendix XII are already in compliance with Phase 1.

Type: Should be an awareness course with the principal elements of the subject. It may take the form of a training bulletin, or other self-study or informative session. Signature of the reader is required to ensure that the person has passed the training.

Level: It should be a course at the level of familiarisation with the principal elements of the subject.

#### Objectives:

The trainee should, after the completion of the training:

1. Be familiar with the basic elements of the fuel tank safety issues.



2. Be able to give a simple description of the historical background and the elements requiring a safety consideration, using common words and showing examples of non-conformities.
3. Be able to use typical terms.

Content: The course should include:

- a short background showing examples of FTS accidents or incidents,
- the description of concept of fuel tank safety and CDCCL,
- some examples of manufacturers documents showing CDCCL items,
- typical examples of FTS defects,
- some examples of TC holders repair data
- some examples of maintenance instructions for inspection.

#### Phase 2 - Detailed training

A flexible period may be allowed by the competent authorities to allow organisations to set the necessary courses and impart the training to the personnel, taking into account the organisation's training schemes/means/practices. This flexible period should not extend beyond 31 December 2010.

The persons who have already attended the Level 2 Detailed training course in compliance with ED Decision 2007/001/R Appendix XII either from a CAMO or from a [Part-147](#) training organisation are already in compliance with Phase 2 with the exception of continuation training.

Staff should have received Phase 2 training by 31 December 2010 or within 12 months of joining the organization, whichever comes later.

Type: Should be a more in-depth internal or external course. It should not take the form of a training bulletin or other self-study. An examination should be required at the end, which should be in the form of a multi choice question, and the pass mark of the examination should be 75%.

Level: It should be a detailed course on the theoretical and practical elements of the subject.

The training may be made either:

- in appropriate facilities containing examples of components, systems and parts affected by Fuel Tank Safety (FTS) issues. The use of films, pictures and practical examples on FTS is recommended; or
- by attending a distance course (e-learning or computer based training) including a film when such film meets the intent of the objectives and content here below. An e-learning or computer based training should meet the following criteria:
  - A continuous evaluation process should ensure the effectiveness of the training and its relevance;
  - Some questions at intermediate steps of the training should be proposed to ensure that the trainee is authorized to move to the next step;
  - The content and results of examinations should be recorded;
  - Access to an instructor in person or at distance should be possible in case support is needed.

A duration of 8 hours for phase 2 is an acceptable compliance.

When the course is provided in a classroom, the instructor should be very familiar with the data in Objectives and Guidelines. To be familiar, an instructor should have attended himself a similar course in a classroom and made additionally some lecture of related subjects.

Objectives:

The attendant should, after the completion of the training:

- have knowledge of the history of events related to fuel tank safety issues and the theoretical and practical elements of the subject, have an overview of the FAA regulations known as SFAR (Special FAR) 88 of the FAA and of JAA Temporary Guidance Leaflet TGL 47, be able to give a detailed description of the concept of fuel tank system ALI (including Critical Design Configuration Control Limitations CDCCL, and using theoretical fundamentals and specific examples;
- have the capacity to combine and apply the separate elements of knowledge in a logical and comprehensive manner;
- have knowledge on how the above items affect the aircraft;
- be able to identify the components or parts or the aircraft subject to FTS from the manufacturer's documentation,
- be able to plan the action or apply a Service Bulletin and an Airworthiness Directive.

Content: Following the guidelines described in paragraph E).

Continuation training:

The organisation should ensure that the continuation training is performed in each two years period. The syllabus of the training programme referred to in the Training policy of the Continuing Airworthiness Management Exposition (CAME) should contain the additional syllabus for this continuation training.

The continuation training may be combined with the phase 2 training in a classroom or at distance.

The continuing training should be updated when new instructions are issued which are related to the material, tools, documentation and manufacturer's or competent authority's directives.

**E) Guidelines for preparing the content of Phase 2 courses.**

The following guidelines should be taken into consideration when the phase 2 training programme are being established:

- a) understanding of the background and the concept of fuel tank safety,
- b) how the mechanics can recognise, interpret and handle the improvements in the instructions for continuing airworthiness that have been made or are being made regarding fuel tank systems,
- c) awareness of any hazards especially when working on the fuel system, and when the Flammability Reduction System using nitrogen is installed.

Paragraphs a) b) and c) above should be introduced in the training programme addressing the following issues:

- i) The theoretical background behind the risk of fuel tank safety: the explosions of mixtures of fuel and air, the behaviour of those mixtures in an aviation environment, the effects of temperature and pressure, energy needed for ignition, etc., the 'fire triangle', - Explain 2 concepts to prevent explosions:
  - (1) ignition source prevention and
  - (2) flammability reduction,
- ii) The major accidents related to fuel tank systems, the accident investigations and their conclusions,
- iii) SFAR 88 of the FAA and JAA Interim Policy INT POL 25/12: ignition prevention program initiatives and goals, to identify unsafe conditions and to correct them, to systematically improve fuel tank maintenance),
- iv) Explain briefly the concepts that are being used: the results of SFAR 88 of the FAA and JAA INT/POL 25/12: modifications, airworthiness limitations items and CDCCL,
- v) Where relevant information can be found and how to use and interpret this information in the various instructions for continuing airworthiness (aircraft maintenance manuals, component maintenance manual, etc.),
- vi) Fuel Tank Safety during maintenance: fuel tank entry and exit procedures, clean working environment, what is meant by configuration control, wire separation, bonding of components etc.,
- vii) Flammability reduction systems when installed: reason for their presence, their effects, the hazards of a Flammability Reduction System (FRS) using nitrogen for maintenance, safety precautions in maintenance/working with an FRS,
- viii) Recording maintenance actions, recording measures and results of inspections.

The training should include a representative number of examples of defects and the associated repairs as required by the TC/STC holders maintenance data.

#### **F) Approval of training**

For CAMOs the approval of the initial and continuation training programme and the content of the examination can be achieved by the change of the CAME exposition. The modification of the CAME should be approved as required by M.A.704(b). The necessary changes to the CAME to meet the content of this decision should be made and implemented at the time requested by the competent authority.

## Appendix XIII to AMC M.A.712(f) — Organisational review

ED Decision 2015/029/R

**Organisational reviews may replace a full quality system in accordance with the provisions of [M.A.712\(f\)](#) and [AMC M.A.712\(f\)](#) and as described in the continuing airworthiness management exposition (CAME)**

Depending on the complexity of the small organisation (number and type of aircraft, number of different fleets, privilege to perform airworthiness reviews, etc.), the organisational review system may vary from a system using the principles and practices of a quality system (except for the requirement of independence) to a simplified system adapted to the low complexity of the organisation and the aircraft managed.

As a core minimum, the organisational review system should have the following features, which should be described in the CAME:

- a. Identification of the person responsible for the organisational review programme:  
By default, this person should be the accountable manager, unless he delegates this responsibility to (one of) the [M.A.706\(c\)](#) person(s).
- b. Identification and qualification criteria for the person(s) responsible for performing the organisational reviews:  
These persons should have a thorough knowledge of the regulations and of the continuing airworthiness management organisation (CAMO) procedures. They should also have knowledge of audits, acquired through training or through experience (preferably as an auditor, but also possibly because they actively participated in several audits conducted by the competent authority).
- c. Elaboration of the organisational review programme:
  - Checklist(s) covering all items necessary to be satisfied that the organisation delivers a safe product and complies with the regulation. All procedures described in the CAME should be addressed.
  - A schedule for the accomplishment of the checklist items. Each item should be checked at least every 12 months. The organisation may choose to conduct one full review annually or to conduct several partial reviews.
- d. Performance of organisational reviews:  
Each checklist item should be answered using an appropriate combination of:
  - review of records, documentation, etc.
  - sample check of aircraft under contract.
  - interview of personnel involved.
  - review of discrepancies and difficulty internal reports (e.g., notified difficulties in using current procedures and tools, systematic deviations from procedures, etc.).
  - review of complaints filed by customers.
- e. Management of findings and occurrence reports:
  - All findings should be recorded and notified to the affected persons.

- All level 1 findings, in the sense of [M.A.716\(a\)](#), should be immediately notified to the competent authority and all necessary actions on aircraft in service should be immediately taken.
- All occurrence reports should be reviewed with the aim for continuous improvement of the system by identifying possible corrective and preventive actions. This should be done in order to find prior indicators (e.g., notified difficulties in using current procedures and tools, systematic deviations from procedures, unsafe behaviours, etc.), and dismissed alerts that, had they been recognised and appropriately managed before the event, could have resulted in the undesired event being prevented.
- Corrective and preventive actions should be approved by the person responsible for the organisational review programme and implemented within a specified time frame.
- Once the person responsible for the organisational review programme is satisfied that the corrective action is effective, closure of the finding should be recorded along with a summary of the corrective action.
- The accountable manager should be notified of all significant findings and, on a regular basis, of the global results of the organisational review programme.

Following is a typical example of a simplified organisational review checklist, **to be adapted as necessary to cover the CAME procedures:**

#### **1 – Scope of work**

- All aircraft under contract are covered in the [Form 14](#).
- The scope of work in the CAME does not disagree with the [Form 14](#).
- No work has been performed outside the scope of the [Form 14](#) and the CAME.
- Is it justified to retain in the approved scope of work aircraft types for which the organisation has no longer aircraft under contract?

#### **2 – Airworthiness situation of the fleet**

- Does the continuing airworthiness status (AD, maintenance programme, life limited components, deferred maintenance, ARC validity) show any expired items? If so, are the aircraft grounded?

#### **3 – Aircraft maintenance programme**

- Check that all revisions to the TC/STC holders Instructions for Continuing Airworthiness, since the last review, have been (or are planned to be) incorporated in the maintenance programme, unless otherwise approved by the Competent Authority.
- Has the maintenance programme been revised to take into account all modifications or repairs impacting the maintenance programme?
- Have all maintenance programme amendments been approved at the right level (competent authority or indirect approval)?
- Does the status of compliance with the maintenance programme reflect the latest approved maintenance programme?
- Has the use of maintenance programme deviations and tolerances been properly managed and approved?

#### **4 – Airworthiness Directives (and other mandatory measures issued by the competent authority)**

- Have all ADs issued since the last review been incorporated into the AD status?
- Does the AD status correctly reflect the AD content: applicability, compliance date, periodicity...? (sample check on ADs)

#### **5 – Modifications/repairs**

- Are all modifications/repairs listed in the corresponding status approved in accordance with [M.A.304](#)? (sample check on modifications/repairs)
- Have all the modifications/repairs which have been installed since the last review been incorporated in the corresponding status? (sample check from the aircraft/component logbooks)

#### **6 – Relations with the owners/operators**

- Has a contract (in accordance with [Appendix I to Part-M](#)) been signed with each external owner/operator, covering all the aircraft whose airworthiness is managed by the CAMO?
- Have the owners/operators under contract fulfilled their obligations identified in the contract? As appropriate:
  - Are the pre-flight checks correctly performed? (interview of pilots)
  - Are the technical log or equivalent correctly used (record of flight hours/cycles, defects reported by the pilot, identification of what maintenance is next due etc.)?
  - Did flights occur with overdue maintenance or with defects not properly rectified or deferred? (sample check from the aircraft records)
  - Has maintenance been performed without notifying the CAMO (sample check from the aircraft records, interview of the owner/operator)?

#### **7 – Personnel**

- Check that the current accountable manager and other nominated persons are correctly identified in the approved CAME.
- If the number of personnel has decreased or if the activity has increased, check that the organisation still has sufficient staff.
- Check that the qualification of all new personnel (or personnel with new functions) has been appropriately assessed.
- Check that the staff has been trained, as necessary, to cover changes in:
  - regulations,
  - competent authority publications,
  - the CAME and associated procedures,
  - the approved scope of work,
  - maintenance data (significant ADs, SBs, ICA amendments, etc.).

#### **8 – Maintenance contracted**

- Sample check of maintenance records:
  - Existence and adequacy of the work order,
  - Data received from the maintenance organisation:

- 
- Valid CRS including any deferred maintenance
  - List of removed and installed equipment and copy of the associated [Form 1](#) or equivalent.
  - Obtain a copy of the current approval certificate (Form 3) of the maintenance organisations contracted.

**9 – Technical records and record-keeping**

- Have the certificates ([Form 1](#) and Conformity certificates) been properly collected and recorded?
- Perform a sample check of technical records to ensure completeness and storage during the appropriate periods.
- Is storage of computerised data properly ensured?

**10 – Occurrence reporting procedures**

- Check that reporting is properly performed,
- Actions taken and recorded.

**11 – Airworthiness review**

## **ANNEX II (PART-145)**

### **GENERAL**

#### **145.1 General**

*Regulation (EU) No 1321/2014*

For the purpose of this Part, the competent authority shall be:

1. for organisations having their principal place of business in a Member State, the authority designated by that Member State, or;
2. for organisations having their principal place of business located in a third country, the Agency.

#### **AMC 145.1 General**

*ED Decision 2015/029/R*

A competent authority may be a ministry, a national aviation authority, or any aviation body designated by the Member State and located within that Member State. A Member State may designate more than one competent authority to cover different areas of responsibility, as long as the designation decision contains a list of the competencies of each authority and there is only one competent authority responsible for each given area of responsibility.



## SECTION A — TECHNICAL REQUIREMENTS

### 145.A.10 Scope

Regulation (EU) No 1321/2014

This Section establishes the requirements to be met by an organisation to qualify for the issue or continuation of an approval for the maintenance of aircraft and components.

### AMC 145.A.10 Scope

ED Decision 2015/029/R

1. Line Maintenance should be understood as any maintenance that is carried out before flight to ensure that the aircraft is fit for the intended flight.
  - (a) *Line Maintenance* may include:
    - Trouble shooting.
    - Defect rectification.
    - Component replacement with use of external test equipment if required. Component replacement may include components such as engines and propellers.
    - Scheduled maintenance and/or checks including visual inspections that will detect obvious unsatisfactory conditions/discrepancies but do not require extensive in depth inspection. It may also include internal structure, systems and powerplant items which are visible through quick opening access panels/doors.
    - Minor repairs and modifications which do not require extensive disassembly and can be accomplished by simple means.
  - (b) For temporary or occasional cases (ADs, SBs) the Quality Manager may accept base maintenance tasks to be performed by a line maintenance organisation provided all requirements are fulfilled as defined by the competent authority.
  - (c) Maintenance tasks falling outside these criteria are considered to be Base Maintenance.
  - (d) Aircraft maintained in accordance with 'progressive' type programmes should be individually assessed in relation to this paragraph. In principle, the decision to allow some 'progressive' checks to be carried out should be determined by the assessment that all tasks within the particular check can be carried out safely to the required standards at the designated line maintenance station.
2. Where the organisation uses facilities both inside and outside the Member State such as satellite facilities, sub-contractors, line stations etc., such facilities may be included in the approval without being identified on the approval certificate subject to the maintenance organisation exposition identifying the facilities and containing procedures to control such facilities and the competent authority being satisfied that they form an integral part of the approved maintenance organisation.

### GM 145.A.10 Scope

ED Decision 2015/029/R

This Guidance Material (GM) provides guidance on how the smallest organisations satisfy the intent of [Part-145](#):

1. By inference, the smallest maintenance organisation would only be involved in a limited number of light aircraft, or aircraft components, used for commercial air transport. It is therefore a matter of scale; light aircraft do not demand the same level of resources, facilities or complex maintenance procedures as the large organisation.
2. It is recognised that a [Part-145](#) approval may be required by two quite different types of small organisations, the first being the light aircraft maintenance hangar, the second being the component maintenance workshop, e.g. small piston engines, radio equipment, etc.
3. Where only one person is employed (in fact having the certifying function and others), these organisations approved under [Part-145](#) may use the alternatives provided in point 3.1 limited to the following:

**Class A2** Base and Line maintenance of aeroplanes of 5 700 kg and below (piston engines only).

**Class A3** Base and Line maintenance of single-engined helicopters of less than 3 175 kg.

**Class A4** Aircraft other than A1, A2 and A3

**Class B2** Piston engines with maximum output of less than 450 HP.

**Class C** Components.

**Class D1** Non-destructive Testing.

- 3.1. [145.A.30\(b\)](#): The minimum requirement is for one full-time person who meets the [Part-66](#) requirements for certifying staff and holds the position of ‘accountable manager, maintenance engineer and is also certifying staff and, if applicable, airworthiness review staff’. No other person may issue a certificate of release to service and therefore if absent, no maintenance may be released during such absence.

3.1.1. The quality monitoring function of [145.A.65\(c\)](#) may be contracted to an appropriate organisation approved under [Part-145](#) or to a person with appropriate technical knowledge and extensive experience of quality audits employed on a part-time basis, with the agreement of the competent authority.

Note: Full-time for the purpose of [Part-145](#) means not less than 35 hrs per week except during vacation periods.

3.1.2. [145.A.35](#). In the case of an approval based on one person using a subcontracted quality monitoring arrangement, the requirement for a record of certifying staff is satisfied by the submission to and acceptance by the competent authority of the [EASA Form 4](#). With only one person the requirement for a separate record of authorisation is unnecessary because the EASA Form 3 approval schedule defines the authorisation. An appropriate statement, to reflect this situation, should be included in the exposition.

3.1.3. [145.A.65\(c\)](#). It is the responsibility of the contracted quality monitoring organisation or person to make a minimum of 2 visits per 12 months and it is the responsibility of this organisation or person to carry out such monitoring on the basis of 1 pre-announced visit and 1 not announced visit to the organisation.

It is the responsibility of the organisation to comply with the findings of the contracted quality monitoring organisation or the person.

CAUTION: it should be understood that if the contracted organisation or the above mentioned person loses or gives up its approval, then the organisation’s approval will be suspended.

4. Recommended operating procedure for a [Part-145](#) approved maintenance organisation based upon up to 10 persons involved in maintenance.
- 4.1. [145.A.30\(b\)](#): The normal minimum requirement is for the employment on a full-time basis of two persons who meet the competent authorities' requirements for certifying staff, whereby one holds the position of 'maintenance engineer' and the other holds the position of 'quality audit engineer'.

Either person can assume the responsibilities of the accountable manager providing that they can comply in full with the applicable elements of [145.A.30\(a\)](#), but the 'maintenance engineer' should be the certifying person to retain the independence of the 'quality audit engineer' to carry out audits. Nothing prevents either engineer from undertaking maintenance tasks providing that the 'maintenance engineer' issues the certificate of release to service. This 'maintenance engineer' may also be nominated as airworthiness review staff to carry out airworthiness reviews and issue the corresponding airworthiness review certificate for ELA1 aircraft not involved in commercial operations in accordance with [M.A.901\(l\)](#).

The 'quality audit engineer' should have similar qualifications and status to the 'maintenance engineer' for reasons of credibility, unless he/she has a proven track-record in aircraft quality assurance, in which case some reduction in the extent of maintenance qualifications may be permitted.

In cases where the competent authority agrees that it is not practical for the organisation to nominate a post holder for the quality monitoring function, this function may be contracted in accordance to paragraph 3.1.1.

## 145.A.15 Application

Regulation (EU) No 1321/2014

An application for the issue or change of an approval shall be made to the competent authority in a form and manner established by such authority.

## AMC 145.A.15 Application

ED Decision 2015/029/R

In a form and in a manner established by the competent authority means that the application should be made on an [EASA Form 2](#) (refer to [Appendix III to AMC to Part-145](#)).

## 145.A.20 Terms of Approval

Regulation (EU) No 1321/2014

The organisation shall specify the scope of work deemed to constitute approval in its exposition ([Appendix IV to Annex I \(Part-M\)](#) contains a table of all classes and ratings).

## AMC 145.A.20 Terms of approval

ED Decision 2015/029/R

The following table identifies the ATA Specification 2200 chapter for the category C component rating. If the maintenance manual (or equivalent document) does not follow the ATA Chapters, the corresponding subjects still apply to the applicable C rating.

CLASS	RATING	ATA CHAPTERS
COMPONENTS OTHER THAN COMPLETE ENGINES OR APUs	C1 Air Cond & Press	21
	C2 Auto Flight	22
	C3 Comms and Nav	23 - 34
	C4 Doors - Hatches	52
	C5 Electrical Power & Lights	24 – 33 - 85
	C6 Equipment	25 - 38 - 44 – 45 - 50
	C7 Engine – APU	49 - 71 - 72 - 73 - 74 - 75 - 76 - 77 - 78 - 79 - 80 - 81 - 82 - 83
	C8 Flight Controls	27 - 55 - 57.40 - 57.50 - 57.60 - 57.70
	C9 Fuel	28 - 47
	C10 Helicopters - Rotors	62 - 64 - 66 - 67
	C11 Helicopter - Trans	63 - 65
	C12 Hydraulic Power	29
	C13 Indicating/Recording Systems	31 – 42 - 46
	C14 Landing Gear	32
	C15 Oxygen	35
	C16 Propellers	61
	C17 Pneumatic & Vacuum	36 - 37
	C18 Protection ice/rain/fire	26 - 30
	C19 Windows	56
	C20 Structural	53 - 54 - 57.10 - 57.20 - 57.30
	C21 Water Ballast	41
	C22 Propulsion Augmentation	84

## 145.A.25 Facility requirements

*Regulation (EU) No 1321/2014*

The organisation shall ensure that:

- (a) Facilities are provided appropriate for all planned work, ensuring in particular, protection from the weather elements. Specialised workshops and bays are segregated as appropriate, to ensure that environmental and work area contamination is unlikely to occur.
  1. For base maintenance of aircraft, aircraft hangars are both available and large enough to accommodate aircraft on planned base maintenance;
  2. For component maintenance, component workshops are large enough to accommodate the components on planned maintenance.
- (b) Office accommodation is provided for the management of the planned work referred to in point (a), and certifying staff so that they can carry out their designated tasks in a manner that contributes to good aircraft maintenance standards.
- (c) The working environment including aircraft hangars, component workshops and office accommodation is appropriate for the task carried out and in particular special requirements observed. Unless otherwise dictated by the particular task environment, the working environment must be such that the effectiveness of personnel is not impaired:
  1. temperatures must be maintained such that personnel can carry out required tasks without undue discomfort.

2. dust and any other airborne contamination are kept to a minimum and not be permitted to reach a level in the work task area where visible aircraft/component surface contamination is evident. Where dust/other airborne contamination results in visible surface contamination, all susceptible systems are sealed until acceptable conditions are re-established.
  3. lighting is such as to ensure each inspection and maintenance task can be carried out in an effective manner.
  4. noise shall not distract personnel from carrying out inspection tasks. Where it is impractical to control the noise source, such personnel are provided with the necessary personal equipment to stop excessive noise causing distraction during inspection tasks.
  5. where a particular maintenance task requires the application of specific environmental conditions different to the foregoing, then such conditions are observed. Specific conditions are identified in the maintenance data.
  6. the working environment for line maintenance is such that the particular maintenance or inspection task can be carried out without undue distraction. Therefore where the working environment deteriorates to an unacceptable level in respect of temperature, moisture, hail, ice, snow, wind, light, dust/other airborne contamination, the particular maintenance or inspection tasks must be suspended until satisfactory conditions are re-established.
- (d) Secure storage facilities are provided for components, equipment, tools and material. Storage conditions ensure segregation of serviceable components and material from unserviceable aircraft components, material, equipment and tools. The conditions of storage are in accordance with the manufacturer's instructions to prevent deterioration and damage of stored items. Access to storage facilities is restricted to authorised personnel.

### AMC 145.A.25(a) Facility requirements

*ED Decision 2015/029/R*

1. Where the hangar is not owned by the organisation, it may be necessary to establish proof of tenancy. In addition, sufficiency of hangar space to carry out planned base maintenance should be demonstrated by the preparation of a projected aircraft hangar visit plan relative to the maintenance programme. The aircraft hangar visit plan should be updated on a regular basis.
2. Protection from the weather elements relates to the normal prevailing local weather elements that are expected throughout any twelve month period. Aircraft hangar and component workshop structures should prevent the ingress of rain, hail, ice, snow, wind and dust etc. Aircraft hangar and component workshop floors should be sealed to minimise dust generation.
3. For line maintenance of aircraft, hangars are not essential but it is recommended that access to hangar accommodation be demonstrated for usage during inclement weather for minor scheduled work and lengthy defect rectification.
4. Aircraft maintenance staff should be provided with an area where they may study maintenance instructions and complete maintenance records in a proper manner.

### AMC 145.A.25(b) Facility requirements

*ED Decision 2015/029/R*

It is acceptable to combine any or all of the office accommodation requirements into one office subject to the staff having sufficient room to carry out the assigned tasks.

In addition, as part of the office accommodation, aircraft maintenance staff should be provided with an area where they may study maintenance instructions and complete maintenance records in a proper manner.

### AMC 145.A.25(d) Facility requirements

*ED Decision 2015/029/R*

1. Storage facilities for serviceable aircraft components should be clean, well-ventilated and maintained at a constant dry temperature to minimise the effects of condensation. Manufacturer's storage recommendations should be followed for those aircraft components identified in such published recommendations.
2. Storage racks should be strong enough to hold aircraft components and provide sufficient support for large aircraft components such that the component is not distorted during storage.
3. All aircraft components, wherever practicable, should remain packaged in protective material to minimise damage and corrosion during storage.

### 145.A.30 Personnel requirements

*Regulation (EU) No 1321/2014*

- (a) The organisation shall appoint an accountable manager who has corporate authority for ensuring that all maintenance required by the customer can be financed and carried out to the standard required by this Part. The accountable manager shall:
1. ensure that all necessary resources are available to accomplish maintenance in accordance with point [145.A.65\(b\)](#) to support the organisation approval.
  2. establish and promote the safety and quality policy specified in point [145.A.65\(a\)](#).
  3. demonstrate a basic understanding of this [Annex \(Part-145\)](#).

*Regulation (EU) No 1321/2014*

- (b) The organisation shall nominate a person or group of persons, whose responsibilities include ensuring that the organisation complies with this Part. Such person(s) shall ultimately be responsible to the accountable manager.
1. The person or persons nominated shall represent the maintenance management structure of the organisation and be responsible for all functions specified in this Part.
  2. The person or persons nominated shall be identified and their credentials submitted in a form and manner established by the competent authority.
  3. The person or persons nominated shall be able to demonstrate relevant knowledge, background and satisfactory experience related to aircraft or component maintenance and demonstrate a working knowledge of this Part.
  4. Procedures shall make clear who deputises for any particular person in the case of lengthy absence of the said person.

*Regulation (EU) No 1321/2014*

- (c) The accountable manager under point (a) shall appoint a person with responsibility for monitoring the quality system, including the associated feedback system as required by point [145.A.65\(c\)](#). The appointed person shall have direct access to the accountable manager to ensure that the accountable manager is kept properly informed on quality and compliance matters.

*Regulation (EU) No 1321/2014*

- (d) The organisation shall have a maintenance man-hour plan showing that the organisation has sufficient staff to plan, perform, supervise, inspect and quality monitor the organisation in accordance with the approval. In addition the organisation shall have a procedure to reassess work intended to be carried out when actual staff availability is less than the planned staffing level for any particular work shift or period.

*Regulation (EU) 2015/1088*

- (e) The organisation shall establish and control the competence of personnel involved in any maintenance, [development of maintenance programmes](#), [airworthiness reviews](#), management and/or quality audits in accordance with a procedure and to a standard agreed by the competent authority. In addition to the necessary expertise related to the job function, competence must include an understanding of the application of human factors and human performance issues appropriate to that person's function in the organisation. 'Human factors' means principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration of human performance. 'Human performance' means human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

*Regulation (EU) No 1321/2014*

- (f) The organisation shall ensure that personnel who carry out and/or control a continued airworthiness non-destructive test of aircraft structures and/or components are appropriately qualified for the particular non-destructive test in accordance with the European or equivalent Standard recognised by the Agency. Personnel who carry out any other specialised task shall be appropriately qualified in accordance with officially recognised Standards. By derogation to this point those personnel specified in points (g) and (h)(1) and (h)(2), qualified in category B1 or B3 in accordance with [Annex III \(Part-66\)](#) may carry out and/or control colour contrast dye penetrant tests.

*Regulation (EU) No 1321/2014*

- (g) Any organisation maintaining aircraft, except where stated otherwise in point (j), shall in the case of aircraft line maintenance, have appropriate aircraft rated certifying staff qualified as category B1, B2, B3, as appropriate, in accordance with [Annex III \(Part-66\)](#) and point [145.A.35](#).

In addition such organisations may also use appropriately task trained certifying staff holding the privileges described in points [66.A.20\(a\)\(1\)](#) and [66.A.20\(a\)\(3\)\(ii\)](#) and qualified in accordance with [Annex III \(Part-66\)](#) and point [145.A.35](#) to carry out minor scheduled line maintenance and simple defect rectification. The availability of such certifying staff shall not replace the need for category B1, B2, B3 certifying staff, as appropriate.

*Regulation (EU) 2015/1536*

- (h) Any organisation maintaining aircraft, except where stated otherwise in point (j) shall:
1. in the case of base maintenance of complex motor-powered aircraft, have appropriate aircraft type rated certifying staff qualified as category C in accordance with [Part-66](#) and [145.A.35](#). In addition the organisation shall have sufficient aircraft type rated staff qualified as category B1, B2 as appropriate in accordance with [Part-66](#) and [145.A.35](#) to support the category C certifying staff.
    - (i) B1 and B2 support staff shall ensure that all relevant tasks or inspections have been carried out to the required standard before the category C certifying staff issues the certificate of release to service.



- 
- (ii) The organisation shall maintain a register of any such B1 and B2 support staff.
  - (iii) The category C certifying staff shall ensure that compliance with paragraph (i) has been met and that all work required by the customer has been accomplished during the particular base maintenance check or work package, and shall also assess the impact of any work not carried out with a view to either requiring its accomplishment or agreeing with the operator to defer such work to another specified check or time limit.
2. in the case of base maintenance of aircraft other than complex motor-powered aircraft have either:
- (i) appropriate aircraft rated certifying staff qualified as category B1, B2, B3, as appropriate, in accordance with [Annex III \(Part-66\)](#) and point 145.A.35 or,
  - (ii) appropriate aircraft rated certifying staff qualified in category C assisted by support staff as specified in point [145.A.35\(a\)\(i\)](#).
- Regulation (EU) 2015/1536*
- (i) Component certifying staff shall comply with the provisions of [Article 5\(6\)](#) of Regulation (EU) No 1321/2014.
- Regulation (EU) 2015/1088*
- (j) By derogation to points (g) and (h), in relation to the obligation to comply with [Annex III \(Part-66\)](#), the organisation may use certifying staff qualified in accordance with the following provisions:
1. For organisation facilities located outside the Community territory certifying staff may be qualified in accordance with the national aviation regulations of the State in which the organisation facility is registered subject to the conditions specified in [Appendix IV to this Part](#).
  2. For line maintenance carried out at a line station of an organisation which is located outside the Community territory, the certifying staff may be qualified in accordance with the national aviation regulations of the State in which the line station is based, subject to the conditions specified in [Appendix IV to this Part](#).
  3. For a repetitive pre-flight airworthiness directive which specifically states that the flight crew may carry out such airworthiness directive, the organisation may issue a limited certification authorisation to the aircraft commander and/or the flight engineer on the basis of the flight crew licence held. However, the organisation shall ensure that sufficient practical training has been carried out to ensure that such aircraft commander or flight engineer can accomplish the airworthiness directive to the required standard.
  4. In the case of aircraft operating away from a supported location the organisation may issue a limited certification authorisation to the commander and/or the flight engineer on the basis of the flight crew licence held subject to being satisfied that sufficient practical training has been carried out to ensure that the commander or flight engineer can accomplish the specified task to the required standard. The provisions of this point shall be detailed in an exposition procedure.
  5. In the following unforeseen cases, where an aircraft is grounded at a location other than the main base where no appropriate certifying staff are available, the organisation contracted to provide maintenance support may issue a one-off certification authorisation:



- (i) to one of its employees holding equivalent type authorisations on aircraft of similar technology, construction and systems; or
- (ii) to any person with not less than five years maintenance experience and holding a valid ICAO aircraft maintenance licence rated for the aircraft type requiring certification provided there is no organisation appropriately approved under this Part at that location and the contracted organisation obtains and holds on file evidence of the experience and the licence of that person.

All such cases as specified in this point must be reported to the competent authority within seven days after issuing such certification authorisation. The organisation issuing the one-off authorisation shall ensure that any such maintenance that could affect flight safety is re-checked by an appropriately approved organisation.

*Regulation (EU) 2015/1088*

- (k) If the organisation performs airworthiness reviews and issues the corresponding airworthiness review certificate for ELA1 aircraft not involved in commercial operations in accordance with [M.A.901\(l\)](#), it shall have airworthiness review staff qualified and authorised in accordance with [M.A.901\(l\)1](#).

*Regulation (EU) 2015/1088*

- (l) If the organisation is involved in the development and processing of approval of the maintenance programme for ELA2 aircraft not involved in commercial operations in accordance with [M.A.201\(e\)\(ii\)](#), it shall have qualified staff who shall be able to show relevant knowledge and experience.

## AMC 145.A.30(a) Personnel requirements

*ED Decision 2015/029/R*

With regard to the accountable manager, it is normally intended to mean the chief executive officer of the approved maintenance organisation, who by virtue of position has overall (including in particular financial) responsibility for running the organisation. The accountable manager may be the accountable manager for more than one organisation and is not required to be necessarily knowledgeable on technical matters as the maintenance organisation exposition defines the maintenance standards. When the accountable manager is not the chief executive officer the competent authority will need to be assured that such an accountable manager has direct access to chief executive officer and has a sufficiency of 'maintenance funding' allocation.

## AMC 145.A.30(b) Personnel requirements

*ED Decision 2015/029/R*

1. Dependent upon the size of the organisation, the [Part-145](#) functions may be subdivided under individual managers or combined in any number of ways.
2. The organisation should have, dependent upon the extent of approval, a base maintenance manager, a line maintenance manager, a workshop manager and a quality manager, all of whom should report to the accountable manager except in small [Part-145](#) organisation where any one manager may also be the accountable manager, as determined by the competent authority, he/she may also be the line maintenance manager or the workshop manager.
3. The base maintenance manager is responsible for ensuring that all maintenance required to be carried out in the hangar, plus any defect rectification carried out during base maintenance, is carried out to the design and quality standards specified in [145.A.65\(b\)](#). The base maintenance

manager is also responsible for any corrective action resulting from the quality compliance monitoring of [145.A.65\(c\)](#).

4. The line maintenance manager is responsible for ensuring that all maintenance required to be carried out on the line including line defect rectification is carried out to the standards specified in [145.A.65\(b\)](#) and also responsible for any corrective action resulting from the quality compliance monitoring of [145.A.65\(c\)](#).
5. The workshop manager is responsible for ensuring that all work on aircraft components is carried out to the standards specified in [145.A.65\(b\)](#) and also responsible for any corrective action resulting from the quality compliance monitoring of [145.A.65\(c\)](#).
6. The quality manager's responsibility is specified in [145.A.30\(c\)](#).
7. Notwithstanding the example sub-paragraphs 2 - 6 titles, the organisation may adopt any title for the foregoing managerial positions but should identify to the competent authority the titles and persons chosen to carry out these functions.
8. Where an organisation chooses to appoint managers for all or any combination of the identified [Part-145](#) functions because of the size of the undertaking, it is necessary that these managers report ultimately through either the base maintenance manager or line maintenance manager or workshop manager or quality manager, as appropriate, to the accountable manager.

NOTE: Certifying staff may report to any of the managers specified depending upon which type of control the approved maintenance organisation uses (for example licensed engineers/independent inspection/dual function supervisors etc.) so long as the quality compliance monitoring staff specified in [145.A.65\(c\)\(1\)](#) remain independent.

### AMC 145.A.30(c) Personnel requirements

*ED Decision 2015/029/R*

Monitoring the quality system includes requesting remedial action as necessary by the accountable manager and the nominated persons referred to in [145.A.30\(b\)](#).

### AMC 145.A.30(d) Personnel requirements

*ED Decision 2015/029/R*

1. Has sufficient staff means that the organisation employs or contracts competent staff, as detailed in the man-hour plan, of which at least half the staff that perform maintenance in each workshop, hangar or flight line on any shift should be employed to ensure organisational stability. For the purpose of meeting a specific operational necessity, a temporary increase of the proportion of contracted staff may be permitted to the organisation by the competent authority, in accordance with an approved procedure which should describe the extent, specific duties, and responsibilities for ensuring adequate organisation stability. For the purpose of this subparagraph, employed means the person is directly employed as an individual by the maintenance organisation approved under [Part-145](#), whereas contracted means the person is employed by another organisation and contracted by that organisation to the maintenance organisation approved under [Part-145](#).
2. The maintenance man-hour plan should take into account all maintenance activities carried out outside the scope of the [Part-145](#) approval.

The planned absence (for training, vacations, etc.) should be considered when developing the man-hour plan.

3. The maintenance man-hour plan should relate to the anticipated maintenance work load except that when the organisation cannot predict such workload, due to the short term nature of its contracts, then such plan should be based upon the minimum maintenance workload needed for commercial viability. Maintenance work load includes all necessary work such as, but not limited to, planning, maintenance record checks, production of worksheets/cards in paper or electronic form, accomplishment of maintenance, inspection and the completion of maintenance records.
4. In the case of aircraft base maintenance, the maintenance man-hour plan should relate to the aircraft hangar visit plan as specified in [AMC 145.A.25\(a\)](#).
5. In the case of aircraft component maintenance, the maintenance man-hour plan should relate to the aircraft component planned maintenance as specified in [145.A.25\(a\)\(2\)](#).
6. The quality monitoring compliance function man-hours should be sufficient to meet the requirement of [145.A.65\(c\)](#) which means taking into account [AMC 145.A.65\(c\)](#). Where quality monitoring staff perform other functions, the time allocated to such functions needs to be taken into account in determining quality monitoring staff numbers.
7. The maintenance man-hour plan should be reviewed at least every 3 months and updated when necessary.
8. Significant deviation from the maintenance man-hour plan should be reported through the departmental manager to the quality manager and the accountable manager for review. Significant deviation means more than a 25% shortfall in available man-hours during a calendar month for any one of the functions specified in [145.A.30\(d\)](#).

## AMC1 145.A.30(e) Personnel requirements

*ED Decision 2015/029/R*

Competence should be defined as a measurable skill or standard of performance, knowledge and understanding, taking into consideration attitude and behaviour.

The referenced procedure requires amongst others that planners, mechanics, specialised services staff, supervisors, certifying staff and support staff, whether employed or contracted, are assessed for competence before unsupervised work commences and competence is controlled on a continuous basis.

Competence should be assessed by evaluation of:

- on-the-job performance and/or testing of knowledge by appropriately qualified personnel, and
- records for basic, organisational, and/or product type and differences training, and
- experience records.

Validation of the above could include a confirmation check with the organisation(s) that issued such document(s). For that purpose, experience/training may be recorded in a document such as a log book or based on the suggested template in [GM3 145.A.30\(e\)](#).

As a result of this assessment, an individual's qualification should determine:

- which level of ongoing supervision would be required or whether unsupervised work could be permitted.
- whether there is a need for additional training.

A record of such qualification and competence assessment should be kept.

This should include copies of all documents that attest to qualification, such as the licence and/or any authorisation held, as applicable.

For a proper competence assessment of its personnel, the organisation should consider that:

1. In accordance with the job function, adequate initial and recurrent training should be provided and recorded to ensure continued competence so that it is maintained throughout the duration of employment/contract.
2. All staff should be able to demonstrate knowledge of and compliance with the maintenance organisation procedures, as applicable to their duties.
3. All staff should be able to demonstrate an understanding of human factors and human performance issues in relation with their job function and be trained as per [AMC2 145.A.30\(e\)](#).
4. To assist in the assessment of competence and to establish the training needs analysis, job descriptions are recommended for each job function in the organisation. Job descriptions should contain sufficient criteria to enable the required competence assessment.
5. Criteria should allow the assessment to establish that, among others (titles might be different in each organisation):
  - Managers are able to properly manage the work output, processes, resources and priorities described in their assigned duties and responsibilities in a safe compliant manner in accordance with regulations and organisation procedures.
  - Planners are able to interpret maintenance requirements into maintenance tasks, and have an understanding that they have no authority to deviate from the maintenance data.
  - Supervisors are able to ensure that all required maintenance tasks are carried out and, where not completed or where it is evident that a particular maintenance task cannot be carried out to the maintenance data, then such problems will be reported to the [145.A.30\(c\)](#) person for appropriate action. In addition, for those supervisors, who also carry out maintenance tasks, that they understand such tasks should not be undertaken when incompatible with their management responsibilities.
  - Mechanics are able to carry out maintenance tasks to any standard specified in the maintenance data and will notify supervisors of defects or mistakes requiring rectification to re-establish required maintenance standards.
  - Specialised services staff are able to carry out specialised maintenance tasks to the standard specified in the maintenance data. They should be able to communicate with supervisors and report accurately when necessary.
  - Support staff are able to determine that relevant tasks or inspections have been carried out to the required standard.
  - Certifying staff are able to determine when the aircraft or aircraft component is ready to release to service and when it should not be released to service.
  - Quality audit staff are able to monitor compliance with [Part-145](#) identifying noncompliance in an effective and timely manner so that the organisation may remain in compliance with Part-145.

Competence assessment should be based upon the procedure specified in [GM2 145.A.30\(e\)](#).

## AMC2 145.A.30(e) Personnel requirements

*ED Decision 2015/029/R*

In respect to the understanding of the application of human factors and human performance issues, all maintenance organisation personnel should have received an initial and continuation human factors training. This should concern to a minimum:

- Post-holders, managers, supervisors;
  - Certifying staff, support staff and mechanics;
  - Technical support personnel such as planners, engineers, technical record staff;
  - Quality control/assurance staff;
  - Specialised services staff;
  - Human factors staff/human factors trainers;
  - Store department staff, purchasing department staff;
  - Ground equipment operators.
1. Initial human factors training should cover all the topics of the training syllabus specified in [GM 145.A.30\(e\)](#) either as a dedicated course or else integrated within other training. The syllabus may be adjusted to reflect the particular nature of the organisation. The syllabus may also be adjusted to meet the particular nature of work for each function within the organisation. For example:
- small organisations not working in shifts may cover in less depth subjects related to teamwork and communication;
  - planners may cover in more depth the scheduling and planning objective of the syllabus and in less depth the objective of developing skills for shift working.

All personnel, including personnel being recruited from any other organisation should receive initial human factors training compliant with the organisation's training standards prior to commencing actual job function, unless their competence assessment justifies that there is no need for such training. Newly directly employed personnel working under direct supervision may receive training within 6 months after joining the maintenance organisation.

2. The purpose of human factors continuation training is primarily to ensure that staff remain current in terms of human factors and also to collect feedback on human factors issues. Consideration should be given to the possibility that such training has the involvement of the quality department. There should be a procedure to ensure that feedback is formally passed from the trainers to the quality department to initiate action where necessary.

Human factors continuation training should be of an appropriate duration in each two year period in relation to relevant quality audit findings and other internal/external sources of information on human errors in maintenance available to the organisation.

3. Human factors training may be conducted by the maintenance organisation itself, or independent trainers, or any training organisations acceptable to the competent authority.
4. The human factors training procedures should be specified in the maintenance organisation exposition.

## AMC3 145.A.30(e) Personnel requirements

*ED Decision 2015/029/R*

Additional training in fuel tank safety as well as associated inspection standards and maintenance procedures should be required for maintenance organisations' technical personnel, especially technical personnel involved in the compliance of CDCCL tasks.

EASA guidance is provided for training to maintenance organisation personnel in [Appendix IV to AMC 145.A.30\(e\) and 145.B.10\(3\)](#).

## AMC4 145.A.30(e) Personnel requirements

*ED Decision 2015/029/R*

Competence assessment should include the verification for the need of additional EWIS training when relevant.

EASA guidance is provided for EWIS training programme to maintenance organisation personnel in AMC 20-22.

## GM1 145.A.30(e) Personnel requirements

*ED Decision 2016/011/R*

### TRAINING SYLLABUS FOR INITIAL HUMAN FACTORS TRAINING

The training syllabus below identifies the topics and subtopics to be addressed during the human factors training.

The maintenance organisation may combine, divide, change the order of any subject of the syllabus to suit its own needs, as long as all subjects are covered to a level of detail appropriate to the organisation and its personnel.

Some of the topics may be covered in separate training (health and safety, management, supervisory skills, etc.) in which case duplication of training is not necessary.

Where possible, practical illustrations and examples should be used, especially accident and incident reports.

Topics should be related to existing legislation, where relevant. Topics should be related to existing guidance/advisory material, where relevant (e.g. ICAO HF Digests and Training Manual).

Topics should be related to maintenance engineering where possible; too much unrelated theory should be avoided.

1. General/Introduction to human factors
  - 1.1. Need to address human factors
  - 1.2. Statistics
  - 1.3. Incidents
2. Safety Culture/Organisational factors
3. Human Error
  - 3.1. Error models and theories
  - 3.2. Types of errors in maintenance tasks
  - 3.3. Violations

- 3.4. Implications of errors
- 3.5. Avoiding and managing errors
- 3.6. Human reliability
- 4. Human performance & limitations
  - 4.1. Vision
  - 4.2. Hearing
  - 4.3. Information-processing
  - 4.4. Attention and perception
  - 4.5. Situational awareness
  - 4.6. Memory
  - 4.7. Claustrophobia and physical access
  - 4.8. Motivation
  - 4.9. Fitness/Health
  - 4.10. Stress
  - 4.11. Workload management
  - 4.12. Fatigue
  - 4.13. Alcohol, medication, drugs
  - 4.14. Physical work
  - 4.15. Repetitive tasks/complacency
- 5. Environment
  - 5.1. Peer pressure
  - 5.2. Stressors
  - 5.3. Time pressure and deadlines
  - 5.4. Workload
  - 5.5. Shift Work
  - 5.6. Noise and fumes
  - 5.7. Illumination
  - 5.8. Climate and temperature
  - 5.9. Motion and vibration
  - 5.10. Complex systems
  - 5.11. Hazards in the workplace
  - 5.12. Lack of manpower
  - 5.13. Distractions and interruptions
- 6. Procedures, information, tools and practices
  - 6.1. Visual Inspection

- 6.2. Work logging and recording
- 6.3. Procedure - practice/mismatch/norms
- 6.4. Technical documentation - access and quality
- 6.5. Critical maintenance tasks and error-capturing methods (independent inspection, reinspection, etc.)
7. Communication
  - 7.1. Shift/Task handover
  - 7.2. Dissemination of information
  - 7.3. Cultural differences
8. Teamwork
  - 8.1. Responsibility
  - 8.2. Management, supervision and leadership
  - 8.3. Decision making
9. Professionalism and integrity
  - 9.1. Keeping up to date; currency
  - 9.2. Error provoking behaviour
  - 9.3. Assertiveness
10. Organisation's HF program
  - 10.1. Reporting errors
  - 10.2. Disciplinary policy
  - 10.3. Error investigation
  - 10.4. Action to address problems
  - 10.5. Feedback

## **GM2 145.A.30(e) Competence assessment procedure**

*ED Decision 2016/011/R*

The organisation should develop a procedure describing the process of competence assessment of personnel. The procedure should specify:

- persons responsible for this process,
- when the assessment should take place,
- credits from previous assessments,
- validation of qualification records,
- means and methods for the initial assessment,
- means and methods for the continuous control of competence including feedback on personnel performance,
- competences to be observed during the assessment in relation with each job function,



- actions to be taken when assessment is not satisfactory,
- recording of assessment results.

For example, according to the job functions and the scope, size and complexity of the organisation, the assessment may consider the following (the table is not exhaustive):

	Managers	Planners	Supervisor	Certifying staff and support staff	Mechanics	Specialised Service staff	Quality audit staff
Knowledge of applicable officially recognised standards						X	X
Knowledge of auditing techniques: planning, conducting and reporting							X
Knowledge of human factors, human performance and limitations	X	X	X	X	X	X	X
Knowledge of logistics processes	X	X	X				
Knowledge of organisation capabilities, privileges and limitations	X	X	X	X		X	X
Knowledge of Part-M, Part-145 and any other relevant regulations	X	X	X	X			X
Knowledge of relevant parts of the maintenance organisation exposition and procedures	X	X	X	X	X	X	X
Knowledge of occurrence reporting system and understanding of the importance of reporting occurrences, incorrect maintenance data and existing or potential defects		X	X	X	X	X	
Knowledge of safety risks linked to the working environment	X	X	X	X	X	X	X
Knowledge on CDCCL when relevant	X	X	X	X	X	X	X
Knowledge on EWIS when relevant	X	X	X	X	X	X	X
Understanding of professional integrity, behaviour and attitude towards safety	X	X	X	X	X	X	X
Understanding of conditions for ensuring continuing airworthiness of aircraft and components				X			X
Understanding of his/her own human performance and limitations	X	X	X	X	X	X	X
Understanding of personnel authorisations and limitations	X	X	X	X	X	X	X
Understanding critical maintenance task		X	X	X	X		X
Ability to compile and control completed work cards		X	X	X			
Ability to consider human performance and limitations.	X	X	X	X			X

	Managers	Planners	Supervisor	Certifying staff and support staff	Mechanics	Specialised Service staff	Quality audit staff
Ability to determine required qualifications for task performance		X	X	X			
Ability to identify and rectify existing and potential unsafe conditions			X	X	X	X	X
Ability to manage third parties involved in maintenance activity		X	X				
Ability to confirm proper accomplishment of maintenance tasks			X	X	X	X	
Ability to identify and properly plan performance of critical maintenance tasks		X	X	X			
Ability to prioritise tasks and report discrepancies		X	X	X	X		
Ability to process the work requested by the operator		X	X	X			
Ability to promote the safety and quality policy	X		X				
Ability to properly process removed, uninstalled and rejected parts			X	X	X	X	
Ability to properly record and sign for work accomplished			X	X	X	X	
Ability to recognise the acceptability of parts to be installed prior to fitment				X	X		
Ability to split complex maintenance tasks into clear stages		X					
Ability to understand work orders, work cards and refer to and use applicable maintenance data		X	X	X	X	X	X
Ability to use information systems	X	X	X	X	X	X	X
Ability to use, control and be familiar with required tooling and/or equipment			X	X	X	X	
Adequate communication and literacy skills	X	X	X	X	X	X	X
Analytical and proven auditing skills (for example, objectivity, fairness, open-mindedness, determination, ...)							X
Maintenance error investigation skills							X
Resources management and production planning skills	X	X	X				
Teamwork, decision-making and leadership skills	X		X				

## GM3 145.A.30(e) Template for recording experience/training

ED Decision 2015/029/R

The following template may be used to record the professional experience gained in an organisation and the training received and be considered during the competence assessment of the individual in another organisation.

<b>Aviation Maintenance personnel experience credential</b>					
Name		Given name			
Address					
Telephone		E-mail			
Independent worker <input type="checkbox"/>					
Trade Group: airframe <input type="checkbox"/> engine <input type="checkbox"/> electric <input type="checkbox"/> avionics <input type="checkbox"/> other (specify) <input type="checkbox"/> .....					
<b>Employer's details (when applicable)</b>					
Name					
Address					
Telephone					
<b>Maintenance organisation details</b>					
Name					
Address					
Telephone					
Approval Number					
Period of employment		From:		To:	
<b>Domain of employment</b>					
<input type="checkbox"/> Planning		<input type="checkbox"/> Engineering		<input type="checkbox"/> Technical records	
<input type="checkbox"/> Store department		<input type="checkbox"/> Purchasing			
Mechanics/Technician					
<input type="checkbox"/> Line Maintenance		<input type="checkbox"/> Base Maintenance		<input type="checkbox"/> Component Maintenance	
<input type="checkbox"/> Servicing		<input type="checkbox"/> Removal/installation		<input type="checkbox"/> Testing/inspection	
<input type="checkbox"/> Scheduled Maintenance		<input type="checkbox"/> Inspection		<input type="checkbox"/> Repair	
<input type="checkbox"/> Trouble-shooting		<input type="checkbox"/> Trouble-shooting		<input type="checkbox"/> Overhaul	
		<input type="checkbox"/> Repair		<input type="checkbox"/> Re-treatment	
				<input type="checkbox"/> Reassembly	
A/C type		A/C type		Component type	
Certifying Staff and support staff					
<input type="checkbox"/> Cat. A		<input type="checkbox"/> Cat. B1		<input type="checkbox"/> Cat. B2	
<input type="checkbox"/> Cat. C		<input type="checkbox"/> Component type		<input type="checkbox"/> Other (e.g. NDT)	
A/C Type		A/C Type		Component Type	
A/C Type		A/C Type		Specify	
Certification privileges: Yes <input type="checkbox"/> / No <input type="checkbox"/>					
<input type="checkbox"/> Specialised services		Speciality ( <i>NDT, composites, welding, etc.</i> ):			
<input type="checkbox"/> Skilled personnel		Speciality ( <i>sheet metal, structures, wireman, upholstery, etc.</i> ):			
<input type="checkbox"/> Ground equipment operation					
<input type="checkbox"/> Quality control		<input type="checkbox"/> Quality assurance		<input type="checkbox"/> Training	
<b>Total number of check boxes ticked:</b>					<input type="checkbox"/>

**Details of employment**

**Training received from the contracting organisation**

Date                      Nature of training

Certified by:

Name:

Date:

Position:

Signature:

Contact details:

*Advisory note:        A copy of the present credential will be kept for at least 3 years from its issuance by the maintenance organisation.*

## AMC 145.A.30(f) Personnel requirements

ED Decision 2015/029/R

1. Continued airworthiness non-destructive testing means such testing specified by the type certificate holder /aircraft or engine or propeller manufacturer in accordance with the maintenance data as specified in [145.A.45](#) for in service aircraft/aircraft components for the purpose of determining the continued fitness of the product to operate safely.
2. Appropriately qualified means to Level 1, 2 or 3 as defined by the European Standard EN 4179 dependent upon the non-destructive testing function to be carried out.
3. Notwithstanding the fact that Level 3 personnel may be qualified via EN 4179 to establish and authorise methods, techniques, etc., this does not permit such personnel to deviate from methods and techniques published by the type certificate holder/manufacturer in the form of continued airworthiness data, such as in non-destructive test manuals or service bulletins, unless the manual or service bulletin expressly permits such deviation.
4. Notwithstanding the general references in EN 4179 to a national aerospace non-destructive testing (NDT) board, all examinations should be conducted by personnel or organisations under the general control of such a board. In the absence of a national aerospace NDT board, the

- aerospace NDT board of another Member State should be used, as defined by the competent authority.
5. Particular non-destructive test means any one or more of the following; Dye penetrant, magnetic particle, eddy current, ultrasonic and radiographic methods including X ray and gamma ray.
  6. It should be noted that new methods are and will be developed, such as, but not limited to thermography and shearography, which are not specifically addressed by EN 4179. Until the time this agreed standard is established, such methods should be carried out in accordance with the particular equipment manufacturer's recommendations including any training and examination process to ensure competence of the personnel in the process.
  7. Any maintenance organisation approved under [Part-145](#) that carries out NDT should establish NDT specialist qualification procedures detailed in the exposition and accepted by the competent authority.
  8. Boroscoping and other techniques such as delamination coin tapping are non-destructive inspections rather than non-destructive testing. Notwithstanding such differentiation, the maintenance organisation should establish an exposition procedure accepted by the competent authority to ensure that personnel who carry out and interpret such inspections are properly trained and assessed for their competence in the process. Non-destructive inspections, not being considered as NDT by [Part-145](#) are not listed in Appendix II under class rating D1.
  9. The referenced standards, methods, training and procedures should be specified in the maintenance organisation exposition.
  10. Any such personnel who intend to carry out and/or control a non-destructive test for which they were not qualified prior to the effective date of [Part-145](#) should qualify for such non-destructive test in accordance with EN 4179.
  11. In this context officially recognised standard means those standards established or published by an official body whether having legal personality or not, which are widely recognised by the air transport sector as constituting good practice.

## AMC 145.A.30(g) Personnel requirements

*ED Decision 2015/029/R*

1. For the purposes of [66.A.20\(a\)\(1\)](#) and [66.A.20\(a\)\(3\)\(ii\)](#) personnel, minor scheduled line maintenance means any minor scheduled inspection/check up to and including a weekly check specified in the aircraft maintenance programme. For aircraft maintenance programmes that do not specify a weekly check, the competent authority will determine the most significant check that is considered equivalent to a weekly check.
2. Typical tasks permitted after appropriate task training to be carried out by the [66.A.20\(a\)\(1\)](#) and the [66.A.20\(a\)\(3\)\(ii\)](#) personnel for the purpose of these personnel issuing an aircraft certificate of release to service as specified in [145.A.50](#) as part of minor scheduled line maintenance or simple defect rectification are contained in the following list:
  - (a) Replacement of wheel assemblies.
  - (b) Replacement of wheel brake units.
  - (c) Replacement of emergency equipment.
  - (d) Replacement of ovens, boilers and beverage makers.

- (e) Replacement of internal and external lights, filaments and flash tubes.
- (f) Replacement of windscreen wiper blades.
- (g) Replacement of passenger and cabin crew seats, seat belts and harnesses.
- (h) Closing of cowlings and refitment of quick access inspection panels.
- (i) Replacement of toilet system components but excluding gate valves.
- (j) Simple repairs and replacement of internal compartment doors and placards but excluding doors forming part of a pressure structure.
- (k) Simple repairs and replacement of overhead storage compartment doors and cabin furnishing items.
- (l) Replacement of static wicks.
- (m) Replacement of aircraft main and APU aircraft batteries.
- (n) Replacement of in-flight entertainment system components other than public address.
- (o) Routine lubrication and replenishment of all system fluids and gases.
- (p) The de-activation only of sub-systems and aircraft components as permitted by the operator's minimum equipment list where such de-activation is agreed by the competent authority as a simple task.
- (q) Inspection for and removal of de-icing/anti-icing fluid residues, including removal/closure of panels, cowls or covers or the use of special tools.
- (r) Any other task agreed by the competent authority as a simple task for a particular aircraft type. This may include defect deferment when all the following conditions are met:
  - There is no need for troubleshooting; and
  - The task is in the MEL; and
  - The maintenance action required by the MEL is agreed by the competent authority to be simple.

In the particular case of helicopters, and in addition to the items above, the following:

- (s) removal and installation of Helicopter Emergency Medical Service (HEMS) simple internal medical equipment.
- (t) removal and installation of external cargo provisions (i.e., external hook, mirrors) other than the hoist.
- (u) removal and installation of quick release external cameras and search lights.
- (v) removal and installation of emergency float bags, not including the bottles.
- (w) removal and installation of external doors fitted with quick release attachments.
- (x) removal and installation of snow pads/skid wear shoes/slump protection pads.

No task which requires troubleshooting should be part of the authorised maintenance actions. Release to service after rectification of deferred defects should be permitted as long as the task is listed above.

3. The requirement of having appropriate aircraft rated certifying staff qualified as category B1, B2, B3, as appropriate, in the case of aircraft line maintenance does not imply that the

organisation must have B1, B2 and B3 personnel at every line station. The MOE should have a procedure on how to deal with defects requiring B1, B2 or B3 certifying staff.

4. The competent authority may accept that in the case of aircraft line maintenance an organisation has only B1, B2 or B3 certifying staff, as appropriate, provided that the competent authority is satisfied that the scope of work, as defined in the Maintenance Organisation Exposition, does not need the availability of all B1, B2 and B3 certifying staff. Special attention should be taken to clearly limit the scope of scheduled and non-scheduled line maintenance (defect rectification) to only those tasks that can be certified by the available certifying staff category.

### AMC 145.A.30(h) Personnel requirements

*ED Decision 2015/029/R*

In accordance with [145.A.30\(h\)](#) and [145.A.35](#), the qualification requirements (basic licence, aircraft ratings, recent experience and continuation training) are identical for certifying staff and for support staff. The only difference is that support staff cannot hold certification privileges when performing this role since during base maintenance the release to service will be issued by category C certifying staff.

Nevertheless, the organisation may use as support staff (for base maintenance) persons who already hold certification privileges for line maintenance.

### AMC 145.A.30(j)(4) Personnel requirements

*ED Decision 2015/029/R*

1. For the issue of a limited certification authorisation:
  - (a) the commander should hold either an air transport pilots license (ATPL), or a commercial pilots license (CPL).
  - (b) The flight engineer should hold either an ATPL, CPL or a national flight engineer licence acceptable to the competent authority on the aircraft type.
2. In addition the limited certification authorisation is subject to the maintenance organisation exposition containing procedures to address the personnel requirements of [145.A.30\(e\)](#) and associated AMC and guidance material. The procedures should be accepted by the competent authority and should include as a minimum:
  - (a) Completion of adequate maintenance airworthiness regulation training.
  - (b) Completion of adequate task training for the specific task on the aircraft. The task training should be of sufficient duration to ensure that the individual has a thorough understanding of the task to be completed and will involve training in the use of associated maintenance data.
  - (c) Completion of the procedural training as specified in [Part-145](#).
- 2.(i) Typical tasks that may be certified and/or carried out by the commander holding an ATPL or CPL are minor maintenance or simple checks included in the following list:
  - (a) Replacement of internal lights, filaments and flash tubes.
  - (b) Closing of cowlings and refitment of quick access inspection panels.
  - (c) Role changes e.g. stretcher fit, dual controls, FLIR, doors, photographic equipment etc.

- (d) Inspection for and removal of de-icing/anti-icing fluid residues, including removal/closure of panels, cowls or covers that are easily accessible but not requiring the use of special tools.
  - (e) Any check/replacement involving simple techniques consistent with this AMC and as agreed by the competent authority.
- 2.(ii) Holders of flight engineer licence acceptable to the competent authority on the aircraft type, may only exercise this limited certification authorisation privilege when performing the duties of a flight engineer.
- In addition to paragraph 2(i)(a) to (e) other typical minor maintenance or simple defect rectification tasks that may be carried out are included in the following list:
- (a) Replacement of wheel assemblies.
  - (b) Replacement of simple emergency equipment that is easily accessible.
  - (c) Replacement of ovens, boilers and beverage makers.
  - (d) Replacement of external lights.
  - (e) Replacement of passenger and cabin crew seats, seat belts and harnesses.
  - (f) Simple replacement of overhead storage compartment doors and cabin furnishing items.
  - (g) Replacement of static wicks.
  - (h) Replacement of aircraft main and APU aircraft batteries.
  - (i) Replacement of in-flight entertainment system components other than public address.
  - (j) The de-activation only of sub-systems and aircraft components as permitted by the operator's minimum equipment list where such de-activation is agreed by the competent authority as a simple task.
  - (k) Re-setting of tripped circuit breakers under the guidance of maintenance control.
  - (l) Any other task agreed by the competent authority as a simple task for a particular aircraft type.
3. The authorisation should have a finite life of twelve months subject to satisfactory re-current training on the applicable aircraft type.

## **GM 145.A.30(j)(4) Personnel requirements (Flight crew)**

*ED Decision 2015/029/R*

For the holder of a flight engineer licence acceptable to the competent authority appendix 1 to JAR FCL 4.160 Technical Training Course (TTC) details the following subjects:

Familiarisation with basic maintenance procedures, to give additional technical background knowledge, especially with respect to the implication of systems malfunctions, and to train the applicant in maintenance related to the Minimum equipment list (MEL).

The theoretical knowledge instruction consists of 100 hours and includes the following elements:

1. Airframe and systems
2. Electrics
3. Powerplant and emergency equipment



#### 4. Flight instruments and automatic flight control systems

Practical skills training provided by an organisation approved under [Part-145](#) is given which includes 35 hours practical experience in the following subjects:

- Fuselage and flight controls,
- Engines,
- Instruments,
- Landing gear and brakes,
- Cabin/cockpit/emergency equipment,
- De-icing/anti-icing related maintenance activities;
- Ground handling and servicing,
- Certificate of completion.

Following successful completion of the technical training, the training organisation carrying out the theoretical knowledge instruction and/or the practical skill training should provide the applicant with a certificate of satisfactory completion of the course, or part thereof.

### AMC 145.A.30(j)(5) Personnel requirements

*ED Decision 2015/029/R*

1. For the purposes of this sub-paragraph ‘unforeseen’ means that the aircraft grounding could not reasonably have been predicted by the operator because the defect was unexpected due to being part of a hitherto reliable system.
2. A one-off authorisation should only be considered for issue by the quality department of the contracted organisation after it has made a reasoned judgement that such a requirement is appropriate under the circumstances and at the same time maintaining the required airworthiness standards. The organisation’s quality department will need to assess each situation individually prior to the issuance of a one-off authorisation.
3. A one-off authorisation should not be issued where the level of certification required could exceed the knowledge and experience level of the person it is issued to. In all cases, due consideration should be given to the complexity of the work involved and the availability of required tooling and/or test equipment needed to complete the work.

### AMC 145.A.30(j)(5)(i) Personnel requirements

*ED Decision 2015/029/R*

In those situations where the requirement for a one-off authorisation to issue a CRS for a task on an aircraft type for which certifying staff does not hold a type-rated authorisation has been identified, the following procedure is recommended:

1. Flight crew should communicate full details of the defect to the operator’s supporting maintenance organisation. If necessary, the supporting maintenance organisation will then request the use of a one-off authorisation from the quality department.
2. When issuing a one-off authorisation, the quality department of the organisation should verify that:

- (a) Full technical details relating to the work required to be carried out have been established and passed on to the certifying staff.
  - (b) The organisation has an approved procedure in place for coordinating and controlling the total maintenance activity undertaken at the location under the authority of the one-off authorisation.
  - (c) The person to whom a one-off authorisation is issued has been provided with all the necessary information and guidance relating to maintenance data and any special technical instructions associated with the specific task undertaken. A detailed step by step worksheet has been defined by the organisation, communicated to the one-off authorisation holder.
  - (d) The person holds authorisations of equivalent level and scope on other aircraft type of similar technology, construction and systems.
3. The one-off authorisation holder should sign off the detailed step by step worksheet when completing the work steps. The completed tasks should be verified by visual examination and/or normal system operation upon return to an appropriately approved [Part-145](#) maintenance facility.

### AMC 145.A.30(j)(5)(ii) Personnel requirements

*ED Decision 2015/029/R*

This paragraph addresses staff not employed by the maintenance organisation who meet the requirements of [145.A.30\(j\)\(5\)](#). In addition to the items listed in [AMC 145.A.30\(j\)\(5\)\(i\)](#), paragraph 1, 2(a), (b) and (c) and 3 the quality department of the organisation may issue such one-off authorisation providing full qualification details relating to the proposed certifying personnel are verified by the quality department and made available at the location.

### 145.A.35 Certifying staff and support staff

*Regulation (EU) No 1321/2014*

- (a) In addition to the appropriate requirements of points [145.A.30\(g\)](#) and [\(h\)](#), the organisation shall ensure that certifying staff and support staff have an adequate understanding of the relevant aircraft and/or components to be maintained together with the associated organisation procedures. In the case of certifying staff, this shall be accomplished before the issue or re-issue of the certification authorisation.
  - (i) ‘Support staff’ means those staff holding an aircraft maintenance licence under [Annex III \(Part-66\)](#) in category B1, B2 and/or B3 with the appropriate aircraft ratings, working in a base maintenance environment while not necessarily holding certification privileges.
  - (ii) ‘Relevant aircraft and/or components’, means those aircraft or components specified in the particular certification authorisation.
  - (iii) ‘Certification authorisation’ means the authorisation issued to certifying staff by the organisation and which specifies the fact that they may sign certificates of release to service within the limitations stated in such authorisation on behalf of the approved organisation.
- (b) Excepting those cases listed in points [145.A.30\(j\)](#) and [66.A.20\(a\)3\(ii\)](#) the organisation may only issue a certification authorisation to certifying staff in relation to the basic categories or subcategories and any type rating listed on the aircraft maintenance licence as required by

*Regulation (EU) No 1321/2014*

[Annex III \(Part-66\)](#), subject to the licence remaining valid throughout the validity period of the authorisation and the certifying staff remaining in compliance with [Annex III \(Part-66\)](#).

*Regulation (EU) No 1321/2014*

- (c) The organisation shall ensure that all certifying staff and support staff are involved in at least 6 months of actual relevant aircraft or component maintenance experience in any consecutive 2-year period.

For the purpose of this point ‘involved in actual relevant aircraft or component maintenance’ means that the person has worked in an aircraft or component maintenance environment and has either exercised the privileges of the certification authorisation and/or has actually carried out maintenance on at least some of the aircraft type or aircraft group systems specified in the particular certification authorisation.

*Regulation (EU) No 1321/2014*

- (d) The organisation shall ensure that all certifying staff and support staff receive sufficient continuation training in each two year period to ensure that such staff have up-to-date knowledge of relevant technology, organisation procedures and human factor issues.

*Regulation (EU) No 1321/2014*

- (e) The organisation shall establish a programme for continuation training for certifying staff and support staff, including a procedure to ensure compliance with the relevant points of [145.A.35](#) as the basis for issuing certification authorisations under this Part to certifying staff, and a procedure to ensure compliance with [Annex III \(Part-66\)](#).

*Regulation (EU) No 1321/2014*

- (f) Except where any of the unforeseen cases of point [145.A.30\(j\)\(5\)](#) apply, the organisation shall assess all prospective certifying staff for their competence, qualification and capability to carry out their intended certifying duties in accordance with a procedure as specified in the exposition prior to the issue or re-issue of a certification authorisation under this Part.

*Regulation (EU) No 1321/2014*

- (g) When the conditions of points (a), (b), (d), (f) and, where applicable, point (c) have been fulfilled by the certifying staff, the organisation shall issue a certification authorisation that clearly specifies the scope and limits of such authorisation. Continued validity of the certification authorisation is dependent upon continued compliance with points (a), (b), (d), and where applicable, (c).

*Regulation (EU) No 1321/2014*

- (h) The certification authorisation must be in a style that makes its scope clear to the certifying staff and any authorised person who may require to examine the authorisation. Where codes are used to define scope, the organisation shall make a code translation readily available. ‘Authorised person’ means the officials of the competent authorities, the Agency and the Member State who has responsibility for the oversight of the maintained aircraft or component.

*Regulation (EU) No 1321/2014*

- (i) The person responsible for the quality system shall also remain responsible on behalf of the organisation for issuing certification authorisations to certifying staff. Such person may nominate other persons to actually issue or revoke the certification authorisations in accordance with a procedure as specified in the exposition.

*Regulation (EU) No 1321/2014*

- (j) The organisation shall maintain a record of all certifying staff and support staff, which shall contain:

1. the details of any aircraft maintenance licence held under [Annex III \(Part-66\)](#); and
2. all relevant training completed; and
3. the scope of the certification authorisations issued, where relevant; and
4. particulars of staff with limited or one-off certification authorisations.

The organisation shall retain the record for at least three years after the staff referred to in this point have ceased employment with the organisation or as soon as the authorisation has been withdrawn. In addition, upon request, the maintenance organisation shall furnish the staff referred to in this point with a copy of their personal record on leaving the organisation.

The staff referred to in this point shall be given access on request to their personal records as detailed above.

*Regulation (EU) No 1321/2014*

- (k) The organisation shall provide certifying staff with a copy of their certification authorisation in either a documented or electronic format.

*Regulation (EU) No 1321/2014*

- (l) Certifying staff shall produce their certification authorisation to any authorised person within 24 hours.

*Regulation (EU) No 1321/2014*

- (m) The minimum age for certifying staff and support staff is 21 years.

*Regulation (EU) No 1321/2014*

- (n) The holder of a category A aircraft maintenance licence may only exercise certification privileges on a specific aircraft type following the satisfactory completion of the relevant category A aircraft task training carried out by an organisation appropriately approved in accordance with [Annex II \(Part-145\)](#) or [Annex IV \(Part-147\)](#). This training shall include practical hands on training and theoretical training as appropriate for each task authorised. Satisfactory completion of training shall be demonstrated by an examination or by workplace assessment carried out by the organisation.

*Regulation (EU) No 1321/2014*

- (o) The holder of a category B2 aircraft maintenance licence may only exercise the certification privileges described in point [66.A.20\(a\)\(3\)\(ii\)](#) of [Annex III \(Part-66\)](#) following the satisfactory completion of (i) the relevant category A aircraft task training and (ii) 6 months of documented practical experience covering the scope of the authorisation that will be issued. The task training shall include practical hands on training and theoretical training as appropriate for each task authorised. Satisfactory completion of training shall be demonstrated by an examination or by workplace assessment. Task training and examination/assessment shall be carried out by the maintenance organisation issuing the certifying staff authorisation. The practical experience shall be also obtained within such maintenance organisation.

## AMC 145.A.35(a) Certifying staff and support staff

*ED Decision 2015/029/R*

1. Holding a [Part-66](#) licence with the relevant type/group rating, or a national qualification in the case of components, does not mean by itself that the holder is qualified to be authorised as certifying staff and/or support staff. The organisation is responsible to assess the competence of the holder for the scope of maintenance to be authorised.

2. The sentence 'the organisation shall ensure that certifying staff and support staff have an adequate understanding of the relevant aircraft and/or components to be maintained together with the associated organisation procedures' means that the person has received training and has been successfully assessed on:
- the type of aircraft or component;
  - the differences on:
    - the particular model/variant;
    - the particular configuration.

The organisation should specifically ensure that the individual competencies have been established with regard to:

- relevant knowledge, skills and experience in the product type and configuration to be maintained, taking into account the differences between the generic aircraft type rating training that the person received and the specific configuration of the aircraft to be maintained.
  - appropriate attitude towards safety and observance of procedures.
  - knowledge of the associated organisation and operator procedures (i.e. handling and identification of components, MEL use, Technical Log use, independent checks, etc.).
3. Some special maintenance tasks may require additional specific training and experience, including but not limited to:
- in-depth troubleshooting;
  - very specific adjustment or test procedures;
  - rigging;
  - engine run-up, starting and operating the engines, checking engine performance characteristics, normal and emergency engine operation, associated safety precautions and procedures;
  - extensive structural/system inspection and repair;
  - other specialised maintenance required by the maintenance programme.

For engine run-up training, simulators and/or real aircraft should be used.

4. The satisfactory assessment of the competence should be conducted in accordance with a procedure approved by the competent authority (item 3.4 of the MOE, as described in [AMC 145.A.70\(a\)](#)).
5. The organisation should hold copies of all documents that attest the competence and recent experience for the period described in [145.A.35\(j\)](#).

Additional information is provided in [AMC 66.A.20\(b\)3](#).

## **AMC 145.A.35(b) Certifying staff and support staff**

*ED Decision 2015/029/R*

The organisation issues the certification authorisation when satisfied that compliance has been established with the appropriate paragraphs of [Part-145](#) and [Part-66](#). In granting the certification authorisation the maintenance organisation approved under Part-145 needs to be satisfied that the

person holds a valid [Part-66](#) aircraft maintenance licence and may need to confirm such fact with the competent authority of the Member State that issued the licence.

### AMC 145.A.35(c) Certifying staff and support staff

*ED Decision 2015/029/R*

For the interpretation of '6 months of actual relevant aircraft maintenance experience in any consecutive 2-year period', the provisions of [AMC 66.A.20\(b\)2](#) are applicable.

### AMC 145.A.35(d) Certifying staff and support staff

*ED Decision 2015/029/R*

1. Continuation training is a two way process to ensure that certifying staff remain current in terms of procedures, human factors and technical knowledge and that the organisation receives feedback on the adequacy of its procedures and maintenance instructions. Due to the interactive nature of this training, consideration should be given to the possibility that such training has the involvement of the quality department to ensure that feedback is actioned. Alternatively, there should be a procedure to ensure that feedback is formally passed from the training department to the quality department to initiate action.
2. Continuation training should cover changes in relevant requirements such as [Part-145](#), changes in organisation procedures and the modification standard of the products being maintained plus human factor issues identified from any internal or external analysis of incidents. It should also address instances where staff failed to follow procedures and the reasons why particular procedures are not always followed. In many cases the continuation training will reinforce the need to follow procedures and ensure that incomplete or incorrect procedures are identified to the company in order that they can be corrected. This does not preclude the possible need to carry out a quality audit of such procedures.
3. Continuation training should be of sufficient duration in each 2 year period to meet the intent of [145.A.35\(d\)](#) and may be split into a number of separate elements. [145.A.35\(d\)](#) requires such training to keep certifying staff updated in terms of relevant technology, procedures and human factors issues which means it is one part of ensuring quality. Therefore sufficient duration should be related to relevant quality audit findings and other internal / external sources of information available to the organisation on human errors in maintenance. This means that in the case of an organisation that maintains aircraft with few relevant quality audit findings, continuation training could be limited to days rather than weeks, whereas a similar organisation with a number of relevant quality audit findings, such training may take several weeks. For an organisation that maintains aircraft components, the duration of continuation training would follow the same philosophy but should be scaled down to reflect the more limited nature of the activity. For example certifying staff who release hydraulic pumps may only require a few hours of continuation training whereas those who release turbine engine may only require a few days of such training. The content of continuation training should be related to relevant quality audit findings and it is recommended that such training is reviewed at least once in every 24 month period.
4. The method of training is intended to be a flexible process and could, for example, include a [Part-147](#) continuation training course, aeronautical college courses, internal short duration courses, seminars, etc. The elements, general content and length of such training should be specified in the maintenance organisation exposition unless such training is undertaken by an organisation approved under [Part-147](#) when such details may be specified under the approval and cross referenced in the maintenance organisation exposition.

## AMC 145.A.35(e) Certifying staff and support staff

ED Decision 2015/029/R

The programme for continuation training should list all certifying staff and support staff and when training will take place, the elements of such training and an indication that it was carried out reasonably on time as planned. Such information should subsequently be transferred to the certifying staff and support staff record as required by [145.A.35\(j\)](#).

## AMC 145.A.35(f) Certifying staff and support staff

ED Decision 2015/029/R

As stated in [145.A.35\(f\)](#), except where any of the unforeseen cases of [145.A.30\(j\)\(5\)](#) applies, all prospective certifying staff and support staff should be assessed for competence related to their intended duties in accordance with AMCs 1, 2, 3 and 4 to [145.A.30\(e\)](#), as applicable.

## AMC 145.A.35(j) Certifying staff and support staff

ED Decision 2015/029/R

1. The following minimum information as applicable should be kept on record in respect of each certifying staff and support staff:
  - (a) Name
  - (b) Date of Birth
  - (c) Basic Training
  - (d) Type Training
  - (e) Continuation Training
  - (f) Experience
  - (g) Qualifications relevant to the authorisation
  - (h) Scope of the authorisation
  - (i) Date of first issue of the authorisation
  - (j) If appropriate - expiry date of the authorisation
  - (k) Identification Number of the authorisation
2. The record may be kept in any format but should be controlled by the organisation's quality department. This does not mean that the quality department should run the record system.
3. Persons authorised to access the system should be maintained at a minimum to ensure that records cannot be altered in an unauthorised manner or that such confidential records become accessible to unauthorised persons.
4. The competent authority is an authorised person when investigating the records system for initial and continued approval or when the competent authority has cause to doubt the competence of a particular person.



## AMC 145.A.35(n) Certifying staff and support staff

ED Decision 2015/029/R

1. It is the responsibility of the [Part-145](#) organisation issuing the category A certifying staff authorisation to ensure that the task training received by this person covers all the tasks to be authorised. This is particularly important in those cases where the task training has been provided by a [Part-147](#) organisation or by a Part-145 organisation different from the one issuing the authorisation.
2. 'Appropriately approved in accordance with [Annex IV \(Part-147\)](#)' means an organisation holding an approval to provide category A task training for the corresponding aircraft type.
3. 'Appropriately approved in accordance with [Annex II \(Part-145\)](#)' means an organisation holding a maintenance organisation approval for the corresponding aircraft type.

## AMC 145.A.35(o) Certifying staff and support staff

ED Decision 2015/029/R

1. The privilege for a B2 licence holder to release minor scheduled line maintenance and simple defect rectification in accordance with [66.A.20\(a\)\(3\)\(ii\)](#) can only be granted by the [Part-145](#) approved organisation where the licence holder is employed/contracted after meeting all the requirements specified in [145.A.35\(o\)](#). This privilege cannot be transferred to another [Part-145](#) approved organisation.
2. When a B2 licence holder already holds a certifying staff authorisation containing minor scheduled line maintenance and simple defect rectification for a particular aircraft type, new tasks relevant to category A can be added to that type without requiring another 6 months of experience. However, task training (theoretical plus practical hands-on) and examination/assessment for these additional tasks is still required.
3. When the certifying staff authorisation intends to cover several aircraft types, the experience may be combined within a single 6-month period.
4. For the addition of new types to the certifying staff authorisation, another 6 months should be required unless the aircraft is considered similar per [AMC 66.A.20\(b\)2](#) to the one already held.
5. The term '6 months of experience' may include full-time employment or part-time employment. The important aspect is that the person has been involved during a period of 6 months (not necessarily every day) in those tasks which are going to be part of the authorisation.

## 145.A.36 Records of airworthiness review staff

Regulation (EU) 2015/1088

The organisation shall record all details concerning the airworthiness review staff and maintain a current list of all the airworthiness review staff together with their scope of approval as part of the organisation's exposition pursuant to point [145.A.70\(a\)6](#).

The organisation shall retain the record for at least three years after the staff referred to in this point have ceased employment (or engagement as a contractor or volunteer) with the organisation or as soon as the authorisation has been withdrawn. In addition, upon request, the maintenance organisation shall provide the staff referred to in this point with a copy of their personal record on leaving the organisation.

The staff referred to in this point shall be given access on request to their personal records.



## AMC 145.A.36 Records of airworthiness review staff

*ED Decision 2015/029/R*

The following minimum information, as applicable, should be kept on record in respect of each airworthiness review staff:

- (a) name;
- (b) date of birth;
- (c) certifying staff authorisation;
- (d) experience as certifying staff on ELA1 aircraft;
- (e) qualifications relevant to the approval (knowledge of relevant parts of [Part-M](#) and knowledge of the relevant airworthiness review procedures);
- (f) scope of the airworthiness review authorisation and personal authorisation reference;
- (g) date of the first issue of the airworthiness review authorisation; and
- (h) if appropriate, expiry date of the airworthiness review authorisation.

## 145.A.40 Equipment, tools and material

*Regulation (EU) No 1321/2014*

- (a) The organisation shall have available and use the necessary equipment, tools and material to perform the approved scope of work.
  - 1. Where the manufacturer specifies a particular tool or equipment, the organisation shall use that tool or equipment, unless the use of alternative tooling or equipment is agreed by the competent authority via procedures specified in the exposition.
  - 2. Equipment and tools must be permanently available, except in the case of any tool or equipment that is so infrequently used that its permanent availability is not necessary. Such cases shall be detailed in an exposition procedure.
  - 3. An organisation approved for base maintenance shall have sufficient aircraft access equipment and inspection platforms/docking such that the aircraft can be properly inspected.
- (b) The organisation shall ensure that all tools, equipment and particularly test equipment, as appropriate, are controlled and calibrated according to an officially recognised standard at a frequency to ensure serviceability and accuracy. Records of such calibrations and traceability to the standard used shall be kept by the organisation.

## AMC 145.A.40(a) Equipment, tools and material

*ED Decision 2015/029/R*

Once the applicant for approval has determined the intended scope of approval for consideration by the competent authority, it will be necessary to show that all tools and equipment as specified in the maintenance data can be made available when needed. All such tools and equipment that require to be controlled in terms of servicing or calibration by virtue of being necessary to measure specified dimensions and torque figures etc, should be clearly identified and listed in a control register including any personal tools and equipment that the organisation agrees can be used.

## AMC 145.A.40(b) Equipment, tools and material

ED Decision 2015/029/R

1. The control of these tools and equipment requires that the organisation has a procedure to inspect/service and, where appropriate, calibrate such items on a regular basis and indicate to users that the item is within any inspection or service or calibration time-limit. A clear system of labelling all tooling, equipment and test equipment is therefore necessary giving information on when the next inspection or service or calibration is due and if the item is unserviceable for any other reason where it may not be obvious. A register should be maintained for all precision tooling and equipment together with a record of calibrations and standards used.
2. Inspection, service or calibration on a regular basis should be in accordance with the equipment manufacturers' instructions except where the organisation can show by results that a different time period is appropriate in a particular case.
3. In this context officially recognised standard means those standards established or published by an official body whether having legal personality or not, which are widely recognised by the air transport sector as constituting good practice.

## 145.A.42 Acceptance of components

Regulation (EU) No 1321/2014

- (a) All components shall be classified and appropriately segregated into the following categories:
  1. Components which are in a satisfactory condition, released on an [EASA Form 1](#) or equivalent and marked in accordance with Subpart Q of Annex I (Part-21) to Regulation (EU) No 748/2012.
  2. Unserviceable components which shall be maintained in accordance with this section.
  3. Unsalvageable components which are classified in accordance with point [145.A.42\(d\)](#).
  4. Standard parts used on an aircraft, engine, propeller or other aircraft component when specified in the manufacturer's illustrated parts catalogue and/or the maintenance data.
  5. Material both raw and consumable used in the course of maintenance when the organisation is satisfied that the material meets the required specification and has appropriate traceability. All material must be accompanied by documentation clearly relating to the particular material and containing a conformity to specification statement plus both the manufacturing and supplier source.
  6. Components referred to in point 21A.307(c) of Annex I (Part-21) to Regulation (EU) No 748/2012.
- (b) Prior to installation of a component, the organisation shall ensure that the particular component is eligible to be fitted when different modification and/or airworthiness directive standards may be applicable.
- (c) The organisation may fabricate a restricted range of parts to be used in the course of undergoing work within its own facilities provided procedures are identified in the exposition.
- (d) Components which have reached their certified life limit or contain a non-repairable defect shall be classified as unsalvageable and shall not be permitted to re-enter the component supply system unless certified life limits have been extended or a repair solution has been approved according to Annex I (Part-21) to Regulation (EU) No 748/2012.

- (e) Components referred to in point 21A.307(c) of Annex I (Part-21) to Regulation (EU) No 748/2012 shall only be installed if considered eligible for installation by the aircraft owner in its own aircraft.

### AMC 145.A.42(a) Acceptance of components

ED Decision 2015/029/R

1. A document equivalent to an [EASA Form 1](#) may be:
  - (a) a release document issued by an organisation under the terms of a bilateral agreement signed by the European Community;
  - (b) a release document issued by an organisation approved under the terms of a JAA bilateral agreement until superseded by the corresponding agreement signed by the European Community;
  - (c) a JAA Form One issued prior to 28 November 2004 by a JAR 145 organisation approved by a JAA Full Member State;
  - (d) in the case of new aircraft components that were released from manufacturing prior to the Part-21 compliance date the component should be accompanied by a JAA Form One issued by a JAR 21 organisation approved by a JAA Full Member Authority and within the JAA mutual recognition system;
  - (e) a JAA Form One issued prior to 28 September 2005 by a production organisation approved by a competent authority in accordance with its national regulations.
2. For acceptance of standard parts, raw material and consumable material, refer to [AMC M.A.501\(c\)](#) and [AMC M.A.501\(d\)](#).

### AMC 145.A.42(b) Acceptance of components

ED Decision 2015/029/R

The [EASA Form 1](#) or equivalent identifies the status of an aircraft component. Block 12 'Remarks' on the EASA Form 1 in some cases contains vital airworthiness related information which may need appropriate and necessary actions.

The receiving organisation should be satisfied that the component in question is in satisfactory condition and has been appropriately released to service. In addition, the organisation should ensure that the component meets the approved data/standard, such as the required design and modification standard. This may be accomplished by reference to the manufacturer's parts catalogue or other approved data (i.e. Service Bulletin). Care should also be taken in ensuring compliance with applicable airworthiness directives, the status of any life-limited parts fitted to the aircraft component as well as Critical Design Configuration Control Limitations.

### AMC 145.A.42(c) Acceptance of components

ED Decision 2015/029/R

1. The agreement by the competent authority for the fabrication of parts by the approved maintenance organisation should be formalised through the approval of a detailed procedure in the Maintenance Organisation Exposition. This AMC contains principles and conditions to be taken into account for the preparation of an acceptable procedure.
2. Fabrication, inspection assembly and test should be clearly within the technical and procedural capability of the organisation.

3. All necessary data to fabricate the part should be approved either by the Agency or the type certificate (TC) holder or Part-21 design organisation approval holder, or supplemental type certificate (STC) holder.
4. Items fabricated by an organisation approved under [Part-145](#) may only be used by that organisation in the course of overhaul, maintenance, modifications, or repair of aircraft or components undergoing work within its own facility. The permission to fabricate does not constitute approval for manufacture, or to supply externally and the parts do not qualify for certification on [EASA Form 1](#). This prohibition also applies to the bulk transfer of surplus inventory, in that locally fabricated parts are physically segregated and excluded from any delivery certification.
5. Fabrication of parts, modification kits etc. for onward supply and/or sale may not be conducted by an organisation approved under [Part-145](#).
6. The data specified in paragraph 3 may include repair procedures involving the fabrication of parts. Where the data on such parts is sufficient to facilitate fabrication, the parts may be fabricated by an organisation approved under [Part-145](#). Care should be taken to ensure that the data include details of part numbering, dimensions, materials, processes, and any special manufacturing techniques, special raw material specification or/and incoming inspection requirement and that the approved organisation has the necessary capability. That capability should be defined by way of exposition content. Where special processes or inspection procedures are defined in the approved data which are not available at the organisation the organisation cannot fabricate the part unless the TC/STC-holder gives an approved alternative.
7. Examples of fabrication under the scope of an [Part-145](#) approval can include but are not limited to the following:
  - (a) Fabrication of bushes, sleeves and shims.
  - (b) Fabrication of secondary structural elements and skin panels.
  - (c) Fabrication of control cables.
  - (d) Fabrication of flexible and rigid pipes.
  - (e) Fabrication of electrical cable looms and assemblies.
  - (f) Formed or machined sheet metal panels for repairs.

All the above fabricated parts should be in accordance with data provided in overhaul or repair manuals, modification schemes and service bulletins, drawings or otherwise approved by the competent authority.

Note: It is not acceptable to fabricate any item to pattern unless an engineering drawing of the item is produced which includes any necessary fabrication processes and which is acceptable to the competent authority.

8. Where a TC-holder or an approved production organisation is prepared to make available complete data which is not referred to in aircraft manuals or service bulletins but provides manufacturing drawings for items specified in parts lists, the fabrication of these items is not considered to be within the scope of an approval unless agreed otherwise by the competent authority in accordance with a procedure specified in the exposition.
9. Inspection and Identification.

Any locally fabricated part should be subjected to an inspection stage before, separately, and preferably independently from, any inspection of its installation. The inspection should

establish full compliance with the relevant manufacturing data, and the part should be unambiguously identified as fit for use by stating conformity to the approved data. Adequate records should be maintained of all such fabrication processes including, heat treatment and the final inspections. All parts, except those having not enough space, should carry a part number which clearly relates it to the manufacturing/inspection data. Additional to the part-number the organisation's identity should be marked on the part for traceability purposes.

## AMC 145.A.42(d) Acceptance of components

*ED Decision 2015/029/R*

1. The following types of components should typically be classified as unsalvageable:
  - (a) Components with non-repairable defects, whether visible or not to the naked eye;
  - (b) Components that do not meet design specifications, and cannot be brought into conformity with such specifications;
  - (c) Components subjected to unacceptable modification or rework that is irreversible;
  - (d) Certified life-limited parts that have reached or exceeded their certified life limits, or have missing or incomplete records;
  - (e) Components that cannot be returned to airworthy condition due to exposure to extreme forces, heat or adverse environment;
  - (f) Components for which conformity with an applicable airworthiness directive cannot be accomplished;
  - (g) Components for which maintenance records and/or traceability to the manufacturer cannot be retrieved.
2. It is common practice for possessors of aircraft components to dispose of unsalvageable components by selling, discarding, or transferring such items. In some instances, these items have reappeared for sale and in the active parts inventories of the aviation community. Misrepresentation of the status of components and the practice of making such items appear serviceable have resulted in the use of unsalvageable nonconforming components. Therefore organisations disposing of unsalvageable aircraft components should consider the possibility of such components later being misrepresented and sold as serviceable components. Caution should be exercised to ensure that unsalvageable components are disposed of in a manner that does not allow them to be returned to service.

## 145.A.45 Maintenance data

*Regulation (EU) No 1321/2014*

- (a) The organisation shall hold and use applicable current maintenance data in the performance of maintenance, including modifications and repairs. 'Applicable' means relevant to any aircraft, component or process specified in the organisation's approval class rating schedule and in any associated capability list.

In the case of maintenance data provided by an operator or customer, the organisation shall hold such data when the work is in progress, with the exception of the need to comply with point [145.A.55\(c\)](#).
- (b) For the purposes of this Part, applicable maintenance data shall be any of the following:

1. Any applicable requirement, procedure, operational directive or information issued by the authority responsible for the oversight of the aircraft or component;
  2. Any applicable airworthiness directive issued by the authority responsible for the oversight of the aircraft or component;
  3. Instructions for continuing airworthiness, issued by type certificate holders, supplementary type certificate holders, any other organisation required to publish such data by Annex I (Part-21) to Regulation (EU) No 748/2012 and in the case of aircraft or components from third countries the airworthiness data mandated by the authority responsible for the oversight of the aircraft or component;
  4. Any applicable standard, such as but not limited to, maintenance standard practices recognised by the Agency as a good standard for maintenance;
  5. Any applicable data issued in accordance with point (d).
- (c) The organisation shall establish procedures to ensure that if found, any inaccurate, incomplete or ambiguous procedure, practice, information or maintenance instruction contained in the maintenance data used by maintenance personnel is recorded and notified to the author of the maintenance data.
- (d) The organisation may only modify maintenance instructions in accordance with a procedure specified in the maintenance organisation's exposition. With respect to those changes, the organisation shall demonstrate that they result in equivalent or improved maintenance standards and shall inform the type-certificate holder of such changes. Maintenance instructions for the purposes of this point means instructions on how to carry out the particular maintenance task: they exclude the engineering design of repairs and modifications.
- (e) The organisation shall provide a common work card or worksheet system to be used throughout relevant parts of the organisation. In addition, the organisation shall either transcribe accurately the maintenance data contained in points (b) and (d) onto such work cards or worksheets or make precise reference to the particular maintenance task or tasks contained in such maintenance data. Work cards and worksheets may be computer generated and held on an electronic database subject to both adequate safeguards against unauthorised alteration and a back-up electronic database which shall be updated within 24 hours of any entry made to the main electronic database. Complex maintenance tasks shall be transcribed onto the work cards or worksheets and subdivided into clear stages to ensure a record of the accomplishment of the complete maintenance task.

Where the organisation provides a maintenance service to an aircraft operator who requires their work card or worksheet system to be used then such work card or worksheet system may be used. In this case, the organisation shall establish a procedure to ensure correct completion of the aircraft operators' work cards or worksheets.

- (f) The organisation shall ensure that all applicable maintenance data is readily available for use when required by maintenance personnel.
- (g) The organisation shall establish a procedure to ensure that maintenance data it controls is kept up to date. In the case of operator/customer controlled and provided maintenance data, the organisation shall be able to show that either it has written confirmation from the operator/customer that all such maintenance data is up to date or it has work orders specifying the amendment status of the maintenance data to be used or it can show that it is on the operator/customer maintenance data amendment list.

## AMC 145.A.45(b) Maintenance data

*ED Decision 2015/029/R*

1. Except as specified in sub-paragraph 5, each maintenance organisation approved under [Part-145](#) should hold and use the following minimum maintenance data relevant to the organisation's approval class rating. All maintenance related Implementing Rules and associated AMCs, approval specifications and Guidance Material, all applicable national maintenance requirements and notices which have not been superseded by an Agency requirement, procedure or directive and all applicable EASA airworthiness directives plus any non-national airworthiness directive supplied by a contracted non-EU operator or customer as well as Critical Design Configuration Control Limitations.
2. In addition to sub-paragraph 1, an organisation with an approval class rating in category A - Aircraft, should hold and use the following maintenance data where published. The appropriate sections of the operator's aircraft maintenance programme, aircraft maintenance manual, repair manual, supplementary structural inspection document, corrosion control document, service bulletins, service letters, service instructions, modification leaflets, NDT manual, parts catalogue, type certificate data sheet and any other specific document issued by the type certificate or supplementary type certificate holder as maintenance data.
3. In addition to subparagraph 1, an organisation with an approval class rating in category B — Engines/APUs, should hold and use the following maintenance data where published. The appropriate sections of the engine/APU maintenance and repair manual, service bulletins, service letters, modification leaflets, non-destructive testing (NDT) manual, parts catalogue, type certificate data sheet and any other specific document issued by the type certificate holder as maintenance data.
4. In addition to sub-paragraph 1, an organisation with an approval class rating in category C - Components other than complete engines/APUs, should hold and use the following maintenance data where published. The appropriate sections of the vendor maintenance and repair manual, service bulletins and service letters plus any document issued by the type certificate holder as maintenance data on whose product the component may be fitted when applicable.
5. Appropriate sections of the sub-paragraphs 2 to 4 additional maintenance data means in relation to the maintenance work scope at each particular maintenance facility. For example, a base maintenance facility should have almost complete set(s) of the maintenance data whereas a line maintenance facility may need only the maintenance manual and the parts catalogue.
6. An organisation only approved in class rating category D – Specialised services, should hold and use all applicable specialised service(s) process specifications.

## AMC 145.A.45(c) Maintenance data

*ED Decision 2015/029/R*

1. The referenced procedure should ensure that when maintenance personnel discover inaccurate, incomplete or ambiguous information in the maintenance data they should record the details. The procedure should then ensure that the [Part-145](#) approved maintenance organisation notifies the problem to the author of the maintenance data in a timely manner. A record of such communications to the author of the maintenance data should be retained by the Part-145 approved organisation until such time as the type certificate holder has clarified the issue by e.g. amending the maintenance data.
2. The referenced procedure should be specified in the maintenance organisation exposition.



## AMC 145.A.45(d) Maintenance data

*ED Decision 2015/029/R*

The referenced procedure should address the need for a practical demonstration by the mechanic to the quality personnel of the proposed modified maintenance instruction. When satisfied the quality personnel should approve the modified maintenance instruction and ensure that the type certificate or supplementary type certificate holder is informed of the modified maintenance instruction. The procedure should include a paper/electronic traceability of the complete process from start to finish and ensure that the relevant maintenance instruction clearly identifies the modification. Modified maintenance instructions should only be used in the following circumstances:

- (a) Where the type certificate / supplementary type certificate holders original intent can be carried out in a more practical or more efficient manner.
- (b) Where the type certificate / supplementary type certificate holders original intent cannot be achieved by following the maintenance instructions. For example, where a component cannot be replaced following the original maintenance instructions.
- (c) For the use of alternative tools / equipment.

**Important Note:** Critical Design Configuration Control Limitations (CDCCL) are airworthiness limitations. Any modification of the maintenance instructions linked to CDCCL constitutes an aircraft modification that should be approved in accordance with Part-21.

## AMC 145.A.45(e) Maintenance data

*ED Decision 2015/029/R*

1. The maintenance organisation should:
  - transcribe accurately the maintenance data onto such work cards or worksheets, or
  - make precise reference to the particular maintenance task(s) contained in such maintenance data, which already identifies the task as a CDCCL where applicable.
2. Relevant parts of the organisation means with regard to aircraft base maintenance, aircraft line maintenance, engine workshops, mechanical workshops and avionics workshops. Therefore, engine workshops for example should have a common system throughout such engine workshops that may be different to that in the aircraft base maintenance.
3. The workcards should differentiate and specify, when relevant, disassembly, accomplishment of task, reassembly and testing. In the case of a lengthy maintenance task involving a succession of personnel to complete such a task, it may be necessary to use supplementary workcards or worksheets to indicate what was actually accomplished by each individual person.

## AMC 145.A.45(f) Maintenance data

*ED Decision 2015/029/R*

1. Data being made available to personnel maintaining aircraft means that the data should be available in close proximity to the aircraft being maintained for supervisors, mechanics and certifying staff to study.
2. Where computer systems are used, the number of computer terminals should be sufficient in relation to the size of the work programme to enable easy access, unless the computer system can produce paper copies. Where microfilm or microfiche readers/printers are used, a similar requirement is applicable.



## AMC 145.A.45(g) Maintenance data

*ED Decision 2015/029/R*

To keep data up-to-date, a procedure should be set up to monitor the amendment status of all data and maintain a check that all amendments are being received by being a subscriber to any document amendment scheme. Special attention should be given to TC related data such as certification life-limited parts, airworthiness limitations and Airworthiness Limitation Items (ALI), etc.

## 145.A.47 Production planning

*Regulation (EU) No 1321/2014*

- (a) The organisation shall have a system appropriate to the amount and complexity of work to plan the availability of all necessary personnel, tools, equipment, material, maintenance data and facilities in order to ensure the safe completion of the maintenance work.
- (b) The planning of maintenance tasks, and the organising of shifts, shall take into account human performance limitations.
- (c) When it is required to hand over the continuation or completion of maintenance tasks for reasons of a shift or personnel changeover, relevant information shall be adequately communicated between outgoing and incoming personnel.

## AMC 145.A.47(a) Production planning

*ED Decision 2016/011/R*

1. Depending on the amount and complexity of work generally performed by the maintenance organisation, the planning system may range from a very simple procedure to a complex organisational set-up including a dedicated planning function in support of the production function.
2. For the purpose of [Part-145](#), the production planning function includes two complementary elements:
  - scheduling the maintenance work ahead, to ensure that it will not adversely interfere with other work as regards the availability of all necessary personnel, tools, equipment, material, maintenance data and facilities.
  - during maintenance work, organising maintenance teams and shifts and provide all necessary support to ensure the completion of maintenance without undue time pressure.
3. When establishing the production planning procedure, consideration should be given to the following:
  - logistics,
  - inventory control,
  - square meters of accommodation,
  - man-hours estimation,
  - man-hours availability,
  - preparation of work,
  - hangar availability,

- environmental conditions (access, lighting standards and cleanliness),
- co-ordination with internal and external suppliers, etc.
- scheduling critical maintenance tasks during periods when staff are likely to be most alert.

### AMC 145.A.47(b) Production planning

*ED Decision 2015/029/R*

Limitations of human performance, in the context of planning safety related tasks, refers to the upper and lower limits, and variations, of certain aspects of human performance (Circadian rhythm / 24 hours body cycle) which personnel should be aware of when planning work and shifts.

### AMC 145.A.47(c) Production planning

*ED Decision 2015/029/R*

The primary objective of the changeover / handover information is to ensure effective communication at the point of handing over the continuation or completion of maintenance actions. Effective task and shift handover depends on three basic elements:

- The outgoing person's ability to understand and communicate the important elements of the job or task being passed over to the incoming person.
- The incoming person's ability to understand and assimilate the information being provided by the outgoing person.
- A formalised process for exchanging information between outgoing and incoming persons and a planned shift overlap and a place for such exchanges to take place.

## 145.A.48 Performance of maintenance

*Regulation (EU) 2015/1536*

The organisation shall establish procedures to ensure that:

- after completion of maintenance a general verification is carried out to ensure that the aircraft or component is clear of all tools, equipment and any extraneous parts or material, and that all access panels removed have been refitted;
- an error capturing method is implemented after the performance of any critical maintenance task;
- the risk of multiple errors during maintenance and the risk of errors being repeated in identical maintenance tasks are minimised; and,
- damage is assessed and modifications and repairs are carried out using data specified in point [M.A.304](#).

## GM 145.A.48 Performance of maintenance

*ED Decision 2016/011/R*

### AUTHORISED PERSON

An 'authorised person' is a person formally authorised by the maintenance organisation to perform or supervise a maintenance task. An 'authorised person' is not necessarily 'certifying staff'.

### SIGN-OFF

A 'sign-off' is a statement issued by the 'authorised person' which indicates that the task or group of tasks has been correctly performed. A 'sign-off' relates to one step in the maintenance process and is, therefore, different to a certificate of release to service.

### **AMC1 145.A.48(b) Performance of maintenance**

*ED Decision 2016/011/R*

The procedure should identify the error-capturing methods, the critical maintenance tasks, the training and qualification of staff applying error-capturing methods, and how the organisation ensures that its staff is familiar with critical maintenance tasks and error-capturing methods.

### **AMC2 145.A.48(b) Performance of maintenance**

*ED Decision 2016/011/R*

#### **CRITICAL MAINTENANCE TASKS**

- (a) The procedure should ensure that the following maintenance tasks are reviewed to assess their impact on flight safety:
  - (1) tasks that may affect the control of the aircraft flight path and attitude, such as installation, rigging and adjustments of flight controls;
  - (2) aircraft stability control systems (autopilot, fuel transfer);
  - (3) tasks that may affect the propulsive force of the aircraft, including installation of aircraft engines, propellers and rotors; and
  - (4) overhaul, calibration or rigging of engines, propellers, transmissions and gearboxes.
- (b) The procedure should describe which data sources are used to identify critical maintenance tasks. Several data sources may be used, such as:
  - (1) information from the design approval holder;
  - (2) accident reports;
  - (3) investigation and follow-up of incidents;
  - (4) occurrence reporting;
  - (5) flight data analysis;
  - (6) results of audits;
  - (7) normal operations monitoring schemes; and
  - (8) feedback from training.

### **AMC3 145.A.48(b) Performance of maintenance**

*ED Decision 2016/011/R*

#### **ERROR-CAPTURING METHODS**

- (a) Error-capturing methods are those actions defined by the organisation to detect maintenance errors made when performing maintenance.
- (b) The organisation should ensure that the error-capturing methods are adequate for the work and the disturbance of the system. A combination of several actions (visual inspection, operational check, functional test, rigging check) may be necessary in some cases.

**AMC4 145.A.48(b) Performance of maintenance**

ED Decision 2016/011/R

**INDEPENDENT INSPECTION**

Independent inspection is one possible error-capturing method.

**(a) What is an independent inspection**

An independent inspection is an inspection performed by an 'independent qualified person' of a task carried out by an 'authorised person', taking into account that:

- (1) the 'authorised person' is the person who performs the task or supervises the task and they assume the full responsibility for the completion of the task in accordance with the applicable maintenance data;
- (2) the 'independent qualified person' is the person who performs the independent inspection and attests the satisfactory completion of the task and that no deficiencies have been found. The 'independent qualified person' does not issue a certificate of release to service, therefore they are not required to hold certification privileges;
- (3) the 'authorised person' issues the certificate of release to service or signs off the completion of the task after the independent inspection has been carried out satisfactorily;
- (4) the work card system used by the organisation should record the identification of both persons and the details of the independent inspection as necessary before the certificate of release to service or sign-off for the completion of the task is issued.

**(b) Qualifications of persons performing independent inspections**

The organisation should have procedures to demonstrate that the 'independent qualified person' has been trained and has gained experience in the specific inspection to be performed. The organisation could consider making use of, for example:

- (1) staff holding a certifying staff or support staff or sign-off authorisation or equivalent necessary to release or sign off the critical maintenance task;
- (2) staff holding a certifying staff or support staff or sign-off authorisation or equivalent necessary to release or sign off similar task in a product of similar category and having received specific practical training in the task to be inspected; or
- (3) a commander holding a limited certification authorisation in accordance with [145.A.30\(j\)\(4\)](#) and having received adequate practical training and having enough experience in the specific task to be inspected and on how to perform independent inspection.

**(c) How to perform an independent inspection**

An independent inspection should ensure correct assembly, locking and sense of operation. When inspecting control systems that have undergone maintenance, the independent qualified person should consider the following points independently:

- (1) all those parts of the system that have actually been disconnected or disturbed should be inspected for correct assembly and locking;
- (2) the system as a whole should be inspected for full and free movement over the complete range;
- (3) cables should be tensioned correctly with adequate clearance at secondary stops;

- (4) the operation of the control system as a whole should be observed to ensure that the controls are operating in the correct sense;
  - (5) if different control systems are interconnected so that they affect each other, all the interactions should be checked through the full range of the applicable controls; and
  - (6) software that is part of the critical maintenance task should be checked, for example: version, compatibility with aircraft configuration.
- (d) What to do in unforeseen cases when only one person is available
- REINSPECTION:
- (1) Reinspection is an error-capturing method subject to the same conditions as an independent inspection is, except that the 'authorised person' performing the maintenance task is also acting as 'independent qualified person' and performs the inspection.
  - (2) Reinspection, as an error-capturing method, should only be performed in unforeseen circumstances when only one person is available to carry out the task and perform the independent inspection. The circumstances cannot be considered unforeseen if the person or organisation has not assigned a suitable 'independent qualified person' to that particular line station or shift.
  - (3) The certificate of release to service is issued after the task has been performed by the 'authorised person' and the reinspection has been carried out satisfactorily. The work card system used by the organisation should record the identification and the details of the reinspection before the certificate of release to service for the task is issued.1. List level 0

## AMC 145.A.48(c) Performance of maintenance

*ED Decision 2016/011/R*

The procedures should be aimed at:

- (a) minimising multiple errors and preventing omissions. Therefore, the procedures should specify:
  - (1) that every maintenance task is signed off only after completion;
  - (2) how the grouping of tasks for the purpose of sign-off allows critical steps to be clearly identified; and
  - (3) that work performed by personnel under supervision (i.e. temporary staff, trainees) is checked and signed off by an authorised person;
- (b) minimising the possibility of an error being repeated in identical tasks and, therefore, compromising more than one system or function. Thus, the procedures should ensure that no person is required to perform a maintenance task involving removal/installation or assembly/disassembly of several components of the same type fitted to more than one system, a failure of which could have an impact on safety, on the same aircraft or component during a particular maintenance check. However, in unforeseen circumstances when only one person is available, the organisation may make use of reinspection as described in point (d) of [AMC4 145.A.48\(b\)](#).

## GM 145.A.48(c) Performance of maintenance

ED Decision 2016/011/R

To minimise the risk of multiple errors or errors being repeated, the organisation may implement:

- procedures to plan the performance by different persons of the same task in different systems;
- duplicate inspection or re-inspection procedures.

## GM 145.A.48(d) Performance of maintenance — critical design configuration control limitations (CDCCL)

ED Decision 2016/011/R

The organisation should ensure that when performing maintenance the CDCCL are not compromised. The organisation should pay particular attention to possible adverse effects of any change to the wiring of the aircraft, even of a change not specifically associated with the fuel tank system. For example, it should be common practice to identify segregation of fuel gauging system wiring as a CDCCL. The organisation can prevent adverse effects associated with changes to the wiring by standardising maintenance practices through training, and not through periodic inspections. Training should be provided to avoid indiscriminate routing and splicing of wire and to provide comprehensive knowledge of critical design features of fuel tank systems that would be controlled by a CDCCL. Guidance on the training of maintenance organisation personnel is provided in [Appendix IV to AMC 145.A.35](#).

## 145.A.50 Certification of maintenance

Regulation (EU) No 1321/2014

- (a) A certificate of release to service shall be issued by appropriately authorised certifying staff on behalf of the organisation when it has been verified that all maintenance ordered has been properly carried out by the organisation in accordance with the procedures specified in point [145.A.70](#), taking into account the availability and use of the maintenance data specified in point [145.A.45](#) and that there are no non-compliances which are known to endanger flight safety.
- (b) A certificate of release to service shall be issued before flight at the completion of any maintenance.
- (c) New defects or incomplete maintenance work orders identified during the above maintenance shall be brought to the attention of the aircraft operator for the specific purpose of obtaining agreement to rectify such defects or completing the missing elements of the maintenance work order. In the case where the aircraft operator declines to have such maintenance carried out under this point, point (e) is applicable.
- (d) A certificate of release to service shall be issued at the completion of any maintenance on a component whilst off the aircraft. The authorised release certificate ‘[EASA Form 1](#)’ referred to in [Appendix II of Annex I \(Part-M\)](#) constitutes the component certificate of release to service except if otherwise specified in point [M.A.502\(b\)](#) or [M.A.502\(e\)](#). When an organisation maintains a component for its own use, an EASA Form 1 may not be necessary depending upon the organisation's internal release procedures defined in the exposition.
- (e) By derogation to point (a), when the organisation is unable to complete all maintenance ordered, it may issue a certificate of release to service within the approved aircraft limitations. The organisation shall enter such fact in the aircraft certificate of release to service before the issue of such certificate.

- (f) By derogation to points (a) and [145.A.42](#), when an aircraft is grounded at a location other than the main line station or main maintenance base due to the non-availability of a component with the appropriate release certificate, it is permissible to temporarily fit a component without the appropriate release certificate for a maximum of 30 flight hours or until the aircraft first returns to the main line station or main maintenance base, whichever is the sooner, subject to the aircraft operator agreement and said component having a suitable release certificate but otherwise in compliance with all applicable maintenance and operational requirements. Such components shall be removed by the above prescribed time limit unless an appropriate release certificate has been obtained in the meantime under points (a) and [145.A.42](#).

## AMC 145.A.50 Certification of maintenance after embodiment of a Standard Change or Standard Repair (SC/SR)

ED Decision 2015/029/R

[AMC M.A.801](#) of the AMC to Part-M contains acceptable means of compliance for the release to service of a SC/SR by an organisation approved in accordance with [Part-145](#).

## AMC 145.A.50(a) Certification of maintenance

ED Decision 2015/029/R

'Endangers the flight safety' means any instances where safe operation could not be assured or which could lead to an unsafe condition. It typically includes, but is not limited to, significant cracking, deformation, corrosion or failure of primary structure, any evidence of burning, electrical arcing, significant hydraulic fluid or fuel leakage and any emergency system or total system failure. An airworthiness directive overdue for compliance is also considered a hazard to flight safety.

## AMC 145.A.50(b) Certification of maintenance

ED Decision 2015/029/R

1. The certificate of release to service should contain the following statement:  
'Certifies that the work specified, except as otherwise specified, was carried out in accordance with [Part-145](#) and in respect to that work the aircraft/aircraft component is considered ready for release to service'.  
Reference should also be made to the EASA [Part-145](#) approval number.
2. It is acceptable to use an alternate abbreviated certificate of release to service consisting of the following statement '[Part-145](#) release to service' instead of the full certification statement specified in paragraph 1. When the alternate abbreviated certificate of release to service is used, the introductory section of the technical log should include an example of the full certification statement from paragraph 1.
3. The certificate of release to service should relate to the task specified in the (S)TC holder's or operator's instructions or the aircraft maintenance programme which itself may cross-refer to maintenance data.
4. The date such maintenance was carried out should include when the maintenance took place relative to any life or overhaul limitation in terms of date/flying hours/cycles/landings etc., as appropriate.
5. When extensive maintenance has been carried out, it is acceptable for the certificate of release to service to summarise the maintenance as long as there is a unique cross-reference to the



work package containing full details of maintenance carried out. Dimensional information should be retained in the work-pack record.

## AMC1 145.A.50(d) Certification of maintenance

ED Decision 2015/029/R

The purpose of the certificate is to release assemblies/items/components/parts (hereafter referred to as 'item(s)') after maintenance and to release maintenance work carried out on such items under the approval of a competent authority and to allow items removed from one aircraft/aircraft component to be fitted to another aircraft/aircraft component.

The certificate is to be used for export/import purposes, as well as for domestic purposes, and serves as an official certificate for items from the manufacturer/maintenance organisation to users.

It can only be issued by organisations approved by the particular competent authority within the scope of the approval.

The certificate may be used as a rotatable tag by utilising the available space on the reverse side of the certificate for any additional information and dispatching the item with two copies of the certificate so that one copy may be eventually returned with the item to the maintenance organisation. The alternative solution is to use existing rotatable tags and also supply a copy of the certificate.

A certificate should not be issued for any item when it is known that the item is unserviceable except in the case of an item undergoing a series of maintenance processes at several maintenance organisations approved under [Part-145](#) and the item needs a certificate for the previous maintenance process carried out for the next maintenance organisation approved under Part-145 to accept the item for subsequent maintenance processes. In such a case, a clear statement of limitation should be endorsed in Block 12.

## AMC2 145.A.50(d) Certification of maintenance

ED Decision 2015/029/R

1. A component which has been maintained off the aircraft needs the issuance of a certificate of release to service for such maintenance and another certificate of release to service in regard to being installed properly on the aircraft when such action occurs.

When an organisation maintains a component for use by the same organisation, an [EASA Form 1](#) may not be necessary depending upon the organisation's internal release procedures defined in the maintenance organisation exposition.

2. In the case of the issue of EASA Form 1 for components in storage before [Part-145](#) and Part-21 became effective and not released on an EASA Form 1 or equivalent in accordance with [145.A.42\(a\)](#) or removed serviceable from a serviceable aircraft or an aircraft which has been withdrawn from service the following applies:

2.1. An EASA Form 1 may be issued for an aircraft component which has been:

- Maintained before [Part-145](#) became effective or manufactured before Part-21 became effective.
- Used on an aircraft and removed in a serviceable condition. Examples include leased and loaned aircraft components.
- Removed from aircraft which have been withdrawn from service, or from aircraft which have been involved in abnormal occurrences such as accidents, incidents, heavy landings or lightning strikes.



- Maintained by an unapproved organisation.
- 2.2. An appropriately rated maintenance organisation approved under [Part-145](#) may issue an EASA Form 1 as detailed in this AMC subparagraph 2.5 to 2.9, as appropriate, in accordance with procedures detailed in the exposition as approved by the competent authority. The appropriately rated organisation is responsible for ensuring that all reasonable measures have been taken to ensure that only approved and serviceable aircraft components are issued an EASA Form 1 under this paragraph.
- 2.3. For the purposes of this AMC No 2 only, appropriately rated means an organisation with an approval class rating for the type of component or for the product in which it may be installed.
- 2.4. An EASA Form 1 issued in accordance with this paragraph 2 should be issued by signing in block 14b and stating 'Inspected/Tested' in block 11. In addition, block 12 should specify:
  - 2.4.1. When the last maintenance was carried out and by whom.
  - 2.4.2. If the component is unused, when the component was manufactured and by whom with a cross-reference to any original documentation which should be included with the Form.
  - 2.4.3. A list of all airworthiness directives, repairs and modifications known to have been incorporated. If no airworthiness directives or repairs or modifications are known to be incorporated, then this should be so stated.
  - 2.4.4. Detail of life used for service life-limited parts being any combination of fatigue, overhaul or storage life.
  - 2.4.5. For any aircraft component having its own maintenance history record, reference to the particular maintenance history record as long as the record contains the details that would otherwise be required in block 12. The maintenance history record and acceptance test report or statement, if applicable, should be attached to the EASA Form 1.
- 2.5. New/unused aircraft components
  - 2.5.1. Any unused aircraft component in storage without an EASA Form 1 up to the effective date(s) for Part-21 that was manufactured by an organisation acceptable to the competent authority at that time may be issued with an EASA Form 1 by an appropriately rated maintenance organisation approved under [Part-145](#). The EASA Form 1 should be issued in accordance with the following subparagraphs which should be included in a procedure within the maintenance organisation manual.

Note 1: It should be understood that the release of a stored but unused aircraft component in accordance with this paragraph represents a maintenance release under [Part-145](#) and not a production release under Part-21. It is not intended to bypass the production release procedure agreed by the Member State for parts and subassemblies intended for fitment on the manufacturers' own production line.

    - (a) An acceptance test report or statement should be available for all used and unused aircraft components that are subjected to acceptance testing after manufacturing or maintenance as appropriate.

- (b) The aircraft component should be inspected for compliance with the manufacturer's instructions and limitations for storage and condition including any requirement for limited storage life, inhibitors, controlled climate and special storage containers. In addition or in the absence of specific storage instructions the aircraft component should be inspected for damage, corrosion and leakage to ensure good condition.
  - (c) The storage life used of any storage life-limited parts should be established.
- 2.5.2. If it is not possible to establish satisfactory compliance with all applicable conditions specified in subparagraph 2.5.1(a) to (c) inclusive, the aircraft component should be disassembled by an appropriately rated organisation and subjected to a check for incorporated airworthiness directives, repairs and modifications and inspected/tested in accordance with the maintenance data to establish satisfactory condition and, if relevant, all seals, lubricants and life-limited parts should be replaced. Upon satisfactory completion after reassembly, an EASA Form 1 may be issued stating what was carried out and the reference of the maintenance data included.
- 2.6. Used aircraft components removed from a serviceable aircraft
- 2.6.1. Serviceable aircraft components removed from a Member State registered aircraft may be issued with an EASA Form 1 by an appropriately rated organisation subject to compliance with this subparagraph.
- (a) The organisation should ensure that the component was removed from the aircraft by an appropriately qualified person.
  - (b) The aircraft component may only be deemed serviceable if the last flight operation with the component fitted revealed no faults on that component/related system.
  - (c) The aircraft component should be inspected for satisfactory condition including in particular damage, corrosion or leakage and compliance with any additional maintenance data.
  - (d) The aircraft record should be researched for any unusual events that could affect the serviceability of the aircraft component such as involvement in accidents, incidents, heavy landings or lightning strikes. Under no circumstances may an EASA Form 1 be issued in accordance with this paragraph 2.6 if it is suspected that the aircraft component has been subjected to extremes of stress, temperatures or immersion which could affect its operation.
  - (e) A maintenance history record should be available for all used serialised aircraft components.
  - (f) Compliance with known modifications and repairs should be established.
  - (g) The flight hours/cycles/landings as applicable of any service life-limited parts including time since overhaul should be established.
  - (h) Compliance with known applicable airworthiness directives should be established.
  - (i) Subject to satisfactory compliance with this subparagraph 2.6.1, an EASA Form 1 may be issued and should contain the information as specified in

paragraph 2.4 including the aircraft from which the aircraft component was removed.

2.6.2. Serviceable aircraft components removed from a non-Member State registered aircraft may only be issued with an EASA Form 1 if the components are leased or loaned from the maintenance organisation approved under [Part-145](#) who retains control of the airworthiness status of the components. An EASA Form 1 may be issued and should contain the information as specified in paragraph 2.4 including the aircraft from which the aircraft component was removed.

2.7. Used aircraft components removed from an aircraft withdrawn from service. Serviceable aircraft components removed from a Member State registered aircraft withdrawn from service may be issued with an EASA Form 1 by a maintenance organisation approved under [Part-145](#) subject to compliance with this subparagraph.

- (a) Aircraft withdrawn from service are sometimes dismantled for spares. This is considered to be a maintenance activity and should be accomplished under the control of an organisation approved under [Part-145](#), employing procedures approved by the competent authority.
- (b) To be eligible for installation, components removed from such aircraft may be issued with an EASA Form 1 by an appropriately rated organisation following a satisfactory assessment.
- (c) As a minimum, the assessment will need to satisfy the standards set out in paragraphs 2.5 and 2.6 as appropriate. This should, where known, include the possible need for the alignment of scheduled maintenance that may be necessary to comply with the maintenance programme applicable to the aircraft on which the component is to be installed.
- (d) Irrespective of whether the aircraft holds a certificate of airworthiness or not, the organisation responsible for certifying any removed component should ensure that the manner in which the components were removed and stored are compatible with the standards required by [Part-145](#).
- (e) A structured plan should be formulated to control the aircraft disassembly process. The disassembly is to be carried out by an appropriately rated organisation under the supervision of certifying staff who will ensure that the aircraft components are removed and documented in a structured manner in accordance with the appropriate maintenance data and disassembly plan.
- (f) All recorded aircraft defects should be reviewed and the possible effects these may have on both normal and standby functions of removed components are to be considered.
- (g) Dedicated control documentation is to be used as detailed by the disassembly plan, to facilitate the recording of all maintenance actions and component removals performed during the disassembly process. Components found to be unserviceable are to be identified as such and quarantined pending a decision on the actions to be taken. Records of the maintenance accomplished to establish serviceability are to form part of the component maintenance history.
- (h) Suitable [Part-145](#) facilities for the removal and storage of removed components are to be used which include suitable environmental conditions, lighting, access equipment, aircraft tooling and storage facilities for the work to be undertaken.

While it may be acceptable for components to be removed, given local environmental conditions, without the benefit of an enclosed facility, subsequent disassembly (if required) and storage of the components should be in accordance with the manufacturer's recommendations.

- 2.8. Used aircraft components maintained by organisations not approved in accordance with [Part-145](#). For used components maintained by a maintenance organisation not approved under Part-145, due care should be taken before acceptance of such components. In such cases an appropriately rated maintenance organisation approved under Part-145 should establish satisfactory conditions by:
- (a) dismantling the component for sufficient inspection in accordance with the appropriate maintenance data;
  - (b) replacing all service life-limit components when no satisfactory evidence of life used is available and/or the components are in an unsatisfactory condition;
  - (c) reassembling and testing as necessary the component;
  - (d) completing all certification requirements as specified in [145.A.50](#).
- 2.9. Used aircraft components removed from an aircraft involved in an accident or incident. Such components should only be issued with an EASA Form 1 when processed in accordance with paragraph 2.7 and a specific work order including all additional necessary tests and inspections deemed necessary by the accident or incident. Such a work order may require input from the TC holder or original manufacturer as appropriate. This work order should be referenced in block 12.

## GM 145.A.50(d) EASA Form 1 Block 12 'Remarks'

*ED Decision 2015/029/R*

Examples of data to be entered in this block as appropriate:

- Maintenance documentation used, including the revision status, for all work performed and not limited to the entry made in block 11.
- A statement such as 'in accordance with the CMM' is not acceptable.
- NDT methods with appropriate documentation used when relevant.
- Compliance with airworthiness directives or service bulletins.
- Repairs carried out.
- Modifications carried out.
- Replacement parts installed.
- Life-limited parts status.
- Shelf life limitations.
- Deviations from the customer work order.
- Release statements to satisfy a foreign Civil Aviation Authority maintenance requirement.
- Information needed to support shipment with shortages or re-assembly after delivery.
- References to aid traceability, such as batch numbers.

## AMC 145.A.50(e) Certification of maintenance

ED Decision 2015/029/R

1. Being unable to establish full compliance with sub-paragraph [Part-145.A.50\(a\)](#) means that the maintenance required by the aircraft operator could not be completed due either to running out of available aircraft maintenance downtime for the scheduled check or by virtue of the condition of the aircraft requiring additional maintenance downtime.
2. The aircraft operator is responsible for ensuring that all required maintenance has been carried out before flight and therefore [145.A.50\(e\)](#) requires such operator to be informed in the case where full compliance with [145.A.50\(a\)](#) cannot be achieved within the operator's limitations. If the operator agrees to the deferment of full compliance, then the certificate of release to service may be issued subject to details of the deferment, including the operator's authority, being endorsed on the certificate.

Note: Whether or not the aircraft operator does have the authority to defer maintenance is an issue between the aircraft operator and the competent authority of the State of Registry or State of operator, as appropriate. In case of doubt concerning such a decision of the operator, the approved maintenance organisation should inform its competent authority on such doubt, before issuing the certificate of release to service. This will allow this competent authority to investigate the matter with the competent authority of the State of Registry or the State of the operator as appropriate.

3. The procedure should draw attention to the fact that [145.A.50\(a\)](#) does not normally permit the issue of a certificate of release to service in the case of non-compliance and should state what action the mechanic, supervisor and certifying staff should take to bring the matter to the attention of the relevant department or person responsible for technical co-ordination with the aircraft operator so that the issue may be discussed and resolved with the aircraft operator. In addition, the appropriate person(s) as specified in [145.A.30\(b\)](#) should be kept informed in writing of such possible non-compliance situations and this should be included in the procedure.

## AMC 145.A.50(f) Certification of maintenance

ED Decision 2015/029/R

1. Suitable release certificate means a certificate which clearly states that the aircraft component is serviceable; that clearly specifies the organisation releasing said component together with details of the authority under whose approval the organisation works including the approval or authorisation reference.
2. Compliance with all other [Part-145](#) and operator requirements means making an appropriate entry in the aircraft technical log, checking for compliance with type design standards, modifications, repairs, airworthiness directives, life limitations and condition of the aircraft component plus information on where, when and why the aircraft was grounded.

## 145.A.55 Maintenance and airworthiness review records

Regulation (EU) 2015/1088

- (a) The organisation shall record all details of maintenance work carried out. As a minimum, the organisation shall retain records necessary to prove that all requirements have been met for the issue of the certificate of release to service, including subcontractor's release documents, **and for the issue of any airworthiness review certificate and recommendation.**

- (b) The organisation shall provide a copy of each certificate of release to service to the aircraft operator, together with a copy of any specific repair/modification data used for repairs/modifications carried out.
- (c) The organisation shall retain a copy of all detailed maintenance records and any associated maintenance data for three years from the date the aircraft or component to which the work relates was released from the organisation. **In addition, it shall retain a copy of all the records related to the issue of airworthiness review certificates and recommendations for three years from the date of issue and shall provide a copy of them to the owner of the aircraft.**
1. The records under this point shall be stored in a manner that ensures protection from damage, alteration and theft.
  2. Computer backup discs, tapes etc. shall be stored in a different location from that containing the working discs, tapes etc., in an environment that ensures they remain in good condition.
  3. Where an organisation approved under this [Annex \(Part-145\)](#) terminates its operation, all retained maintenance records covering the last three years shall be distributed to the last owner or customer of the respective aircraft or component or shall be stored as specified by the competent authority.

## GM 145.A.55(a) Maintenance and airworthiness review records

ED Decision 2015/029/R

1. Properly executed and retained records provide owners, operators and maintenance personnel with information essential in controlling unscheduled and scheduled maintenance, and troubleshooting to eliminate the need for re-inspection and rework to establish airworthiness.  
  
The prime objective is to have secure and easily retrievable records with comprehensive and legible contents. The aircraft record should contain basic details of all serialised aircraft components and all other significant aircraft components installed, to ensure traceability to such installed aircraft component documentation and associated maintenance data as specified in [145.A.45](#).
2. Some gas turbine engines are assembled from modules and a true total time in service for a total engine is not kept. When owners and operators wish to take advantage of the modular design, then total time in service and maintenance records for each module is to be maintained. The maintenance records as specified are to be kept with the module and should show compliance with any mandatory requirements pertaining to that module.
3. Reconstruction of lost or destroyed records can be done by reference to other records which reflect the time in service, research of records maintained by repair facilities and reference to records maintained by individual mechanics etc. When these things have been done and the record is still incomplete, the owner/operator may make a statement in the new record describing the loss and establishing the time in service based on the research and the best estimate of time in service. The reconstructed records should be submitted to the competent authority for acceptance.  
  
Note: Additional maintenance may be required.
4. The maintenance record can be either a paper or computer system or any combination of both.
5. Paper systems should use robust material which can withstand normal handling and filing. The record should remain legible throughout the required retention period.

6. Computer systems may be used to control maintenance and/or record details of maintenance work carried out. Computer systems used for maintenance should have at least one backup system which should be updated at least within 24 hours of any maintenance. Each terminal is required to contain programme safeguards against the ability of unauthorised personnel to alter the database.

### AMC 145.A.55(c) Maintenance and airworthiness review records

*ED Decision 2015/029/R*

Associated maintenance data is specific information such as repair and modification data. This does not necessarily require the retention of all Aircraft Maintenance Manual, Component Maintenance Manual, IPC etc issued by the TC holder or STC holder. Maintenance records should refer to the revision status of the data used.

### 145.A.60 Occurrence reporting

*Regulation (EU) No 1321/2014*

- (a) The organisation shall report to the competent authority, the state of registry and the organisation responsible for the design of the aircraft or component any condition of the aircraft or component identified by the organisation that has resulted or may result in an unsafe condition that hazards seriously the flight safety.
- (b) The organisation shall establish an internal occurrence reporting system as detailed in the exposition to enable the collection and evaluation of such reports, including the assessment and extraction of those occurrences to be reported under point (a). This procedure shall identify adverse trends, corrective actions taken or to be taken by the organisation to address deficiencies and include evaluation of all known relevant information relating to such occurrences and a method to circulate the information as necessary.
- (c) The organisation shall make such reports in a form and manner established by the Agency and ensure that they contain all pertinent information about the condition and evaluation results known to the organisation.
- (d) Where the organisation is contracted by a commercial operator to carry out maintenance, the organisation shall also report to the operator any such condition affecting the operator's aircraft or component.
- (e) The organisation shall produce and submit such reports as soon as practicable but in any case within 72 hours of the organisation identifying the condition to which the report relates.

### AMC 145.A.60(a) Occurrence reporting

*ED Decision 2015/029/R*

AMC 20-8 General Acceptable Means of Compliance for Airworthiness of Products, Parts and Appliances provides further guidance on occurrence reporting.

### GM 145.A.60(a) Occurrence reporting

*ED Decision 2015/029/R*

The organisation responsible for the design is normally the TC holder of the aircraft, engine or propeller and/or if known the STC holder.



## AMC 145.A.60(b) Occurrence reporting

ED Decision 2015/029/R

1. The aim of occurrence reporting is to identify the factors contributing to incidents, and to make the system resistant to similar errors.
2. An occurrence reporting system should enable and encourage free and frank reporting of any (potentially) safety related occurrence. This will be facilitated by the establishment of a just culture. An organisation should ensure that personnel are not inappropriately punished for reporting or co-operating with occurrence investigations.
3. The internal reporting process should be closed-loop, ensuring that actions are taken internally to address safety hazards.
4. Feedback to reportees, both on an individual and more general basis, is important to ensure their continued support for the scheme.

## GM 145.A.60(c) Occurrence reporting

ED Decision 2015/029/R

Each report should contain at least the following information:

- (i) Organisation name and approval reference.
- (ii) Information necessary to identify the subject aircraft and / or component.
- (iii) Date and time relative to any life or overhaul limitation in terms of flying hours/cycles/landings etc. as appropriate.
- (iv) Details of the condition as required by [145.A.60\(b\)](#).
- (v) Any other relevant information found during the evaluation or rectification of the condition.

## 145.A.65 Safety and quality policy, maintenance procedures and quality system

Regulation (EU) 2015/1536

- (a) The organisation shall establish a safety and quality policy for the organisation to be included in the exposition under point [145.A.70](#).
- (b) The organisation shall establish procedures agreed by the competent authority taking into account human factors and human performance to ensure good maintenance practices and compliance with the applicable requirements established in [145.A.25](#) to [145.A.95](#). The procedures under this point shall:
  1. ensure that a clear work order or contract has been agreed between the organisation and the organisation requesting maintenance to clearly establish the maintenance to be carried out so that aircraft and components may be released to service in accordance with [145.A.50](#); and,
  2. cover all aspects of carrying out maintenance, including the provision and control of specialised services and lay down the standards to which the organisation intends to work.
- (c) The organisation shall establish a quality system that includes the following:



1. Independent audits in order to monitor compliance with required aircraft/aircraft component standards and adequacy of the procedures to ensure that such procedures invoke good maintenance practices and airworthy aircraft/aircraft components. In the smallest organisations the independent audit part of the quality system may be contracted to another organisation approved under this Part or a person with appropriate technical knowledge and proven satisfactory audit experience; and
2. A quality feedback reporting system to the person or group of persons specified in point [145.A.30\(b\)](#) and ultimately to the accountable manager that ensures proper and timely corrective action is taken in response to reports resulting from the independent audits established to meet point (1).

### **AMC 145.A.65(a) Safety and quality policy, maintenance procedures and quality system**

*ED Decision 2015/029/R*

The safety and quality policy should as a minimum include a statement committing the organisation to:

- Recognise safety as a prime consideration at all times.
- Apply Human factors principles.
- Encourage personnel to report maintenance related errors/incidents.
- Recognise that compliance with procedures, quality standards, safety standards and regulations is the duty of all personnel.
- Recognise the need for all personnel to cooperate with the quality auditors.

### **AMC 145.A.65(b) Safety and quality policy, maintenance procedures and quality system**

*ED Decision 2015/029/R*

1. Maintenance procedures should be held current such that they reflect best practice within the organisation. It is the responsibility of all organisation's employees to report any differences via their organisation's internal occurrence reporting mechanisms.
2. All procedures, and changes to those procedures, should be verified and validated before use where practicable.
3. All technical procedures should be designed and presented in accordance with good human factors principles.

### **GM 145.A.65(b)(1) Safety and quality policy, maintenance procedures and quality system**

*ED Decision 2016/011/R*

[Appendix XI to AMC M.A.708\(c\)](#) provides guidance on the elements that need to be considered for the maintenance contract between the CAMO and the maintenance organisation. The [Part-145](#) organisation should take into account these elements to ensure that a clear contract or work order has been concluded before providing maintenance services.

## AMC 145.A.65(b)(2) Safety and quality policy, maintenance procedures and quality system

*ED Decision 2015/029/R*

Specialised services include any specialised activity, such as, but not limited to non-destructive testing requiring particular skills and/or qualification. [145.A.30\(f\)](#) covers the qualification of personnel but, in addition, there is a need to establish maintenance procedures that cover the control of any specialised process.

## AMC 145.A.65(c)(1) Safety and quality policy, maintenance procedures and quality system

*ED Decision 2015/029/R*

1. The primary objectives of the quality system are to enable the organisation to ensure that it can deliver a safe product and that organisation remains in compliance with the requirements.
2. An essential element of the quality system is the independent audit.
3. The independent audit is an objective process of routine sample checks of all aspects of the organisation's ability to carry out all maintenance to the required standards and includes some product sampling as this is the end result of the maintenance process. It represents an objective overview of the complete maintenance related activities and is intended to complement the [145.A.50\(a\)](#) requirement for certifying staff to be satisfied that all required maintenance has been properly carried out before issue of the certificate of release to service. Independent audits should include a percentage of random audits carried out on a sample basis when maintenance is being carried out. This means some audits during the night for those organisations that work at night.
4. Except as specified in sub-paragraphs 7 and 9, the independent audit should ensure that all aspects of [Part-145](#) compliance are checked every 12 months and may be carried out as a complete single exercise or subdivided over the 12 month period in accordance with a scheduled plan. The independent audit does not require each procedure to be checked against each product line when it can be shown that the particular procedure is common to more than one product line and the procedure has been checked every 12 months without resultant findings. Where findings have been identified, the particular procedure should be rechecked against other product lines until the findings have been rectified after which the independent audit procedure may revert back to 12 monthly for the particular procedure.
5. Except as specified otherwise in subparagraphs 7, the independent audit should sample check one product on each product line every 12 months as a demonstration of the effectiveness of maintenance procedures compliance. It is recommended that procedures and product audits be combined by selecting a specific product example, such as an aircraft or engine or instrument and sample checking all the procedures and requirements associated with the specific product example to ensure that the end result should be an airworthy product.

For the purpose of the independent audit, a product line includes any product under an Appendix II approval class rating as specified in the approval schedule issued to the particular organisation.

It therefore follows for example that a maintenance organisation approved under [Part-145](#) with a capability to maintain aircraft, repair engines, brakes and autopilots would need to carry out four complete audit sample checks each year except as specified otherwise in subparagraphs 5, 7 or 9.

6. The sample check of a product means to witness any relevant testing and visually inspect the product and associated documentation. The sample check should not involve repeat disassembly or testing unless the sample check identifies findings requiring such action.
7. Except as specified otherwise in sub-paragraph 9, where the smallest organisation, that is an organisation with a maximum of 10 personnel actively engaged in maintenance, chooses to contract the independent audit element of the quality system in accordance with [145.A.65\(c\)\(1\)](#) it is conditional on the audit being carried out twice in every 12 month period.
8. Except as specified otherwise in sub-paragraph 9, where the organisation has line stations listed as per [145.A.75\(d\)](#) the quality system should describe how these are integrated into the system and include a plan to audit each listed line station at a frequency consistent with the extent of flight activity at the particular line station. Except as specified otherwise in sub-paragraph 9 the maximum period between audits of a particular line station should not exceed 24 months.
9. Except as specified otherwise in sub-paragraph 5, the competent authority may agree to increase any of the audit time periods specified in this [AMC 145.A.65\(c\)\(1\)](#) by up to 100% provided that there are no safety related findings and subject to being satisfied that the organisation has a good record of rectifying findings in a timely manner.
10. A report should be raised each time an audit is carried out describing what was checked and the resulting findings against applicable requirements, procedures and products.
11. The independence of the audit should be established by always ensuring that audits are carried out by personnel not responsible for the function, procedure or products being checked. It therefore follows that a large maintenance organisation approved under [Part-145](#), being an organisation with more than about 500 maintenance staff should have a dedicated quality audit group whose sole function is to conduct audits, raise finding reports and follow up to check that findings are being rectified. For the medium sized maintenance organisation approved under Part-145, being an organisation with less than about 500 maintenance staff, it is acceptable to use competent personnel from one section/department not responsible for the production function, procedure or product to audit the section/department that is responsible subject to the overall planning and implementation being under the control of the quality manager. Organisations with a maximum of 10 maintenance staff actively engaged in carrying out maintenance may contract the independent audit element of the quality system to another organisation or a qualified and competent person approved by the competent authority.

## GM 145.A.65(c)(1) Safety and quality policy, maintenance procedures and quality system

*ED Decision 2016/011/R*

1. The purpose of this GM is to give guidance on just one acceptable working audit plan to meet part of the needs of [145.A.65\(c\)\(1\)](#). There is any number of other acceptable working audit plans.
2. The proposed plan lists the subject matter that should be covered by the audit and attempts to indicate applicability in the various types of workshops and aircraft facilities. The list should therefore be tailored for the particular situation and more than one list may be necessary. Each list should be shown against a timetable to indicate when the particular item is scheduled for audit and when the audit was completed.

PARA	Comment	HANGAR	ENGINE	MECH	AVIONIC
			Workshop	Workshop	Workshop
<a href="#">145.A.25</a>		Yes	Yes	Yes	Yes

PARA	Comment	HANGAR	ENGINE	MECH	AVIONIC
<a href="#">145.A.30</a>		Yes	Yes	Yes	Yes
<a href="#">145.A.35</a>		Yes	Yes	Yes	Yes
<a href="#">145.A.36</a>		Yes	No	No	No
<a href="#">145.A.40</a>		Yes	Yes	Yes	Yes
<a href="#">145.A.42</a>		Yes	Yes	Yes	Yes
<a href="#">145.A.45</a>		Yes	Yes	Yes	Yes
<a href="#">145.A.47</a>		Yes	Yes	Yes	Yes
<a href="#">145.A.48</a>		Yes	Yes	if appl	if appl
<a href="#">145.A.50</a>		Yes	Yes	Yes	Yes
<a href="#">145.A.55</a>		Yes	Yes	Yes	Yes
<a href="#">145.A.60</a>		Yes	Yes	Yes	Yes
<a href="#">145.A.65</a>		Yes	Yes	Yes	Yes
2.1	MOE	Yes	Yes	Yes	Yes
2.2	MOE	Yes	Yes	Yes	Yes
2.3	MOE	Yes	Yes	Yes	Yes
2.4	MOE	Yes	Yes	Yes	Yes
2.5	MOE	Yes	Yes	Yes	Yes
2.6	MOE	Yes	Yes	Yes	Yes
2.7	MOE	Yes	Yes	Yes	Yes
2.8	MOE	Yes	Yes	Yes	Yes
2.9	MOE	Yes	Yes	Yes	Yes
2.10	MOE	Yes	No	No	No
2.11	MOE	Yes	Yes	Yes	Yes
2.12	MOE	Yes	Yes	Yes	Yes
2.13	MOE	Yes	Yes	Yes	Yes
2.14	MOE	Yes	Yes	Yes	Yes
2.15	MOE	Yes	No	No	No
2.16	MOE	Yes	Yes	Yes	Yes
2.17	MOE	if appl	if appl	if appl	if appl
2.18	MOE	Yes	Yes	Yes	Yes
2.19	MOE	Yes	Yes	Yes	Yes
2.20	MOE	Yes	Yes	Yes	Yes
2.21	MOE	if appl	if appl	if appl	if appl
2.22	MOE	Yes	Yes	No	No
2.23	MOE	Yes	Yes	if appl	if appl
2.24	MOE	Yes	Yes	Yes	Yes
2.25	MOE	Yes	Yes	Yes	Yes
2.26	MOE	Yes	Yes	Yes	Yes
2.27	MOE	Yes	Yes	Yes	Yes
2.28	MOE	Yes	Yes	Yes	Yes
2.29	MOE	Yes	No	No	No
2.30	MOE	Yes	No	No	No
L2.1	MOE	if appl	No	No	No
L2.2	MOE	if appl	No	No	No
L2.3	MOE	if appl	No	No	No

PARA	Comment	HANGAR	ENGINE	MECH	AVIONIC
L2.4	MOE	if appl	No	No	No
L2.5	MOE	if appl	No	No	No
L2.6	MOE	if appl	No	No	No
L2.7	MOE	if appl	No	No	No
3.9	MOE	if appl	if appl	if appl	if appl
3.10	MOE	if appl	if appl	if appl	if appl
3.11	MOE	if appl	if appl	if appl	No
3.12	MOE	Yes	Yes	No	No
3.13	MOE	Yes	Yes	Yes	Yes
3.14	MOE	Yes	Yes	Yes	Yes
<a href="#">145.A.70</a>		Yes	Yes	Yes	Yes
<a href="#">145.A.75</a>		Yes	Yes	Yes	Yes
<a href="#">145.A.80</a>		Yes	Yes	Yes	Yes
<a href="#">145.A.85</a>		Yes	Yes	Yes	Yes
<a href="#">145.A.95</a>		if appl	if appl	if appl	if appl

Note 1: 'if appl' means 'if applicable or relevant'.

Note 2: In the case of line stations, all line stations should be audited at the frequency agreed with the competent authority within the limits of [AMC 145.A.65\(c\)\(1\)](#).

## AMC 145.A.65(c)(2) Safety and quality policy, maintenance procedures and quality system

*ED Decision 2015/029/R*

- An essential element of the quality system is the quality feedback system.
- The quality feedback system may not be contracted to outside persons. The principal function of the quality feedback system is to ensure that all findings resulting from the independent quality audits of the organisation are properly investigated and corrected in a timely manner and to enable the accountable manager to be kept informed of any safety issues and the extent of compliance with [Part-145](#).
- The independent quality audit reports referenced in [AMC 145.A.65\(c\)\(1\)](#) sub-paragraph 10 should be sent to the relevant department(s) for rectification action giving target rectification dates. Rectification dates should be discussed with such department(s) before the quality department or nominated quality auditor confirms such dates in the report. The relevant department(s) are required by [145.A.65\(c\)\(2\)](#) to rectify findings and inform the quality department or nominated quality auditor of such rectification.
- The accountable manager should hold regular meetings with staff to check progress on rectification except that in the large organisations such meetings may be delegated on a day to day basis to the quality manager subject to the accountable manager meeting at least twice per year with the senior staff involved to review the overall performance and receiving at least a half yearly summary report on findings of non-compliance.
- All records pertaining to the independent quality audit and the quality feedback system should be retained for at least 2 years after the date of clearance of the finding to which they refer or for such periods as to support changes to the [AMC 145.A.65\(c\)\(1\)](#) sub-paragraph 9 audit time periods, whichever is the longer.

## 145.A.70 Maintenance organisation exposition

Regulation (EU) 2015/1088

- (a) 'Maintenance organisation exposition' means the document or documents that contain the material specifying the scope of work deemed to constitute approval and showing how the organisation intends to comply with this [Annex \(Part-145\)](#). The organisation shall provide the competent authority with a maintenance organisation exposition, containing the following information:
1. A statement signed by the accountable manager confirming that the maintenance organisation exposition and any referenced associated manuals define the organisation's compliance with this [Annex \(Part-145\)](#) and will be complied with at all times. When the accountable manager is not the chief executive officer of the organisation then such chief executive officer shall countersign the statement;
  2. the organisation's safety and quality policy as specified by point [145.A.65](#);
  3. the title(s) and name(s) of the persons nominated under point [145.A.30\(b\)](#);
  4. the duties and responsibilities of the persons nominated under point [145.A.30\(b\)](#), including matters on which they may deal directly with the competent authority on behalf of the organisation;
  5. an organisation chart showing associated chains of responsibility between the persons nominated under point [145.A.30\(b\)](#);
  6. a list of certifying staff, support staff and, if applicable, airworthiness review staff and staff responsible for the development and processing of the maintenance programme, with their scope of approval;
  7. a general description of manpower resources;
  8. a general description of the facilities located at each address specified in the organisation's approval certificate;
  9. a specification of the organisation's scope of work relevant to the extent of approval;
  10. the notification procedure of point [145.A.85](#) for organisation changes;
  11. the maintenance organisation exposition amendment procedure;
  12. the procedures and quality system established by the organisation under points [145.A.25](#) to [145.A.90](#) and any additional procedure followed in accordance with Annex I (Part-M);
  13. a list of commercial operators, where applicable, to which the organisation provides an aircraft maintenance service;
  14. a list of subcontracted organisations, where applicable, as specified in point [145.A.75\(b\)](#);
  15. a list of line stations, where applicable, as specified in point [145.A.75\(d\)](#);
  16. a list of contracted organisations, where applicable.
- (b) The exposition shall be amended as necessary to remain an up-to-date description of the organisation. The exposition and any subsequent amendment shall be approved by the competent authority.
- (c) Notwithstanding point (b) minor amendments to the exposition may be approved through an exposition procedure (hereinafter called indirect approval).

## AMC 145.A.70(a) Maintenance organisation exposition

ED Decision 2016/011/R

The following information should be included in the maintenance organisation exposition:

The information specified in [145.A.70\(a\)](#) subparagraphs (6) and (12) to (16) inclusive, whilst a part of the maintenance organisation exposition, may be kept as separate documents or on separate electronic data files subject to the management part of said exposition containing a clear cross-reference to such documents or electronic data files.

The exposition should contain the information, as applicable, specified in this AMC. The information may be presented in any subject order as long as all applicable subjects are covered. Where an organisation uses a different format, for example, to allow the exposition to serve for more than one approval, then the exposition should contain a cross-reference Annex using this list as an index with an explanation as to where the subject matter can be found in the exposition.

The exposition should contain information, as applicable, on how the maintenance organisation complies with Critical Design Configuration Control Limitations' (CDCCL) instructions.

Small maintenance organisations may combine the various items to form a simple exposition more relevant to their needs.

The operator may use electronic data processing (EDP) for publication of the maintenance organisation exposition. The maintenance organisation exposition should be made available to the approving competent authority in a form acceptable to the competent authority. Attention should be paid to the compatibility of EDP publication systems with the necessary dissemination of the maintenance organisation exposition, both internally and externally.

### **PART 0 GENERAL ORGANISATION (Operators within the European Union)**

This section is reserved for those maintenance organisations approved under [Part-145](#) who are also operators within the European Union.

### **PART 1 MANAGEMENT**

- 1.1 Corporate commitment by the accountable manager
- 1.2 Safety and quality policy
- 1.3 Management personnel
- 1.4 Duties and responsibilities of the management personnel
- 1.5 Management organisation chart
- 1.6 List of certifying staff, support staff and [airworthiness review staff](#)
- 1.7 Manpower resources
- 1.8 General description of the facilities at each address intended to be approved
- 1.9 Organisations intended scope of work
- 1.10 Notification procedure to the competent authority regarding changes to the organisation's activities/approval/location/personnel
- 1.11 Exposition amendment procedures including, if applicable, delegated procedures

**PART 2 MAINTENANCE PROCEDURES**

- 2.1 Supplier evaluation and subcontract control procedure
- 2.2 Acceptance/inspection of aircraft components and material from outside contractors
- 2.3 Storage, tagging and release of aircraft components and material to aircraft maintenance
- 2.4 Acceptance of tools and equipment
- 2.5 Calibration of tools and equipment
- 2.6 Use of tooling and equipment by staff (including alternate tools)
- 2.7 Cleanliness standards of maintenance facilities
- 2.8 Maintenance instructions and relationship to aircraft/aircraft component manufacturers' instructions including updating and availability to staff
- 2.9 Repair procedure
- 2.10 Aircraft maintenance programme compliance
- 2.11 Airworthiness directives procedure
- 2.12 Optional modification procedure
- 2.13 Maintenance documentation in use and its completion
- 2.14 Technical record control
- 2.15 Rectification of defects arising during base maintenance
- 2.16 Release to service procedure
- 2.17 Records for the operator
- 2.18 Reporting of defects to the competent authority/operator/manufacturer
- 2.19 Return of defective aircraft components to store
- 2.20 Defective components to outside contractors
- 2.21 Control of computer maintenance record systems
- 2.22 Control of manhour planning versus scheduled maintenance work
- 2.23 Critical maintenance tasks and error-capturing methods
- 2.24 Reference to specific maintenance procedures such as -
  - Engine running procedures
  - Aircraft pressure run procedures
  - Aircraft towing procedures
  - Aircraft taxiing procedures
- 2.25 Procedures to detect and rectify maintenance errors.
- 2.26 Shift/task handover procedures
- 2.27 Procedures for notification of maintenance data inaccuracies and ambiguities, to the type certificate holder
- 2.28 Production planning procedures



- 2.29 Airworthiness review procedures and records for ELA1 aircraft not involved in commercial operations
- 2.30 Development and approval processing for maintenance programmes for ELA2 aircraft not involved in commercial operations

#### **PART L2 ADDITIONAL LINE MAINTENANCE PROCEDURES**

- L2.1 Line maintenance control of aircraft components, tools, equipment, etc.
- L2.2 Line maintenance procedures related to servicing/fuelling/de-icing, including inspection for/removal of de-icing/anti-icing fluid residues, etc.
- L2.3 Line maintenance control of defects and repetitive defects
- L2.4 Line procedure for completion of technical log
- L2.5 Line procedure for pooled parts and loan parts
- L2.6 Line procedure for return of defective parts removed from aircraft
- L2.7 Line procedure for critical maintenance tasks and error-capturing methods

#### **PART 3 QUALITY SYSTEM PROCEDURES**

- 3.1 Quality audit of organisation procedures
- 3.2 Quality audit of aircraft
- 3.3 Quality audit remedial action procedure
- 3.4 Certifying staff and support staff qualification and training procedures
- 3.5 Certifying staff and support staff records
- 3.6 Quality audit personnel
- 3.7 Qualifying inspectors
- 3.8 Qualifying mechanics
- 3.9 Aircraft or aircraft component maintenance tasks exemption process control
- 3.10 Concession control for deviation from organisations' procedures
- 3.11 Qualification procedure for specialised activities such as NDT welding, etc.
- 3.12 Control of manufacturers' and other maintenance working teams
- 3.13 Human factors training procedure
- 3.14 Competence assessment of personnel
- 3.15 Training procedures for on-the-job training as per [Section 6 of Appendix III to Part-66](#) (limited to the case where the competent authority for the [Part-145](#) approval and for the [Part-66](#) licence is the same).
- 3.16 Procedure for the issue of a recommendation to the competent authority for the issue of a [Part-66](#) licence in accordance with [66.B.105](#) (limited to the case where the competent authority for the [Part-145](#) approval and for the [Part-66](#) licence is the same).

**PART 4**

- 4.1 Contracting operators
- 4.2 Operator procedures and paperwork
- 4.3 Operator record completion

**PART 5**

- 5.1 Sample of documents
- 5.2 List of Subcontractors as per [145.A.75\(b\)](#)
- 5.3 List of Line maintenance locations as per [145.A.75\(d\)](#)
- 5.4 List of contracted organisations as per [145.A.70\(a\)\(16\)](#)

**PART 6 OPERATORS MAINTENANCE PROCEDURES**

This section is reserved for those maintenance organisations approved under [Part-145](#) who are also operators.

**PART 7 FAA SUPPLEMENTARY PROCEDURES FOR A FAR PART-145 REPAIR STATION**

This section is reserved for those maintenance organisations approved under [Part-145](#) who are also certificated as a FAA FAR Part-145 repair station.

The contents of this Part should be based on the Maintenance Annex Guidance (MAG) issued by EASA and the FAA following the agreement between the United States of America and the European Union on cooperation in the regulation of civil aviation safety.

**PART 8 TRANSPORT CANADA CIVIL AVIATION (TCCA) SUPPLEMENTARY PROCEDURES FOR A CAR 573 MAINTENANCE ORGANISATION**

This section is reserved for those Part-145 approved maintenance organisations holding a CAR 573 approval.

The content of this Part should be based on the Maintenance Annex Guidance (MAG) issued by EASA and the TCCA following the agreement on civil aviation safety between the European Union and Canada.

**GM 145.A.70(a) Maintenance organisation exposition***ED Decision 2015/029/R*

1. The purpose of the maintenance organisation exposition (MOE) is to set forth the procedures, means and methods of the organisation.
2. Compliance with its contents will assure compliance with the requirements of [Part-145](#), which is a prerequisite to obtaining and retaining a maintenance organisation approval certificate.
3. [145.A.70\(a\)\(1\) to \(a\)\(11\)](#) constitutes the ‘management’ part of the MOE and therefore could be produced as one document and made available to the person(s) specified under [145.A.30\(b\)](#) who should be reasonably familiar with its contents. [145.A.70\(a\)\(6\)](#) list of certifying staff and B1 and B2 support staff may be produced as a separate document.

4. [145.A.70\(a\)\(12\)](#) constitutes the working procedures of the organisation and therefore as stated in the requirement may be produced as any number of separate procedures manuals. It should be remembered that these documents should be cross-referenced from the management MOE.
5. Personnel are expected to be familiar with those parts of the manuals that are relevant to the maintenance work they carry out.
6. The organisation should specify in the MOE who should amend the manual particularly in the case where there are several parts.
7. The quality manager should be responsible for monitoring the amendment of the MOE, unless otherwise agreed by the competent authority, including associated procedures manuals and submission of the proposed amendments to the competent authority. However the competent authority may agree via a procedure stated in the amendment section of the MOE that some defined class of amendments may be incorporated without prior approval by the competent authority.
8. The MOE should cover four main parts:
  - (a) The management MOE covering the parts specified earlier.
  - (b) The maintenance procedures covering all aspects of how aircraft components may be accepted from outside sources and how aircraft will be maintained to the required standard.
  - (c) The quality system procedures including the methods of qualifying mechanics, inspection, certifying staff and quality audit personnel.
  - (d) Contracting operator procedures and paperwork.
9. The accountable manager's exposition statement as specified under [145.A.70\(a\)\(1\)](#) should embrace the intent of the following paragraph and in fact this statement may be used without amendment. Any modification to the statement should not alter the intent.

This exposition and any associated referenced manuals define the organisation and procedures upon which the (competent authority\*) [Part-145](#) approval is based as required by [145.A.70](#). These procedures are approved by the undersigned and should be complied with, as applicable, when work orders are being progressed under the terms of the [Part-145](#) approval.

It is accepted that these procedures do not override the necessity of complying with any new or amended regulation published by the (competent authority\*) from time to time where these new or amended regulations are in conflict with these procedures.

It is understood that the (competent authority\*) will approve this organisation whilst the (competent authority\*) is satisfied that the procedures are being followed and work standards maintained. It is further understood that the (competent authority\*) reserves the right to suspend, limit or revoke the approval of the organisation if the (competent authority\*) has evidence that procedures are not followed or standards not upheld.

Signed .....

Dated .....

Accountable Manager and..... (quote position).....

For and on behalf of..... (quote organisation's name).....

Note: Where it states ('competent authority\*') please insert the actual name of the competent authority, for example, EASA, CAA-NL, LBA, DGAC, CAA, etc.

Whenever the accountable manager changes, it is important to ensure that the new accountable manager signs the paragraph 9 statement at the earliest opportunity.

Failure to carry out this action could invalidate the [Part-145](#) approval.

When an organisation is approved against any other Part containing a requirement for an exposition, a supplement covering the differences will suffice to meet the requirements except that the supplement should have an index showing where those parts missing from the supplement are covered.

## 145.A.75 Privileges of the organisation

Regulation (EU) 2015/1088

In accordance with the exposition, the organisation shall be entitled to carry out the following tasks:

- (a) Maintain any aircraft and/or component for which it is approved at the locations identified in the approval certificate and in the exposition;
- (b) Arrange for maintenance of any aircraft or component for which it is approved at another organisation that is working under the quality system of the organisation. This refers to work being carried out by an organisation not itself appropriately approved to carry out such maintenance under this Part and is limited to the work scope permitted under procedures laid down in point [145.A.65\(b\)](#). This work scope shall not include a base maintenance check of an aircraft or a complete workshop maintenance check or overhaul of an engine or engine module;
- (c) Maintain any aircraft or any component for which it is approved at any location subject to the need for such maintenance arising either from the unserviceability of the aircraft or from the necessity of supporting occasional line maintenance, subject to the conditions specified in the exposition;
- (d) Maintain any aircraft and/or component for which it is approved at a location identified as a line maintenance location capable of supporting minor maintenance and only if the organisation exposition both permits such activity and lists such locations;
- (e) Issue certificates of release to service in respect of completion of maintenance in accordance with point [145.A.50](#);
- (f) If specifically approved to do so for ELA1 aircraft not involved in commercial operations,
  1. perform airworthiness reviews and issue the corresponding airworthiness review certificate, under the conditions specified in point [M.A.901\(l\)](#), and
  2. perform airworthiness reviews and issue the corresponding recommendation, under the conditions specified in point [M.A.901\(l\)](#) and [M.A.904\(a\)2 and \(b\)](#).
- (g) Develop the maintenance programme and process its approval in accordance with point [M.A.302](#) for ELA2 aircraft not involved in commercial operations, under the conditions specified in point [M.A.201\(e\)\(ii\)](#), and limited to the aircraft ratings listed in the approval certificate.

## AMC 145.A.75(b) Privileges of the organisation

ED Decision 2015/029/R

1. Working under the quality system of an organisation appropriately approved under [Part-145](#) (sub contracting) refers to the case of one organisation, not itself appropriately approved to [Part-145](#) that carries out aircraft line maintenance or minor engine maintenance or maintenance of other aircraft components or a specialised service as a subcontractor for an

organisation appropriately approved under [Part-145](#). To be appropriately approved to subcontract the organisation should have a procedure for the control of such subcontractors as described below. Any approved maintenance organisation that carries out maintenance for another approved maintenance organisation within its own approval scope is not considered to be subcontracting for the purpose of this paragraph.

Note: For those organisations approved under [Part-145](#) that are also certificated by the FAA under FAR Part-145 it should be noted that FAR Part-145 is more restrictive in respect of maintenance activities that can be contracted or sub-contracted to another maintenance organisation. It is therefore recommended that any listing of contracted or sub-contracted maintenance organisations should identify which meet the [Part-145](#) criteria and which meet the FAR Part-145 criteria.

2. Maintenance of engines or engine modules other than a complete workshop maintenance check or overhaul is intended to mean any maintenance that can be carried out without disassembly of the core engine or, in the case of modular engines, without disassembly of any core module.
3. FUNDAMENTALS OF SUB-CONTRACTING UNDER PART-145
  - 3.1. The fundamental reasons for allowing an organisation approved under [Part-145](#) to sub-contract certain maintenance tasks are:
    - (a) To permit the acceptance of specialised maintenance services, such as, but not limited to, plating, heat treatment, plasma spray, fabrication of specified parts for minor repairs / modifications, etc., without the need for direct approval by the competent authority in such cases.
    - (b) To permit the acceptance of aircraft maintenance up to but not including a base maintenance check as specified in [145.A.75\(b\)](#) by organisations not appropriately approved under [Part-145](#) when it is unrealistic to expect direct approval by the competent authority. The competent authority will determine when it is unrealistic but in general it is considered unrealistic if only one or two organisations intend to use the sub-contract organisation.
    - (c) To permit the acceptance of component maintenance.
    - (d) To permit the acceptance of engine maintenance up to but not including a workshop maintenance check or overhaul of an engine or engine module as specified in [145.A.75\(b\)](#) by organisations not appropriately approved under [Part-145](#) when it is unrealistic to expect direct approval by the competent authority. The determination of unrealistic is as per sub-paragraph (b).
  - 3.2. When maintenance is carried out under the sub-contract control system it means that for the duration of such maintenance, the [Part-145](#) approval has been temporarily extended to include the sub-contractor. It therefore follows that those parts of the sub-contractor's facilities personnel and procedures involved with the maintenance organisation's products undergoing maintenance should meet [Part-145](#) requirements for the duration of that maintenance and it remains the organisation's responsibility to ensure such requirements are satisfied.
  - 3.3. For the criteria specified in sub-paragraph 3.1 the organisation is not required to have complete facilities for maintenance that it needs to sub-contract but it should have its own expertise to determine that the sub-contractor meets the necessary standards. However an organisation cannot be approved unless it has the in-house facilities,

procedures and expertise to carry out the majority of maintenance for which it wishes to be approved in terms of the number of class ratings.

- 3.4. The organisation may find it necessary to include several specialist sub-contractors to enable it to be approved to completely certify the release to service of a particular product. Examples could be specialist welding, electro-plating, painting etc. To authorise the use of such subcontractors, the competent authority will need to be satisfied that the organisation has the necessary expertise and procedures to control such sub-contractors.
  - 3.5. An organisation working outside the scope of its approval schedule is deemed to be not approved. Such an organisation may in this circumstance operate only under the sub-contract control of another organisation approved under [Part-145](#).
  - 3.6. Authorisation to sub-contract is indicated by the competent authority accepting the maintenance organisation exposition containing a specific procedure on the control of sub-contractors.
4. PRINCIPAL PART-145 PROCEDURES FOR THE CONTROL OF SUB-CONTRACTORS NOT APPROVED UNDER PART-145
- 4.1. A pre-audit procedure should be established whereby the maintenance organisations' subcontract control section, which may also be the [145.A.65\(c\)](#) quality system independent audit section, should audit a prospective subcontractor to determine whether those services of the subcontractor that it wishes to use meets the intent of Part-145.
  - 4.2. The organisation approved under Part-145 needs to assess to what extent it will use the sub-contractor's facilities. As a general rule the organisation should require its own paperwork, approved data and material/spare parts to be used, but it could permit the use of tools, equipment and personnel from the sub-contractor as long as such tools, equipment and personnel meet the requirement of Part-145. In the case of sub-contractors who provide specialised services it may for practical reasons be necessary to use their specialised services personnel, approved data and material subject to acceptance by the organisation approved under Part-145.
  - 4.3. Unless the sub-contracted maintenance work can be fully inspected on receipt by the organisation approved under Part-145 it will be necessary for such organisation to supervise the inspection and release from the sub-contractor. Such activities should be fully described in the organisation procedure. The organisation will need to consider whether to use its own staff or authorise the sub-contractor's staff.
  - 4.4. The certificate of release to service may be issued either at the sub-contractor or at the organisation facility by staff issued a certification authorisation in accordance with [145.A.30](#) as appropriate, by the organisation approved under Part-145. Such staff would normally come from the organisation approved under Part-145 but may otherwise be a person from the sub-contractor who meets the approved maintenance organisation certifying staff standard which itself is approved by the competent authority via the maintenance organisation exposition. The certificate of release to service and the [EASA Form 1](#) will always be issued under the maintenance organisation approval reference.
  - 4.5. The sub-contract control procedure will need to record audits of the sub-contractor, to have a corrective action follow up plan and to know when sub-contractors are being used. The procedure should include a clear revocation process for sub-contractors who do not meet the Part-145 approved maintenance organisation's requirements.

- 4.6. The Part-145 quality audit staff will need to audit the sub-contract control section and sample audit sub-contractors unless this task is already carried out by the quality audit staff as stated in sub-paragraph 4.1.
- 4.7. The contract between the Part-145 approved maintenance organisation and the sub-contractor should contain a provision for the competent authority and EASA standardisation team staff to have right of access to the sub-contractor.

## 145.A.80 Limitations on the organisation

*Regulation (EU) No 1321/2014*

The organisation shall only maintain an aircraft or component for which it is approved when all the necessary facilities, equipment, tooling, material, maintenance data and certifying staff are available.

## AMC 145.A.80 Limitations on the organisation

*ED Decision 2015/029/R*

This paragraph is intended to cover the situation where the larger organisation may temporarily not hold all the necessary tools, equipment etc., for an aircraft type or variant specified in the organisation's approval. This paragraph means that the competent authority need not amend the approval to delete the aircraft type or variants on the basis that it is a temporary situation and there is a commitment from the organisation to re-acquire tools, equipment etc. before maintenance on the type may recommence.

## 145.A.85 Changes to the organisation

*Regulation (EU) 2015/1088*

The organisation shall notify the competent authority of any proposal to carry out any of the following changes before such changes take place to enable the competent authority to determine continued compliance with this Part and to amend, if necessary, the approval certificate, except that in the case of proposed changes in personnel not known to the management beforehand, these changes must be notified at the earliest opportunity:

1. the name of the organisation;
2. the main location of the organisation;
3. additional locations of the organisation;
4. the accountable manager;
5. any of the persons nominated under point [145.A.30\(b\)](#);
6. the facilities, equipment, tools, material, procedures, work scope, certifying staff and **airworthiness review staff** that could affect the approval.

## 145.A.90 Continued validity

*Regulation (EU) No 1321/2014*

- (a) An approval shall be issued for an unlimited duration. It shall remain valid subject to:
  1. the organisation remaining in compliance with [Annex II \(Part-145\)](#), in accordance with the provisions related to the handling of findings as specified under point [145.B.50](#); and

2. the competent authority being granted access to the organisation to determine continued compliance with this Part; and
  3. the certificate not being surrendered or revoked.
- (b) Upon surrender or revocation, the approval shall be returned to the competent authority.

## 145.A.95 Findings

*Regulation (EU) No 1321/2014*

- (a) A level 1 finding is any significant non-compliance with requirements laid down in this [Annex \(Part-145\)](#) which lowers the safety standard and hazards seriously the flight safety.
- (b) A level 2 finding is any non-compliance with requirements laid down in this [Annex \(Part-145\)](#) which could lower the safety standard and possibly hazard the flight safety.
- (c) After receipt of notification of findings according to point [145.B.50](#), the holder of the maintenance organisation approval shall define a corrective action plan and demonstrate corrective action to the satisfaction of the competent authority within a period agreed with this authority.



## SECTION B — PROCEDURE FOR COMPETENT AUTHORITIES

### 145.B.01 Scope

Regulation (EU) No 1321/2014

This section establishes the administrative procedures which the competent authority shall follow when exercising its tasks and responsibilities regarding issuance, continuation, change, suspension or revocation of approvals of maintenance organisations under this [Annex \(Part-145\)](#).

### 145.B.10 Competent authority

Regulation (EU) No 1321/2014

#### 1. General

The Member State shall designate a competent authority with allocated responsibilities for the issuance, continuation, change, suspension or revocation of a maintenance approval. This competent authority shall establish documented procedures and an organisational structure.

#### 2. Resources

The number of staff must be appropriate to carry out the requirements as detailed in this section.

#### 3. Qualification and training

All staff involved in approvals under this [Annex \(Part-145\)](#) must:

- (a) be appropriately qualified and have all necessary knowledge, experience and training to perform their allocated tasks.
- (b) have received training/continuation training on this [Annex \(Part-145\)](#) where relevant, including its intended meaning and standard.

#### 4. Procedures

The competent authority shall establish procedures detailing how compliance with this Section B is accomplished.

The procedures must be reviewed and amended to ensure continued compliance.

### AMC 145.B.10(1) Competent authority - General

ED Decision 2015/029/R

1. In deciding upon the required organisational structure, the competent authority should review the number of certificates to be issued, the number and size of potential [Part-145](#) approved maintenance organisations within that Member State, as well as the level of civil aviation activity, number and complexity of aircraft and the size of the Member State's aviation industry.
2. The competent authority should retain effective control of important surveillance functions and not delegate them in such a way that [Part-145](#) organisations, in effect, regulate themselves in airworthiness matters.
3. The set-up of the organisational structure should ensure that the various tasks and obligations of the competent authority are not relying on individuals. That means that a continuing and undisturbed fulfilment of these tasks and obligations of the competent authority should also be guaranteed in case of illness, accident or leave of individual employees.

## AMC 145.B.10(3) Competent authority – Qualification and training

*ED Decision 2015/029/R*

1. Competent authority surveyors should have:
  - 1.1. practical experience and expertise in the application of aviation safety standards and safe operating practices;
  - 1.2. comprehensive knowledge of:
    - (a) relevant parts of implementing rules, certification specifications and guidance material;
    - (b) the competent authority's procedures;
    - (c) the rights and obligations of a surveyor;
    - (d) quality systems;
    - (e) continuing airworthiness management;
    - (f) operational procedures when affecting the continuing airworthiness management of the aircraft or the maintenance.
  - 1.3. training on auditing techniques.
  - 1.4. five years relevant work experience to be allowed to work as a surveyor independently. This may include experience gained during training to obtain the 1.5 qualification.
  - 1.5. a relevant engineering degree or an aircraft maintenance technician qualification with additional education. 'relevant engineering degree' means an engineering degree from aeronautical, mechanical, electrical, electronic, avionic or other studies relevant to the maintenance and continuing airworthiness of aircraft/aircraft components.
  - 1.6. knowledge of maintenance standards, including Fuel Tank Safety (FTS) training as described in [Appendix IV to AMC 145.A.30\(e\) and 145.B.10\(3\)](#).
2. In addition to technical competency, surveyors should have a high degree of integrity, be impartial in carrying out their tasks, be tactful, and have a good understanding of human nature.
3. A programme for continuation training should be developed ensuring that the surveyors remain competent to perform their allocated tasks.

## AMC 145.B.10(4) Competent authority - Procedures

*ED Decision 2015/029/R*

The documented procedures should contain the following information:

- (a) The Member State's designation of the competent authority(ies).
- (b) The title(s) and name(s) of the manager(s) of the competent authority and their duties and responsibilities.
- (c) Organisation chart(s) showing associated chains of responsibility of the senior persons.
- (d) A procedure defining the qualifications for staff together with a list of staff authorised to sign certificates.
- (e) A general description of the facilities.
- (f) Procedures specifying how the competent authority(ies) ensure(s) compliance with [Part-145](#).

## 145.B.15 Organisations located in several Member States

Regulation (EU) No 1321/2014

Where maintenance facilities are located in more than one Member State the investigation and continued oversight of the approval must be carried out in conjunction with the competent authorities from the Member States in whose territory the other maintenance facilities are located.

## 145.B.20 Initial approval

Regulation (EU) No 1321/2014

1. Provided the requirements of points [145.A.30\(a\)](#) and [\(b\)](#) are complied with, the competent authority shall formally indicate its acceptance of the personnel, specified in points [145.A.30\(a\)](#) and [\(b\)](#), to the applicant in writing.
2. The competent authority shall verify that the procedures specified in the maintenance organisation exposition comply with this [Annex \(Part-145\)](#) and verify that the accountable manager signs the commitment statement.
3. The competent authority shall verify that the organisation is in compliance with the requirements of this [Annex \(Part-145\)](#).
4. A meeting with the accountable manager shall be convened at least once during the investigation for approval to ensure that he/she fully understands the significance of the approval and the reason for signing the exposition commitment of the organisation to compliance with the procedures specified in the exposition.
5. All findings must be confirmed in writing to the organisation.
6. The competent authority shall record all findings, closure actions (actions required to close a finding) and recommendations
7. For initial approval all findings must be corrected before the approval can be issued.

## AMC 145.B.20(1) Initial approval

ED Decision 2015/029/R

1. Formally indicated by the competent authority in writing means that the [EASA Form 4](#) should be used for this activity. With the exception of the accountable manager, an [EASA Form 4](#) should be completed for each person nominated to hold a position as required by [145.A.30\(b\)](#).
2. Formal indication of acceptance should be by use of the [EASA Form 4](#) or in the case of the Accountable Manager via approval of the Maintenance Organisation Exposition containing the Accountable Managers commitment statement.
3. The competent authority may reject an accountable manager where there is clear evidence that they previously held a senior position in any JAR/Part approved Organisation and abused that position by not complying with the particular JAR/Part requirements.

## AMC 145.B.20(2) Initial approval

ED Decision 2015/029/R

Verification that the organisation complies with the exposition procedures should be established by the competent authority approving the maintenance organisation exposition.

### AMC 145.B.20(3) Initial approval

*ED Decision 2015/029/R*

1. The competent authority should determine by whom, and how the audit shall be conducted. For example, for a large organisation, it will be necessary to determine whether one large team audit or a short series of small team audits or a long series of single man audits are most appropriate for the particular situation.
2. It is recommended that the audit is carried out on a product line type basis in that, for example, in the case of an organisation with Airbus A310 and A320 ratings, the audit be concentrated on one type only for a full compliance check and dependent upon the result, the second type may only require a sample check against those activities seen to be weak on compliance for the first type.
3. The competent authority auditing surveyor should always ensure that he/she is accompanied throughout the audit by a senior technical member of the organisation. Normally this is the quality manager. The reason for being accompanied is to ensure the organisation is fully aware of any findings during the audit.
4. The auditing surveyor should inform the senior technical member of the organisation at the end of the audit visit on all findings made during the audit.

### AMC 145.B.20(5) Initial approval

*ED Decision 2015/029/R*

1. The audit report form should be the [EASA Form 6](#).
2. A quality review of the [EASA Form 6](#) audit report form should be carried out by a competent independent person nominated by the competent authority. The review should take into account the relevant paragraphs of [Part-145](#), the categorisation of finding levels and the closure action taken. Satisfactory review of the audit form should be indicated by a signature on the audit form.

### AMC 145.B.20(6) Initial approval

*ED Decision 2015/029/R*

1. The reports should include the date each finding was cleared together with reference to the competent authority report or letter that confirmed the clearance.
2. There may be occasions when the competent authority surveyor may find situations in the applicant's organisation on which he/she is unsure about compliance. In this case, the organisation should be informed about possible non-compliance at the time and the fact that the situation will be reviewed within the competent authority before a decision is made.  
  
If the decision is a finding of being in compliance then a verbal confirmation to the organisation will suffice.
3. Findings should be recorded on the audit report form with a provisional categorisation as a level 1 or 2. Subsequent to the audit visit that identified the particular findings, the competent authority should review the provisional finding levels, adjusting them if necessary and change the categorisation from provisional to confirmed.
4. All findings should be confirmed in writing to the applicant organisation within 2 weeks of the audit visit.

## 145.B.25 Issue of approval

Regulation (EU) No 1321/2014

1. The competent authority shall formally approve the exposition and issue to the applicant a Form 3 approval certificate, which includes the approval ratings. The competent authority shall only issue a certificate when the organisation is in compliance with this [Annex \(Part-145\)](#).
2. The competent authority shall indicate the conditions of the approval on the Form 3 approval certificate.
3. The reference number shall be included on the Form 3 approval certificate in a manner specified by the Agency.

### AMC 145.B.25(1) Issue of approval

ED Decision 2015/029/R

1. For approvals involving more than one Member State, the approval should be granted in conjunction with the Member State in whose territory the other maintenance facilities are located. For practical reasons it is recommended that the initial approval should be granted on the basis of a joint audit visit by the approving Member State and the Member State in whose territory the facility is located. Audits related to the continuation of the approval should be delegated to the Member State in whose territory the facility is located with the audit form and recommendation submitted to the approving Member State.
2. The approval should be based only upon the organisational capability (including any associated sub-contractors) relative to [Part-145](#) and not limited by reference to EASA/national type certificated products.  

For example, if the organisation is capable of maintaining within the limitation of [Part-145](#) the Boeing 737-200 series aircraft the approval schedule should state A1 Boeing 737-200 series and not Boeing 737-2H6 which is a particular airline designator for one of many -200 series.
3. The competent authority should indicate approval of the exposition in writing.

### AMC 145.B.25(2) Issue of approval

ED Decision 2015/029/R

The validity of the [Part-145](#) approval should be of unlimited duration.

### AMC 145.B.25(3) Issue of approval

ED Decision 2015/029/R

The numeric sequence should be unique to the particular approved maintenance organisation.

## 145.B.30 Continuation of an approval

Regulation (EU) No 1321/2014

The continuation of an approval shall be monitored in accordance with the applicable 'initial approval' process under point [145.B.20](#). In addition:

1. The competent authority shall keep and update a program listing the approved maintenance organisations under its supervision, the dates when audit visits are due and when such visits were carried out.

2. Each organisation must be completely reviewed for compliance with this [Annex \(Part-145\)](#) at periods not exceeding 24 months.
3. A meeting with the accountable manager shall be convened at least once every 24 months to ensure he/she remains informed of significant issues arising during audits.

### AMC 145.B.30(1) Continuation of an approval

ED Decision 2015/029/R

Credit may be claimed by the competent authority surveyor(s) for specific item audits completed during the preceding 23 month period subject to four conditions:

- the specific item audit should be the same as that required by [Part-145](#) latest amendment, and
- there should be satisfactory evidence on record that such specific item audits were carried out and that all corrective actions have been taken, and
- the competent authority surveyor(s) should be satisfied that there is no reason to believe standards have deteriorated in respect of those specific item audits being granted a back credit, and
- the specific item audit being granted a back credit should be audited not later than 24 months after the last audit of the item.

### AMC 145.B.30(2) Continuation of an approval

ED Decision 2015/029/R

1. Where the competent authority has decided that a series of audit visits are necessary to arrive at a complete audit of an organisation, the programme should indicate which aspects of the approval will be covered on each visit.
2. It is recommended that part of an audit concentrates on two ongoing aspects of the [Part-145](#) approval, namely the organisation's internal self-monitoring quality reports produced by the quality monitoring personnel to determine if the organisation is identifying and correcting its problems and secondly the number of concessions granted by the quality manager.
3. At the successful conclusion of the audit including approval of the exposition, an audit report form should be completed by the auditing surveyor including all recorded findings, closure actions and recommendation. An [EASA Form 6](#) should be used for this activity.
4. The accountable manager should be seen at least once every 24 months to ensure he/she fully understands the significance of the approval.
5. In the case of line stations the competent authority can adopt a sampling programme based upon number of line stations and complexity.

### 145.B.35 Changes

Regulation (EU) No 1321/2014

1. The competent authority shall receive notification from the organisation of any proposed change as listed in point [145.A.85](#).

The competent authority shall comply with the applicable elements of the initial process points for any change to the organisation.

2. The competent authority may prescribe the conditions under which organisation may operate during such changes unless it determines that the approval should be suspended.

### AMC 145.B.35 Changes

ED Decision 2015/029/R

The competent authority should have adequate control over any changes to the management personnel specified in [145.A.30\(a\) and \(b\)](#) and such changes in personnel will require an amendment to the exposition.

### AMC 145.B.35(1) Changes

ED Decision 2015/029/R

The applicable part(s) of the [EASA Form 6](#) should be used for the changes to the [Part-145](#) approval.

### AMC 145.B.35(2) Changes to the organisation

ED Decision 2015/029/R

The primary purpose of this paragraph is to enable the organisation to remain approved if agreed by the competent authority during negotiations about any of the specified changes. Without this paragraph the approval would automatically be suspended in all cases.

## 145.B.40 Changes to the Maintenance Organisation Exposition

Regulation (EU) No 1321/2014

For any change to the Maintenance Organisation Exposition (MOE):

1. In the case of direct approval of the changes in accordance with point [145.A.70\(b\)](#), the competent authority shall verify that the procedures specified in the exposition are in compliance with [Annex II \(Part-145\)](#) before formally notifying the approved organisation of the approval.
2. In the case an indirect approval procedure is used for the approval of the changes in accordance with point [145.A.70\(c\)](#), the competent authority shall ensure (i) that the changes remain minor and (ii) that it has an adequate control over the approval of the changes to ensure they remain in compliance with the requirements of [Annex II \(Part-145\)](#).

### AMC 145.B.40 MOE amendments

ED Decision 2015/029/R

1. It is recommended that a simple exposition status sheet is maintained which contains information on when an amendment was received by the competent authority and when it was approved.
2. The competent authority may define some class of amendments to the exposition which may be incorporated without prior authority approval. In this case a procedure should be stated in the amendment section of the MOE.  

The exposition chapter dealing with scope of work/approval should not be subject to this procedure.
3. The organisation should submit each exposition amendment to the competent authority whether it is an amendment for approval or a delegated approval amendment. Where the



amendment requires approval by the competent authority, the competent authority when satisfied, should indicate its approval in writing. Where the amendment has been submitted under the delegated approval procedure the competent authority should acknowledge receipt in writing.

## 145.B.45 Revocation, suspension and limitation of approval

Regulation (EU) No 1321/2014

The competent authority shall:

- (a) suspend an approval on reasonable grounds in the case of potential safety threat; or
- (b) suspend, revoke or limit an approval pursuant to point [145.B.50](#).

## 145.B.50 Findings

Regulation (EU) No 1321/2014

- (a) When during audits or by other means evidence is found showing non-compliance with the requirements of this [Annex \(Part-145\)](#), the competent authority shall take the following actions:
  1. For level 1 findings, immediate action shall be taken by the competent authority to revoke, limit or suspend in whole or in part, depending upon the extent of the level 1 finding, the maintenance organisation approval, until successful corrective action has been taken by the organisation.
  2. For level 2 findings, the corrective action period granted by the competent authority must be appropriate to the nature of the finding but in any case initially must not be more than three months. In certain circumstances and subject to the nature of the finding the competent authority may extend the three month period subject to a satisfactory corrective action plan agreed by the competent authority.
- (b) Action shall be taken by the competent authority to suspend in whole or part the approval in case of failure to comply within the timescale granted by the competent authority

## AMC 145.B.50(a) Findings

ED Decision 2015/029/R

In practical terms a level 1 finding is where a competent authority finds a significant non-compliance with [Part-145](#).

The following are example level 1 findings:

- Failure to gain access to the organisation during normal operating hours of the organisation in accordance with [145.A.90\(2\)](#) after two written requests.
- If the calibration control of equipment as specified in [145.A.40\(b\)](#) had previously broken down on a particular type product line such that most ‘calibrated’ equipment was suspect from that time then that would be a level 1 finding.

A complete product line is defined as all the aircraft, engine or component of a particular type.

For a level 1 finding it may be necessary for the competent authority to ensure that further maintenance and re-certification of all affected products is accomplished, dependent upon the nature of the finding.



In practical terms where a competent authority surveyor finds a non-compliance with [Part-145](#) against one product, it is deemed to be a level 2 finding.

The following are example level 2 findings:

- One time use of a component without any serviceable tag.
- The training documents of the certifying staff are not completed.

## AMC 145.B.50(b) Findings

*ED Decision 2015/029/R*

Where the organisation has not implemented the necessary corrective action within that period it may be appropriate to grant a further period of up to three months, subject to the competent authority notifying the accountable manager. In exceptional circumstances and subject to a realistic action plan being in place, the competent authority may specifically vary the maximum 6 month corrective action period. However, in granting such a change the past performance of the organisation should be considered.

## 145.B.55 Record-keeping

*Regulation (EU) No 1321/2014*

1. The competent authority shall establish a system of record-keeping with minimum retention criteria that allows adequate traceability of the process to issue, continue, change, suspend or revoke each individual organisation approval.
2. The records shall include as a minimum:
  - (a) the application for an organisation approval, including the continuation thereof.
  - (b) the competent authority continued oversight program including all audit records.
  - (c) the organisation approval certificate including any change thereto.
  - (d) a copy of the audit program listing the dates when audits are due and when audits were carried out.
  - (e) copies of all formal correspondence including [Form 4](#) or equivalent.
  - (f) details of any exemption and enforcement action(s).
  - (g) any other competent authority audit report forms.
  - (h) maintenance organisation expositions.
3. The minimum retention period for the above records shall be four years.
4. The competent authority may elect to use either a paper or computer system or any combination of both subject to appropriate controls.

## AMC 145.B.55 Record-keeping

*ED Decision 2015/029/R*

1. The record-keeping system should ensure that all records are accessible whenever needed within a reasonable time. These records should be organised in a consistent way throughout the competent authority (chronological, alphabetical order, etc.).

2. All records containing sensitive data regarding applicants or organisations should be stored in a secure manner with controlled access to ensure confidentiality of this kind of data.
3. All computer hardware used to ensure data backup should be stored in a different location from that containing the working data in an environment that ensures they remain in good condition. When hardware or software changes take place special care should be taken to ensure that all necessary data continues to be accessible at least through the full period specified in [145.B.55](#).

## 145.B.60 Exemptions

*Regulation (EU) No 1321/2014*

All exemptions granted in accordance with Article 10(3) of Regulation (EC) No 216/2008 shall be recorded and retained by the competent authority.

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## APPENDICES TO ANNEX II (PART-145)

### Appendix I — Authorised Release Certificate — EASA Form 1

*Regulation (EU) No 1321/2014*

The provisions of [Appendix II to Annex I \(Part-M\)](#) apply.

## Appendix II — Class and Ratings System used for the Approval of Maintenance Organisations referred to in Annex I (Part-M) Subpart F and Annex II (Part-145)

*Regulation (EU) No 1321/2014*

The provisions of [Appendix IV to Annex I \(Part-M\)](#) apply.

## Appendix III — Maintenance Organisation Approval referred to in Annex II (Part-145)

*Regulation (EU) 2015/1088*

Page 1 of 2

[MEMBER STATE (\*)]  
A Member of the European Union (\*\*)

**MAINTENANCE ORGANISATION APPROVAL CERTIFICATE**

Reference: [MEMBER STATE CODE(\*)].145.XXXX

Pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council and to Commission Regulation (EU) No 1321/2014 for the time being in force and subject to the condition specified below, the [COMPETENT AUTHORITY OF THE MEMBER STATE (\*)] hereby certifies:

**[COMPANY NAME AND ADDRESS]**

as a maintenance organisation in compliance with [Section A of Annex II \(Part-145\)](#) of Regulation (EU) No 1321/2014, approved to maintain products, parts and appliances listed in the attached approval schedule and issue related certificates of release to service using the above references and, when stipulated, to issue recommendations and airworthiness review certificates after an airworthiness review as specified in point [M.A.901\(I\)](#) of Annex I (Part-M) to the same Regulation for those aircraft listed in the attached approval schedule.

**CONDITIONS:**

1. This approval is limited to that specified in the scope of work section of the approved maintenance organisation exposition as referred to in [Section A of Annex II \(Part-145\)](#), and
2. This approval requires compliance with the procedures specified in the approved maintenance organisation exposition, and
3. This approval is valid whilst the approved maintenance organisation remains in compliance with Annex II ([Part-145](#)) of Regulation (EU) No 1321/2014.
4. Subject to compliance with the foregoing conditions, this approval shall remain valid for an unlimited duration unless the approval has previously been surrendered, superseded, suspended or revoked.

Date of original issue: .....

Date of this revision: .....

Revision No: .....

Signed: .....

For the competent authority: [COMPETENT AUTHORITY OF THE MEMBER STATE(\*)]

EASA Form 3-145 Issue 3

(\*) Or EASA if EASA is the competent authority

(\*\*) Delete for non-EU Member States or EASA

**MAINTENANCE ORGANISATION APPROVAL SCHEDULE**

Reference: [MEMBER STATE CODE (\*).145.[XXXX]

Organisation: [COMPANY NAME AND ADDRESS]

CLASS	RATING	LIMITATION	BASE	LINE
<b>AIRCRAFT (**)</b>	(***)	(***)	[YES/NO] (**)	[YES/NO] (**)
	(***)	(***)	[YES/NO] (**)	[YES/NO] (**)
	(***)	(***)	[YES/NO] (**)	[YES/NO] (**)
	(***)	(***)	[YES/NO] (**)	[YES/NO] (**)
<b>ENGINES (**)</b>	(***)	(***)		
	(***)	(***)		
<b>COMPONENTS OTHER THAN COMPLETE ENGINES OR APUs (**)</b>	(***)	(***)		
	(***)	(***)		
	(***)	(***)		
	(***)	(***)		
	(***)	(***)		
	(***)	(***)		
<b>SPECIALISED SERVICES (**)</b>	(***)	(***)		
	(***)	(***)		

This approval schedule is limited to those products, parts and appliances and to the activities specified in the scope of work section of the approved maintenance organisation exposition,

Maintenance Organisation Exposition reference: .....

Date of original issue: .....

Date of last revision approved: ..... Revision No: .....

Signed: .....

For the competent authority: [COMPETENT AUTHORITY OF THE MEMBER STATE (\*)]

EASA Form 3-145 Issue 3

(\*) Or EASA if EASA is the competent authority

(\*\*) Delete as appropriate if the organisation is not approved.

(\*\*\*) Complete with the appropriate rating and limitation

(\*\*\*\*) Complete with appropriate limitation and state whether the issue of recommendations and airworthiness review certificates is authorised or not (only possible for ELA1 aircraft not involved in commercial operations when the organisation performs the airworthiness review together with the annual inspections contained in the maintenance programme).

## AMC to Appendix III — Maintenance Organisation Approval referred to in Annex II (Part-145)

ED Decision 2015/029/R

The following fields on page 2 'Maintenance Organisation Approval Schedule' of the maintenance organisation approval certificate should be completed as follows:

- Date of original issue: It refers to the date of the original issue of the maintenance organisation exposition
- Date of last revision approved: It refers to the date of the last revision of the maintenance organisation exposition affecting the content of the certificate. Changes to the maintenance organisation exposition which do not affect the content of the certificate do not require the reissuance of the certificate.
- Revision No: It refers to the revision No of the last revision of the maintenance organisation exposition affecting the content of the certificate. Changes to the maintenance organisation exposition which do not affect the content of the certificate do not require the reissuance of the certificate.

## Appendix IV — Conditions for the use of staff not qualified in accordance with Annex III (Part-66) referred to in points 145.A.30(j)1 and 2

Regulation (EU) No 1321/2014

1. Certifying staff in compliance with all the following conditions are deemed to meet the intent of point [145.A.30\(j\)\(1\) and \(2\)](#):
  - (a) The person shall hold a licence or a certifying staff authorisation issued under national regulations in full compliance with ICAO Annex 1.
  - (b) The scope of work of the person shall not exceed the scope of work defined by the national licence or the certifying staff authorisation, whatever is the most restrictive.
  - (c) The person shall demonstrate he/she received the training on human factors and aviation legislation referred to in modules 9 and 10 of [Appendix I to Annex III \(Part-66\)](#).
  - (d) The person shall demonstrate 5 years maintenance experience for line maintenance certifying staff and 8 years for base maintenance certifying staff. However, those persons whose authorised tasks do not exceed those of a [Part-66](#) category A certifying staff, need to demonstrate 3 years maintenance experience only.
  - (e) Line maintenance certifying staff and base maintenance support staff shall demonstrate he/she received type training and passed examination at the category B1, B2 or B3 level, as applicable, referred to in [Appendix III to Annex III \(Part-66\)](#) for each aircraft type in the scope of work referred to in point (b). Those persons whose scope of work does not exceed those of a category A certifying staff may however receive task training in lieu of a complete type training.
  - (f) Base maintenance certifying staff shall demonstrate he/she received type training and passed examination at the category C level referred to in [Appendix III to Annex III \(Part-66\)](#) for each aircraft type in the scope of work referred to in point (b), except that for the first aircraft type, training and examination shall be at the category B1, B2 or B3 level of Appendix III.
2. Protected rights
  - (a) The personnel having privileges before the entry into force of the relevant requirements of [Annex III \(Part-66\)](#) may continue to exercise them without the need to comply with points 1(c) to 1(f).
  - (b) However after that date any certifying staff willing to extend the scope of their authorisation to include additional privileges shall comply with point 1.
  - (c) Notwithstanding point 2(b) above, in the case of additional type training, compliance with points 1(c) and 1(d) is not required.



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## APPENDICES TO AMCs TO ANNEX II (PART-145)

### Appendix I to AMC 145.B.20(1) — EASA Form 4

*ED Decision 2015/029/R*

The provisions of [Appendix X to AMC M.B.602\(a\)](#) and [AMC M.B.702\(a\)](#) [EASA Form 4](#) apply.

## Appendix II to AMC 145.B.20(5) — EASA Form 6

*ED Decision 2016/011/R*

Part-145 APPROVAL RECOMMENDATION REPORT	EASA FORM 6
<p><b>Part 1: General</b></p> <p>Name of organisation:</p> <p>Approval reference:</p> <p>Requested approval rating:</p> <p>EASA Form 3 dated*:</p> <p>FAA FAR 145 Cert No (if applicable):</p> <p>Address of facility audited:</p>   <p>Audit period: From _____ to _____</p> <p>Date(s) of audit:</p> <p>Audit reference(s):</p> <p>Persons interviewed:</p>   <p>Competent authority surveyor(s): _____ Signature(s): _____</p> <p>Competent authority office: _____ Date of EASA Form 6 Part 1 completion: _____</p> <p>*delete as appropriate</p>	

Part-145 APPROVAL RECOMMENDATION REPORT		EASA FORM 6				
<b>Part 2: <a href="#">Part-145</a> Compliance Audit Review</b>						
The five columns may be labelled and used as necessary to record the approval class and/or product line reviewed. Against each column used of the following <a href="#">Part-145</a> points please either tick (✓) the box if satisfied with compliance or cross (X) the box if not satisfied with compliance and specify the reference of the Part 4 finding next to the box, or enter N/A where an item is not applicable, or N/R when applicable but not reviewed.						
Para	Subject					
<a href="#">145.A.25</a>	Facility requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.30</a>	Personnel requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.35</a>	Certifying Staff and support staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.36</a>	Records of airworthiness review staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.40</a>	Equipment, Tools and material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.42</a>	Acceptance of Components	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.45</a>	Maintenance Data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.47</a>	Production Planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.48</a>	Performance of maintenance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.50</a>	Certification of Maintenance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.55</a>	Maintenance Records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.60</a>	Occurrence Reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.65</a>	Safety and Quality Policy, maintenance procedures and Quality System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.70</a>	Maintenance Organisation Exposition (see Part 3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.75</a>	Privileges of the organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.80</a>	Limitations on the organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<a href="#">145.A.85</a>	Changes to the organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">145.A.95</a>	Findings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competent surveyor(s):		Signature(s):				
Competent authority office:		Date of EASA Form 6 Part 2 completion:				

Part-145 APPROVAL RECOMMENDATION REPORT		EASA FORM 6
<b>Part 3: Compliance with 145.A.70 Maintenance organisation exposition</b>		
Please either tick (√) the box if satisfied with compliance; or cross (X) if not satisfied with compliance and specify the reference of the Part 4 finding; or enter N/A where an item is not applicable; or N/R when applicable but not reviewed.		
<b>PART 1 Management</b>		
1.1	<input type="checkbox"/>	Corporate commitment by the accountable manager
1.2	<input type="checkbox"/>	Safety and Quality Policy
1.3	<input type="checkbox"/>	Management personnel
1.4	<input type="checkbox"/>	Duties and responsibilities of the management personnel
1.5	<input type="checkbox"/>	Management Organisation Chart
1.6	<input type="checkbox"/>	List of Certifying staff, support staff and airworthiness review staff (Note: a separate document may be referenced)
1.7	<input type="checkbox"/>	Manpower resources
1.8	<input type="checkbox"/>	General description of the facilities at each address intended to be approved
1.9	<input type="checkbox"/>	Organisations intended scope of work
1.10	<input type="checkbox"/>	Notification procedure to the competent authority regarding changes to the organisation's activities/approval/location/personnel
1.11	<input type="checkbox"/>	Exposition amendment procedures
<b>PART 2 Maintenance Procedures</b>		
2.1	<input type="checkbox"/>	Supplier evaluation and subcontract control procedure
2.2	<input type="checkbox"/>	Acceptance/inspection of aircraft components and material from outside contractors
2.3	<input type="checkbox"/>	Storage, tagging, and release of aircraft components and material to aircraft maintenance
2.4	<input type="checkbox"/>	Acceptance of tools and equipment
2.5	<input type="checkbox"/>	Calibration of tools and equipment
2.6	<input type="checkbox"/>	Use of tooling and equipment by staff (including alternate tools)
2.7	<input type="checkbox"/>	Cleanliness standards of maintenance facilities
2.8	<input type="checkbox"/>	Maintenance instructions and relationship to aircraft/aircraft component manufacturers' instructions including updating and availability to staff
2.9	<input type="checkbox"/>	Repair procedure
2.10	<input type="checkbox"/>	Aircraft maintenance programme compliance
2.11	<input type="checkbox"/>	Airworthiness Directives procedure
2.12	<input type="checkbox"/>	Optional modification procedure

<b>Part-145 APPROVAL RECOMMENDATION REPORT</b>		<b>EASA FORM 6</b>
<b>Part 3: Compliance with <a href="#">145.A.70</a> Maintenance organisation exposition</b>		
2.13	<input type="checkbox"/>	Maintenance documentation in use and its completion
2.14	<input type="checkbox"/>	Technical records control
2.15	<input type="checkbox"/>	Rectification of defects arising during base maintenance
2.16	<input type="checkbox"/>	Release to service procedure
2.17	<input type="checkbox"/>	Records for the operator
2.18	<input type="checkbox"/>	Reporting of defects to the competent authority/Operator/Manufacturer
2.19	<input type="checkbox"/>	Return of defective aircraft components to store
2.20	<input type="checkbox"/>	Defective components to outside contractors
2.21	<input type="checkbox"/>	Control of computer maintenance record systems
2.22	<input type="checkbox"/>	Control of manhour planning versus scheduled maintenance work
2.23	<input type="checkbox"/>	Critical maintenance tasks and error-capturing methods
2.24	<input type="checkbox"/>	Reference to specific maintenance procedures
2.25	<input type="checkbox"/>	Procedures to detect and rectify maintenance errors
2.26	<input type="checkbox"/>	Shift/task handover procedures
2.27	<input type="checkbox"/>	Procedures for notification of maintenance data inaccuracies and ambiguities to the type certificate holder
2.28	<input type="checkbox"/>	Production planning procedures
2.29	<input type="checkbox"/>	Airworthiness review procedures and records for ELA1 aircraft not involved in commercial operations
2.30	<input type="checkbox"/>	Development and approval processing for maintenance programmes for ELA2 aircraft not involved in commercial operations
<b>PART L2 Additional Line Maintenance Procedures</b>		
L2.1	<input type="checkbox"/>	Line maintenance control of aircraft components, tools, equipment, etc.
L2.2	<input type="checkbox"/>	Line maintenance procedures related to servicing/fuelling/de-icing, etc.
L2.3	<input type="checkbox"/>	Line maintenance control of defects and repetitive defects
L2.4	<input type="checkbox"/>	Line procedure for completion of technical log
L2.5	<input type="checkbox"/>	Line procedure for pooled parts and loan parts
L2.6	<input type="checkbox"/>	Line procedure for return of defective parts removed from aircraft
L2.7	<input type="checkbox"/>	Line procedure for critical maintenance tasks and error-capturing methods
<b>PART 3 Quality System Procedures</b>		
3.1	<input type="checkbox"/>	Quality audit of organisation procedures
3.2	<input type="checkbox"/>	Quality audit of aircraft
3.3	<input type="checkbox"/>	Quality audit remedial action procedure
3.4	<input type="checkbox"/>	Certifying staff and support staff qualification and training procedures

Part-145 APPROVAL RECOMMENDATION REPORT		EASA FORM 6
<b>Part 3: Compliance with <a href="#">145.A.70</a> Maintenance organisation exposition</b>		
3.5		Certifying staff records
3.6		Quality audit personnel
3.7		Qualifying inspectors
3.8		Qualifying mechanics
3.9		Aircraft/aircraft component maintenance tasks exemption process control.
3.10		Concession control for deviation from organisation's procedures
3.11		Qualification procedure for specialised activities such as NDT, welding, etc.
3.12		Control of manufacturers' and other maintenance working teams
3.13		Human Factors training procedure
3.14		Competence assessment of personnel
3.15		Training procedures for on-the-job training as per <a href="#">Section 6 of Appendix III to Part-66</a> (limited to the case where the competent authority for the <a href="#">Part-145</a> approval and for the <a href="#">Part-66</a> licence is the same).
3.16		Procedure for the issue of a recommendation to the competent authority for the issue of a <a href="#">Part-66</a> licence in accordance with <a href="#">66.B.105</a> (limited to the case where the competent authority for the <a href="#">Part-145</a> approval and for the <a href="#">Part-66</a> licence is the same).
PART 4		
4.1		Contracting operators
4.2		Operator procedures/paperwork
4.3		Operator record completion
PART 5 Appendices		
5.1		Sample Documents
5.2		List of subcontractors
5.3		List of Line maintenance locations
5.4		List of <a href="#">Part-145</a> organisations
MOE Reference: <span style="margin-left: 150px;">MOE Amendment:</span> Competent authority audit staff: <span style="margin-left: 100px;">Signature(s):</span> Competent authority office: <span style="margin-left: 100px;">Date of EASA Form 6 Part 3 completion:</span>		

Part-145 APPROVAL RECOMMENDATION REPORT		EASA FORM 6			
<b>Part 4: Findings — <a href="#">Part-145</a> Compliance status</b> Each level 1 and 2 finding should be recorded whether it has been rectified or not and should be identified by a simple cross-reference to the Part 2 requirement. All non-rectified findings should be copied in writing to the organisation for the necessary corrective action.					
Part 2 or 3 reference	Audit reference(s):	L E V E L	Corrective action		
	Findings		Date Due	Date Closed	Reference



Part-145 APPROVAL RECOMMENDATION REPORT	EASA FORM 6
<b>Part 5: <a href="#">Part-145</a> Approval or continued approval or change recommendation*</b>	
Name of organisation:	
Approval reference:	
Audit reference(s):	
The following <a href="#">Part-145</a> scope of approval is recommended for this organisation:	
Or, it is recommended that the <a href="#">Part-145</a> scope of approval specified in EASA Form 3 referenced ..... be continued.	
Name of recommending competent authority surveyor:	
Signature of recommending competent authority surveyor:	
Competent authority office:	
Date of recommendation:	
EASA Form 6 review (quality check):	Date:
*delete as appropriate	

## Appendix III to AMC 145.A.15 — EASA Form 2

*ED Decision 2015/029/R*

The provisions of [Appendix IX to AMC M.A.602 and AMC M.A.702 EASA Form 2](#) apply.

## Appendix IV to AMC 145.A.30(e) and 145.B.10(3) — Fuel Tank Safety Training

ED Decision 2015/029/R

This appendix includes general instructions for providing training on Fuel Tank Safety issues.

### A. Effectivity:

- Large aeroplanes as defined in Decision 2003/11/RM of the Executive Director of the Agency (CS-25) and certified after 1 January 1958 with a maximum type certified passenger capacity of 30 or more or a maximum certified payload capacity of 7500 lbs (3402 kg) cargo or more, and
- Large aeroplanes as defined in Decision 2003/11/RM of the Executive Director of the Agency (CS-25) which contains CS-25 amendment 1 or later in their certification basis.

### B. Affected organisations:

- [Part-145](#) approved maintenance organisations involved in the maintenance of aeroplanes specified in paragraph A) and fuel system components installed on such aeroplanes when the maintenance data are affected by CDCCL.
- Competent authorities responsible as per [145.B.30](#) for the oversight of the [Part-145](#) approved organisations specified in this paragraph B).

### C. Persons from affected organisations who should receive training:

#### Phase 1 only:

- The group of persons representing the maintenance management structure of the organisation, the quality manager and the staff required to quality monitor the organisation.
- Personnel of the competent authorities responsible as per [145.B.30](#) for the oversight of [Part-145](#) approved maintenance organizations specified in paragraph B).

#### Phase 1 + Phase 2 + Continuation training:

- Personnel of the [Part-145](#) approved maintenance organization required to plan, perform, supervise, inspect and certify the maintenance of aircraft and fuel system components specified in paragraph A).

### D. General requirements of the training courses

#### Phase 1 – Awareness:

The training should be carried out before the person starts to work without supervision but not later than 6 months after joining the organisation. The persons who have already attended the Level 1 Familiarisation course in compliance with ED Decision 2007/002/R Appendix IV is already in compliance with Phase 1.

Type: Should be an awareness course with the principal elements of the subject. It may take the form of a training bulletin, or other self study or informative session. Signature of the reader is required to ensure that the person has passed the training.

Level: It should be a course at the level of familiarisation with the principal elements of the subject.

Objectives: The trainee should, after the completion of the training:

1. Be familiar with the basic elements of the fuel tank safety issues.
2. Be able to give a simple description of the historical background and the elements requiring a safety consideration, using common words and showing examples of non conformities.
3. Be able to use typical terms.

**Content:** The course should include:

- a short background showing examples of FTS accidents or incidents,
- the description of concept of fuel tank safety and CDCCL,
- some examples of manufacturers documents showing CDCCL items,
- typical examples of FTS defects,
- some examples of TC holders repair data
- some examples of maintenance instructions for inspection.

#### Phase 2 - Detailed training

A flexible period may be allowed by the competent authorities to allow organisations to set the necessary courses and impart the training to the personnel, taking into account the organisation's training schemes/means/practices. This flexible period should not extend beyond 31 December 2010.

The persons who have already attended the Level 2 Detailed training course in compliance with ED decision 2007/002/R Appendix IV either from a [Part-145](#) maintenance organisation or from a [Part-147](#) training organisation are already in compliance with Phase 2 with the exception of continuation training.

Staff should have received Phase 2 training by 31 December 2010 or within 12 months of joining the organisation, whichever comes later.

**Type:** Should be a more in-depth internal or external course. It should not take the form of a training bulletin, or other self study. An examination should be required at the end, which should be in the form of a multi choice question, and the pass mark of the examination should be 75%.

**Level:** It should be a detailed course on the theoretical and practical elements of the subject.

The training may be made either:

- in appropriate facilities containing examples of components, systems and parts affected by Fuel Tank Safety (FTS) issues. The use of films, pictures and practical examples on FTS is recommended; or
- by attending a distance course (e-learning or computer based training) including a film when such film meets the intent of the objectives and content here below. An e-learning or computer based training should meet the following criteria: A continuous evaluation process should ensure the effectiveness of the training and its relevance; Some questions at intermediate steps of the training should be proposed to ensure that the trainee is authorized to move to the next step; The content and results of examinations should be recorded; Access to an instructor in person or at distance should be possible in case support is needed.

A duration of 8 hours for phase 2 is an acceptable compliance.

When the course is provided in a classroom, the instructor should be very familiar with the data in Objectives and Guidelines. To be familiar, an instructor should have attended himself a similar course in a classroom and made additionally some lecture of related subjects.

Objectives:

The attendant should, after the completion of the training:

- have knowledge of the history of events related to fuel tank safety issues and the theoretical and practical elements of the subject, have an overview of the FAA regulations known as SFAR (Special FAR) 88 of the FAA and of JAA Temporary Guidance Leaflet TGL 47, be able to give a detailed description of the concept of fuel tank system ALI (including Critical Design Configuration Control Limitations CDCCL, and using theoretical fundamentals and specific examples;
- have the capacity to combine and apply the separate elements of knowledge in a logical and comprehensive manner;
- have knowledge on how the above items affect the aircraft;
- be able to identify the components or parts or the aircraft subject to FTS from the manufacturer's documentation,
- be able to plan the action or apply a Service Bulletin and an Airworthiness Directive.

Content: Following the guidelines described in paragraph E).

Continuation training:

The organisation should ensure that the continuation training is required in each two years period. The syllabus of the training programme referred to in 3.4 of the Maintenance Organisation Exposition (MOE) should include the additional syllabus for this continuation training.

The continuation training may be combined with the phase 2 training in a classroom or at distance.

The continuing training should be updated when new instruction are issued which are related to the material, tools, documentation and manufacturer's or competent authority's directives.

**E. Guidelines for preparing the content of Phase 2 courses.**

The following guidelines should be taken into consideration when the phase 2 training programme are being established:

- (a) understanding of the background and the concept of fuel tank safety,
- (b) how the mechanics can recognise, interpret and handle the improvements in the instruction for continuing airworthiness that have been made or are being made regarding the fuel tank system maintenance,
- (c) awareness of any hazards especially when working on the fuel system, and when the Flammability Reduction System using nitrogen is installed.

Paragraphs a) b) and c) above should be introduced in the training programme addressing the following issues:

- (i) The theoretical background behind the risk of fuel tank safety: the explosions of mixtures of fuel and air, the behaviour of those mixtures in an aviation environment, the effects of temperature and pressure, energy needed for ignition etc, the 'fire triangle', - Explain 2 concepts to prevent explosions:
  - (1) ignition source prevention and
  - (2) flammability reduction,
- (ii) The major accidents related to fuel tank systems, the accident investigations and their conclusions,
- (iii) SFAR 88 of the FAA and JAA Interim Policy INT POL 25/12: ignition prevention program initiatives and goals, to identify unsafe conditions and to correct them, to systematically improve fuel tank maintenance),
- (iv) Explain the briefly concepts that are being used: the results of SFAR 88 of the FAA and JAA INT/POL 25/12: modifications, airworthiness limitations items and CDCCL,
- (v) Where relevant information can be found and how to use and interpret this information in the instructions for continuing airworthiness (aircraft maintenance manuals, component maintenance manuals, Service Bulletins...),
- (vi) Fuel Tank Safety during maintenance: fuel tank entry and exit procedures, clean working environment, what is meant by configuration control, wire separation, bonding of components etc,
- (vii) Flammability reduction systems when installed: reason for their presence, their effects, the hazards of an FRS using nitrogen for maintenance, safety precautions in maintenance/working with an FRS,
- (viii) Recording maintenance actions, recording measures and results of inspections.

The training should include a representative number of examples of defects and the associated repairs as required by the TC/STC holders' maintenance data.

#### **F. Approval of training**

For [Part-145](#) approved organisations, the approval of the initial and continuation training programme and the content of the examination can be achieved by the change to the MOE. The necessary changes to the MOE to meet the content of this decision should be made and implemented at the time requested by the competent authority.

## ANNEX III (PART-66)

### GENERAL

#### 66.1 Competent authority

Regulation (EU) No 1321/2014

- (a) For the purpose of this [Annex \(Part-66\)](#), the competent authority shall be:
1. the authority designated by the Member State to whom a person first applies for the issuance of an aircraft maintenance licence; or
  2. the authority designated by another Member State, in case it would be different, subject to agreement with the authority referred to in point 1. In that case, the licence referred to in point 1 shall be revoked, all the records mentioned in point [66.B.20](#) shall be transferred and a new licence shall be issued on the basis of these records.
- (b) The Agency shall be responsible for defining:
1. the list of aircraft types; and
  2. what airframe/engine combinations are included in each particular aircraft type rating.

#### AMC 66.1(a) Competent Authority

ED Decision 2015/029/R

A competent authority may be a ministry, a national aviation authority, or any aviation body designated by the Member State and located within that Member State. A Member State may designate more than one competent authority to cover different areas of responsibility, as long as the designation decision contains a list of the competencies of each authority and there is only one competent authority responsible for each given area of responsibility.

The purpose of [66.1\(a\)2](#) is to allow the possibility for a person who already holds a [Part-66](#) licence issued by one Member State (i.e. Member State X) to replace it by a Part-66 licence issued by another Member State (i.e. Member State Y). This may be useful, for example, in cases where a person holding a licence from 'Member State X' is developing his/her career in a maintenance organisation located in 'Member State Y'. In this case, this person may need to endorse new type ratings based on courses directly approved by the competent authority of 'Member State Y' or may need to endorse new licence (sub)categories based on basic examinations performed by the competent authority of 'Member State Y'.

## SECTION A — TECHNICAL REQUIREMENTS

### SUBPART A — AIRCRAFT MAINTENANCE LICENCE

#### 66.A.1 Scope

Regulation (EU) No 1321/2014

This section defines the aircraft maintenance licence and establishes the requirements for application, issue and continuation of its validity.

#### 66.A.3 Licence categories

Regulation (EU) No 1321/2014

- (a) Aircraft maintenance licences include the following categories:
- Category A
  - Category B1
  - Category B2
  - Category B3
  - Category C
- (b) Categories A and B1 are subdivided into subcategories relative to combinations of aeroplanes, helicopters, turbine and piston engines. These subcategories are:
- A1 and B1.1 Aeroplanes Turbine
  - A2 and B1.2 Aeroplanes Piston
  - A3 and B1.3 Helicopters Turbine
  - A4 and B1.4 Helicopters Piston
- (c) Category B3 is applicable to piston-engine non-pressurised aeroplanes of 2000 kg MTOM and below.

#### GM 66.A.3 Licence categories

ED Decision 2016/011/R

Individual aircraft maintenance licence holders need not be restricted to a single category. Provided that each qualification requirement is satisfied, any combination of categories may be granted.

#### 66.A.5 Aircraft groups

Regulation (EU) No 1321/2014

For the purpose of ratings on aircraft maintenance licences, aircraft shall be classified in the following groups:

1. Group 1: complex motor-powered aircraft as well as multiple engine helicopters, aeroplanes with maximum certified operating altitude exceeding FL290, aircraft equipped with fly-by-wire systems and other aircraft requiring an aircraft type rating when defined so by the Agency.
2. Group 2: aircraft other than those in Group 1 belonging to the following subgroups:



- sub-group 2a: single turbo-propeller engine aeroplanes
  - sub-group 2b: single turbine engine helicopters
  - sub-group 2c: single piston engine helicopters.
3. Group 3: piston engine aeroplanes other than those in Group 1.

## 66.A.10 Application

*Regulation (EU) No 1321/2014*

- (a) An application for an aircraft maintenance licence or change to such licence shall be made on an [EASA Form 19](#) (see Appendix V) in a manner established by the competent authority and submitted thereto.
- (b) An application for the change to an aircraft maintenance licence shall be made to the competent authority of the Member State that issued the aircraft maintenance licence.
- (c) In addition to the documents required in points [66.A.10\(a\)](#), [66.A.10\(b\)](#) and [66.B.105](#), as appropriate, the applicant for additional basic categories or subcategories to an aircraft maintenance licence shall submit his/her current original aircraft maintenance licence to the competent authority together with the [EASA Form 19](#).
- (d) Where the applicant for change of the basic categories qualifies for such change via the procedure referred to in point [66.B.100](#) in a Member State other than the Member State which issued the license, the application shall be sent to the competent authority referred to in point [66.1](#).
- (e) Where the applicant for change of the basic categories qualifies for such change via the procedure referred to in point [66.B.105](#) in a Member State other than the Member State which issued the license, the maintenance organisation approved in accordance with [Annex II \(Part-145\)](#) shall send the aircraft maintenance licence together with the [EASA Form 19](#) to the competent authority referred to in point [66.1](#) for stamp and signature of the change or reissue of the licence, as appropriate.
- (f) Each application shall be supported by documentation to demonstrate compliance with the applicable theoretical knowledge, practical training and experience requirements at the time of application.

## AMC 66.A.10 Application

*ED Decision 2015/029/R*

1. Maintenance experience should be written up in a manner that the reader has a reasonable understanding of where, when and what maintenance constitutes the experience. A task by task account is not necessary but at the same time a bland statement 'X years maintenance experience completed' is not acceptable. A log book of maintenance experience is desirable and some competent authorities may require such log book to be kept. It is acceptable to cross refer in the [EASA Form 19](#) to other documents containing information on maintenance.
2. Applicants claiming the maximum reduction in [66.A.30\(a\)](#) total experience based upon having successfully completed [147.A.200](#) approved basic training should include the [Part-147](#) certificate of recognition for approved basic training.
3. Applicants claiming reduction in [66.A.30\(a\)](#) total experience based upon having successfully completed technical training in an organisation or institute recognised by the competent

authority as a competent organisation or institute, should include the relevant certificate of successful completion of training.

## 66.A.15 Eligibility

*Regulation (EU) No 1321/2014*

An applicant for an aircraft maintenance licence shall be at least 18 years of age.

## 66.A.20 Privileges

*Regulation (EU) No 1321/2014*

(a) The following privileges shall apply:

1. A category A aircraft maintenance licence permits the holder to issue certificates of release to service following minor scheduled line maintenance and simple defect rectification within the limits of tasks specifically endorsed on the certification authorisation referred to in point [145.A.35](#) of [Annex II \(Part-145\)](#). The certification privileges shall be restricted to work that the licence holder has personally performed in the maintenance organisation that issued the certification authorisation.
2. A category B1 aircraft maintenance licence shall permit the holder to issue certificates of release to service and to act as B1 support staff following:
  - maintenance performed on aircraft structure, powerplant and mechanical and electrical systems,
  - work on avionic systems requiring only simple tests to prove their serviceability and not requiring troubleshooting.

Category B1 includes the corresponding A subcategory.

3. A category B2 aircraft maintenance licence shall permit the holder:
  - (i) to issue certificates of release to service and to act as B2 support staff for following:
    - maintenance performed on avionic and electrical systems, and
    - electrical and avionics tasks within powerplant and mechanical systems, requiring only simple tests to prove their serviceability; and
  - (ii) to issue certificates of release to service following minor scheduled line maintenance and simple defect rectification within the limits of tasks specifically endorsed on the certification authorisation referred to in point [145.A.35](#) of [Annex II \(Part-145\)](#). This certification privilege shall be restricted to work that the licence holder has personally performed in the maintenance organisation which issued the certification authorisation and limited to the ratings already endorsed in the B2 licence.

The category B2 licence does not include any A subcategory.

4. A category B3 aircraft maintenance licence shall permit the holder to issue certificates of release to service and to act as B3 support staff for:
  - maintenance performed on aeroplane structure, powerplant and mechanical and electrical systems,
  - work on avionic systems requiring only simple tests to prove their serviceability and not requiring troubleshooting.

5. A category C aircraft maintenance licence shall permit the holder to issue certificates of release to service following base maintenance on aircraft. The privileges apply to the aircraft in its entirety.
- (b) The holder of an aircraft maintenance licence may not exercise its privileges unless:
1. in compliance with the applicable requirements of [Annex I \(Part-M\)](#) and [Annex II \(Part-145\)](#); and
  2. in the preceding 2-year period he/she has, either had 6 months of maintenance experience in accordance with the privileges granted by the aircraft maintenance licence or, met the provision for the issue of the appropriate privileges; and
  3. he/she has the adequate competence to certify maintenance on the corresponding aircraft; and
  4. he/she is able to read, write and communicate to an understandable level in the language(s) in which the technical documentation and procedures necessary to support the issue of the certificate of release to service are written.

## GM 66.A.20(a) Privileges

ED Decision 2015/029/R

1. The following definitions apply:

**Electrical system** means the aircraft electrical power supply source, plus the distribution system to the different components contained in the aircraft and relevant connectors. Lighting systems are also included in this definition. When working on cables and connectors which are part of these electrical systems, the following typical practices are included in the privileges:

- Continuity, insulation and bonding techniques and testing;
- Crimping and testing of crimped joints;
- Connector pin removal and insertion;
- Wiring protection techniques.

**Avionics system** means an aircraft system that transfers, processes, displays or stores analogue or digital data using data lines, data buses, coaxial cables, wireless or other data transmission medium, and includes the system's components and connectors. Examples of avionics systems include the following:

- Autoflight;
- Communication, Radar and Navigation;
- Instruments (see NOTE below);
- In Flight Entertainment Systems;
- Integrated Modular Avionics (IMA);
- On-Board Maintenance Systems;
- Information Systems;
- Fly by Wire Systems (related to ATA27 'Flight Controls');
- Fibre Optic Control Systems.

NOTE: Instruments are formally included within the privileges of the B2 licence holders. However, maintenance on electromechanical and pitot-static components may also be released by a B1 license holder.

**Simple test** means a test described in approved maintenance data and meeting all the following criteria:

- The serviceability of the system can be verified using aircraft controls, switches, Built-in Test Equipment (BITE), Central Maintenance Computer (CMC) or external test equipment not involving special training.
- The outcome of the test is a unique go – no go indication or parameter, which can be a single value or a value within an interval tolerance. No interpretation of the test result or interdependence of different values is allowed.
- The test does not involve more than 10 actions as described in the approved maintenance data (not including those required to configure the aircraft prior to the test, i.e. jacking, flaps down, etc, or to return the aircraft to its initial configuration). Pushing a control, switch or button, and reading the corresponding outcome may be considered as a single step even if the maintenance data shows them separated.

**Troubleshooting** means the procedures and actions necessary, using approved maintenance data, in order to identify the root cause of a defect or malfunction. It may include the use of BITE or external test equipment.

**Line maintenance** means any maintenance that is carried out before flight to ensure that the aircraft is fit for the intended flight. It may include:

- trouble shooting;
- defect rectification;
- component replacement with use of external test equipment, if required. Component replacement may include components such as engines and propellers;
- scheduled maintenance and/or checks including visual inspections that will detect obvious unsatisfactory conditions/discrepancies but do not require extensive in depth inspection. It may also include internal structure, systems and powerplant items which are visible through quick opening access panels/doors;
- minor repairs and modifications which do not require extensive disassembly and can be accomplished by simple means;
- for temporary or occasional cases (Airworthiness Directives, hereinafter AD; service bulletins, hereinafter SB) the quality manager may accept base maintenance tasks to be performed by a line maintenance organisation provided all requirements are fulfilled. The Member State will prescribe the conditions under which these tasks may be performed.

**Base Maintenance** means any task falling outside the criteria that are given above for *Line Maintenance*.

NOTE:

Aircraft maintained in accordance with ‘progressive’ type programmes need to be individually assessed in relation to this paragraph. In principle, the decision to allow some ‘progressive’ checks to be carried out is determined by the assessment that all tasks within the particular check can be carried out safely to the required standards at the designated line maintenance station.

2. The category B3 licence does not include any A subcategory. Nevertheless, this does not prevent the B3 licence holder from releasing maintenance tasks typical of the A1.2 subcategory for piston-engine non-pressurized aeroplanes of 2 000 kg MTOM and below, within the limitations contained in the B3 licence.
3. The category C licence permits certification of scheduled base maintenance by the issue of a single certificate of release to service for the complete aircraft after the completion of all such maintenance. The basis for this certification is that the maintenance has been carried out by competent mechanics and category B1, B2 and B3 support staff, as appropriate, have signed for the maintenance tasks under their respective specialisation. The principal function of the category C certifying staff is to ensure that all required maintenance has been called up and signed off by the category B1, B2 and B3 support staff, as appropriate, before issue of the certificate of release to service. Only category C personnel who also hold category B1, B2 or B3 qualifications may perform both roles in base maintenance.

## AMC 66.A.20(b)2 Privileges

*ED Decision 2015/029/R*

The 6 months maintenance experience in 2 years should be understood as consisting of two elements, duration and nature of the experience. The minimum to meet the requirements for these elements may vary depending on the size and complexity of the aircraft and type of operation and maintenance.

### 1. Duration:

Within an approved maintenance organization:

- 6 months continuous employment within the same organisation; or
- 6 months split up into different blocks, employed within the same or in different organisations.

The 6 months period can be replaced by 100 days of maintenance experience in accordance with the privileges, whether they have been performed within an approved organisation or as independent certifying staff according to [M.A.801\(b\)2](#), or as a combination thereof.

When licence holder maintains and releases aircraft in accordance with [M.A.801\(b\)2](#), in certain circumstances this number of days may even be reduced by 50% when agreed in advance by the competent authority. These circumstances consider the cases where the licence holder happens to be the owner of an aircraft and carries out maintenance on his own aircraft, or where a licence holder maintains an aircraft operated for low utilization, that does not allow the licence holder to accumulate the required experience. This reduction should not be combined with the 20% reduction permitted when carrying out technical support, or maintenance planning, continuing airworthiness management or engineering activities. To avoid a too long period without experience, the working days should be spread over the intended 6 months period.

### 2. Nature of the experience:

Depending on the category of the aircraft maintenance licence, the following activities are considered relevant for maintenance experience:

- Servicing;
- Inspection;
- Operational and functional testing;

- Trouble-shooting;
- Repairing;
- Modifying;
- Changing component;
- Supervising these activities;
- Releasing aircraft to service.

For category A licence holders, the experience should include exercising the privileges, by means of performing tasks related to the authorization on at least one aircraft type for each licence subcategory. This means tasks as mentioned in AMC 145.A.30(g), including servicing, component changes and simple defect rectifications.

For category B1, B2 and B3, for every aircraft included in the authorization the experience should be on that particular aircraft or on a similar aircraft within the same licence (sub)category. Two aircraft can be considered as similar when they have similar technology, construction and comparable systems, which means equally equipped with the following (as applicable to the licence category):

- Propulsion systems (piston, turboprop, turbofan, turboshaft, jet-engine or push propellers); and
- Flight control systems (only mechanical controls, hydro-mechanically powered controls or electro-mechanically powered controls); and
- Avionic systems (analogue systems or digital systems); and
- Structure (manufactured of metal, composite or wood).

For licences endorsed with (sub)group ratings:

- In the case of B1 licence endorsed with (sub)group ratings (either manufacturer subgroup or full (sub)group) as defined in [66.A.45](#) the holder should show experience on at least one aircraft type per (sub)group and per aircraft structure (metal, composite, wood).
- In the case of a B2 licence endorsed with (sub)group ratings (either manufacturer subgroup or full (sub)group) as defined in [66.A.45](#) the holder should show experience on at least one aircraft type per (sub)group.
- In the case of a B3 licence endorsed with the rating ‘piston-engine non-pressurized aeroplanes of 2000kg MTOM and below’ as defined in [66.A.45](#), the holder should show experience on at least one aircraft type per aircraft structure (metal, composite, wooden).

For category C, the experience should cover at least one of the aircraft types endorsed on the licence.

For a combination of categories, the experience should include some activities of the nature shown in paragraph 2 in each category.

A maximum of 20% of the experience duration required may be replaced by the following relevant activities on an aircraft type of similar technology, construction and with comparable systems:

- Aircraft maintenance related training as an instructor/assessor or as a student;

- Maintenance technical support/engineering;
- Maintenance management/planning.

The experience should be documented in an individual log book or in any other recording system (which may be an automated one) containing the following data:

- Date;
- Aircraft type;
- Aircraft identification i.e. registration;
- ATA chapter (optional);
- Operation performed i.e. 100 FH check, MLG wheel change, engine oil check and complement, SB embodiment, trouble shooting, structural repair, STC embodiment...;
- Type of maintenance i.e. base, line;
- Type of activity i.e. perform, supervise, release;
- Category used A, B1, B2, B3 or C.
- Duration in days or partial-days.

## GM 66.A.20(b)2 Privileges

ED Decision 2015/029/R

The sentence *'met the provision for the issue of the appropriate privileges'* included in [66.A.20\(b\)2](#) means that during the previous 2 years the person has met all the requirements for the endorsement of the corresponding aircraft rating (for example, in the case of aircraft in Group 1, theoretical plus practical element plus, if applicable, on-the-job training). This supersedes the need for 6 months of experience for the first 2 years. However, the requirement of 6 months of experience in the preceding 2 years will need to be met after the second year.

## AMC 66.A.20(b)3 Privileges

ED Decision 2015/029/R

The wording *'has the adequate competence to certify maintenance on the corresponding aircraft'* means that the licence holder and, if applicable, the organisation where he/she is contracted/employed, should ensure that he/she has acquired the appropriate knowledge, skills, attitude and experience to release the aircraft being maintained. This is essential because some systems and technology present in the particular aircraft being maintained may not have been covered by the training/examination/experience required to obtain the licence and ratings.

This is typically the case, among others, in the following situations:

- Type ratings which have been endorsed on a licence in accordance with [Appendix I to AMC to Part-66](#) 'List of Type Ratings' after attending type training/on-the-job training which did not cover all the models/variants included in such rating. For example, a licence endorsed with the rating Airbus A318/A319/A320/A321 (CFM56) after attending type training/on-the-job training covering only the Airbus 320 (CFM56).
- Type ratings which have been endorsed on a licence in accordance with [Appendix I to AMC to Part-66](#) 'List of Type Ratings' after a new variant has been added to the rating in Appendix I, without performing difference training. For example, a licence endorsed with the rating Boeing



737-600/700/800/900 for a person who already had the rating Boeing 737-600/700/800, without performing any difference training for the 737-900.

- Work being carried out on a model/variant for which the technical design and maintenance techniques have significantly evolved from the original model used in the type training/on-the-job training.
- Specific technology and options selected by each customer which may not have been covered by the type training/on-the-job training.
- Changes in the basic knowledge requirements of [Appendix I to Part-66](#) not requiring re-examination of existing licence holders (grandfathered privileges).
- The endorsement of group/subgroup ratings based on experience on a representative number of tasks/aircraft or based on type training/examination on a representative number of aircraft.
- Persons meeting the requirements of 6 months of experience every 2 years only on certain similar aircraft types as allowed by [AMC 66.A.20\(b\)2](#).
- Persons holding a [Part-66](#) licence with limitations, obtained through conversion of national qualifications ([66.A.70](#)), where such limitations are going to be lifted after performing the corresponding basic knowledge examinations. In this case, the type ratings endorsed in the licence may have been obtained in the national system without covering all the aircraft systems (because of the previous limitations) and there will be a need to assess and, if applicable, to train this person on the missing systems.

Additional information is provided in [AMC 145.A.35\(a\)](#).

## GM 66.A.20(b)4 Privileges

*ED Decision 2015/029/R*

1. Holders of a [Part-66](#) aircraft maintenance licence may not exercise certification privileges unless they have a general knowledge of the language used within the maintenance environment including knowledge of common aeronautical terms in the language. The level of knowledge should be such that the licence holder is able to:
  - read and understand the instructions and technical manuals used for the performance of maintenance;
  - make written technical entries and any maintenance documentation entries, which can be understood by those with whom they are normally required to communicate;
  - read and understand the maintenance organisation procedures;
  - communicate at such a level as to prevent any misunderstanding when exercising certification privileges.
2. In all cases, the level of understanding should be compatible with the level of certification privileges exercised.

## 66.A.25 Basic knowledge requirements

*Regulation (EU) No 1321/2014*

- (a) An applicant for an aircraft maintenance licence, or the addition of a category or subcategory to such a licence, shall demonstrate by examination a level of knowledge in the appropriate subject modules in accordance with the [Appendix I to Annex III \(Part-66\)](#). The examination shall



be conducted either by a training organisation appropriately approved in accordance with [Annex IV \(Part-147\)](#) or by the competent authority.

- (b) The training courses and examinations shall be passed within 10 years prior to the application for an aircraft maintenance licence or the addition of a category or subcategory to such aircraft maintenance licence. Should this not be the case, examination credits may however be obtained in accordance with point (c).
- (c) The applicant may apply to the competent authority for full or partial examination credit to the basic knowledge requirements for:
  - 1. basic knowledge examinations that do not meet the requirement described in point (b) above; and
  - 2. any other technical qualification considered by the competent authority to be equivalent to the knowledge standard of [Annex III \(Part-66\)](#).

Credits shall be granted in accordance with [Subpart E of Section B](#) of this [Annex \(Part-66\)](#).

- (d) Credits expire 10 years after they were granted to the applicant by the competent authority. The applicant may apply for new credits after expiration.

## AMC 66.A.25 Basic knowledge requirements

*ED Decision 2015/029/R*

- 1. For an applicant being a person qualified by holding an academic degree in an aeronautical, mechanical or electronic discipline from a recognised university or other higher educational institute the need for any examination will depend upon the course taken in relation to [Appendix I to Part-66](#).
- 2. Knowledge gained and examinations passed during previous experiences, for example, in military aviation and civilian apprenticeships will be credited where the competent authority is satisfied that such knowledge and examinations are equivalent to that required by [Appendix I to Part-66](#).

## GM 66.A.25(a) Basic knowledge requirements

*ED Decision 2015/029/R*

The levels of knowledge for each licence (sub)category are directly related to the complexity of the certifications related to the corresponding licence (sub)category, which means that category A should demonstrate a limited but adequate level of knowledge, whereas category B1, B2 and B3 should demonstrate a complete level of knowledge in the appropriate subject modules.

## 66.A.30 Basic experience requirements

*Regulation (EU) 2015/1536*

- (a) An applicant for an aircraft maintenance licence shall have acquired:
  - 1. for category A, subcategories B1.2 and B1.4 and category B3:
    - (i) 3 years of practical maintenance experience on operating aircraft, if the applicant has no previous relevant technical training; or
    - (ii) 2 years of practical maintenance experience on operating aircraft and completion of training considered relevant by the competent authority as a skilled worker, in a technical trade; or

- 
- (iii) 1 year of practical maintenance experience on operating aircraft and completion of a basic training course approved in accordance with [Annex IV \(Part-147\)](#);
    2. for category B2 and subcategories B1.1 and B1.3:
      - (i) 5 years of practical maintenance experience on operating aircraft if the applicant has no previous relevant technical training; or
      - (ii) 3 years of practical maintenance experience on operating aircraft and completion of training considered relevant by the competent authority as a skilled worker, in a technical trade; or
      - (iii) 2 years of practical maintenance experience on operating aircraft and completion of a basic training course approved in accordance with [Annex IV \(Part-147\)](#);
    3. for category C with respect to complex motor-powered aircraft:
      - (i) 3 years of experience exercising category B1.1, B1.3 or B2 privileges on complex motor-powered aircraft or as support staff according to point [145.A.35](#), or, a combination of both; or
      - (ii) 5 years of experience exercising category B1.2 or B1.4 privileges on complex motor-powered aircraft or as support staff according to point [145.A.35](#), or a combination of both;
    4. for category C with respect to other than complex motor-powered aircraft: 3 years of experience exercising category B1 or B2 privileges on other than complex motor-powered aircraft or as support staff according to point [145.A.35](#), or a combination of both;
    5. for category C obtained through the academic route: an applicant holding an academic degree in a technical discipline, from a university or other higher educational institution recognised by the competent authority, 3 years of experience working in a civil aircraft maintenance environment on a representative selection of tasks directly associated with aircraft maintenance including 6 months of observation of base maintenance tasks.
  - (b) An applicant for an extension to an aircraft maintenance licence shall have a minimum civil aircraft maintenance experience requirement appropriate to the additional category or subcategory of licence applied for as defined in [Appendix IV to this Annex \(Part-66\)](#).
  - (c) The experience shall be practical and involve a representative cross section of maintenance tasks on aircraft.
  - (d) At least 1 year of the required experience shall be recent maintenance experience on aircraft of the category/subcategory for which the initial aircraft maintenance licence is sought. For subsequent category/subcategory additions to an existing aircraft maintenance licence, the additional recent maintenance experience required may be less than 1 year, but shall be at least 3 months. The required experience shall be dependent upon the difference between the licence category/subcategory held and applied for. Such additional experience shall be typical of the new licence category/subcategory sought.
  - (e) Notwithstanding point (a), aircraft maintenance experience gained outside a civil aircraft maintenance environment shall be accepted when such maintenance is equivalent to that required by this [Annex \(Part-66\)](#) as established by the competent authority. Additional experience of civil aircraft maintenance shall, however, be required to ensure adequate understanding of the civil aircraft maintenance environment.
  - (f) Experience shall have been acquired within the 10 years preceding the application for an aircraft maintenance licence or the addition of a category or subcategory to such a licence.
-

## AMC 66.A.30(a) Basic experience requirements

*ED Decision 2015/029/R*

1. For a category C applicant holding an academic degree the representative selection of tasks should include the observation of hangar maintenance, maintenance planning, quality assurance, record-keeping, approved spare parts control and engineering development.
2. While an applicant to a category C licence may be qualified by having 3 years experience as category B1 or B2 certifying staff only in line maintenance, it is however recommended that any applicant to a category C holding a B1 or B2 licence demonstrate at least 12 months experience as a B1 or B2 support staff.
3. A skilled worker is a person who has successfully completed a training, acceptable to the competent authority, involving the manufacture, repair, overhaul or inspection of mechanical, electrical or electronic equipment. The training would include the use of tools and measuring devices.
4. Maintenance experience on operating aircraft:
  - Means the experience of being involved in maintenance tasks on aircraft which are being operated by airlines, air taxi organisations, owners, etc;
  - Should cover a wide range of tasks in length, complexity and variety;
  - Aims at gaining sufficient experience in the real environment of maintenance as opposed to only the training school environment.
  - May be gained within different types of maintenance organisations ([Part-145](#), [M.A. Subpart F](#), FAR-145, etc) or under the supervision of independent certifying staff;
  - May be combined with [Part-147](#) approved training so that periods of training can be intermixed with periods of experience, similar to an apprenticeship.

## AMC 66.A.30(d) Basic experience requirements

*ED Decision 2015/029/R*

To be considered as recent experience; at least 50% of the required 12-month recent experience should be gained within the 12 month period prior to the date of application for the aircraft maintenance licence. The remainder of the recent experience should have been gained within the 7-year period prior to application. It must be noted that the rest of the basic experience required by [66.A.30](#) must be obtained within the 10 years prior to the application as required by [66.A.30\(f\)](#).

## AMC 66.A.30(e) Basic experience requirements

*ED Decision 2015/029/R*

1. For category A the additional experience of civil aircraft maintenance should be a minimum of 6 months. For category B1, B2 or B3 the additional experience of civil aircraft maintenance should be a minimum of 12 months.
2. Aircraft maintenance experience gained outside a civil aircraft maintenance environment may include aircraft maintenance experience gained in armed forces, coast guards, police etc. or in aircraft manufacturing.

## 66.A.40 Continued validity of the aircraft maintenance licence

*Regulation (EU) No 1321/2014*

- (a) The aircraft maintenance licence becomes invalid 5 years after its last issue or change, unless the holder submits his/her aircraft maintenance licence to the competent authority that issued it, in order to verify that the information contained in the licence is the same as that contained in the competent authority records, pursuant to point [66.B.120](#).
- (b) The holder of an aircraft maintenance licence shall complete the relevant parts of [EASA Form 19](#) (see Appendix V) and submit it with the holder's copy of the licence to the competent authority that issued the original aircraft maintenance licence, unless the holder works in a maintenance organisation approved in accordance with [Annex II \(Part-145\)](#) that has a procedure in its exposition whereby such organisation may submit the necessary documentation on behalf of the aircraft maintenance licence holder.
- (c) Any certification privilege based upon a aircraft maintenance licence becomes invalid as soon as the aircraft maintenance licence is invalid.
- (d) The aircraft maintenance licence is only valid (i) when issued and/or changed by the competent authority and (ii) when the holder has signed the document.

## GM 66.A.40 Continued validity of the aircraft maintenance licence

*ED Decision 2015/029/R*

The validity of the aircraft maintenance licence is not affected by recency of maintenance experience whereas the validity of the [66.A.20](#) privileges is affected by maintenance experience as specified in [66.A.20\(a\)](#).

## 66.A.45 Endorsement with aircraft ratings

*Regulation (EU) No 1321/2014*

- (a) In order to be entitled to exercise certification privileges on a specific aircraft type, the holder of an aircraft maintenance licence need to have his/her licence endorsed with the relevant aircraft ratings.
  - For category B1, B2 or C the relevant aircraft ratings are the following:
    1. For group 1 aircraft, the appropriate aircraft type rating.
    2. For group 2 aircraft, the appropriate aircraft type rating, manufacturer sub-group rating or full sub-group rating.
    3. For group 3 aircraft, the appropriate aircraft type rating or full group rating.
  - For category B3, the relevant rating is 'piston-engine non-pressurised aeroplanes of 2000 kg MTOM and below'.
  - For category A, no rating is required, subject to compliance with the requirements of point [145.A.35](#) of [Annex II \(Part-145\)](#).
- (b) The endorsement of aircraft type ratings requires the satisfactory completion of the relevant category B1, B2 or C aircraft type training.
- (c) In addition to the requirement of point (b), the endorsement of the first aircraft type rating within a given category/sub-category requires satisfactory completion of the corresponding On the Job Training, as described in [Appendix III to Annex III \(Part-66\)](#).

- (d) By derogation from points (b) and (c), for group 2 and 3 aircraft, aircraft type ratings may also be granted after:
- satisfactory completion of the relevant category B1, B2 or C aircraft type examination described in [Appendix III to this Annex \(Part-66\)](#), and
  - in the case of B1 and B2 category, demonstration of practical experience on the aircraft type. In that case, the practical experience shall include a representative cross section of maintenance activities relevant to the licence category.

In the case of a category C rating for a person qualified by holding an academic degree as specified in point [66.A.30\(a\)\(5\)](#), the first relevant aircraft type examination shall be at the category B1 or B2 level.

- (e) For group 2 aircraft:
1. the endorsement of manufacturer sub-group ratings for category B1 and C licence holders requires complying with the aircraft type rating requirements of at least two aircraft types from the same manufacturer which combined are representative of the applicable manufacturer sub-group;
  2. the endorsement of full sub-group ratings for category B1 and C licence holders requires complying with the aircraft type rating requirements of at least three aircraft types from different manufacturers which combined are representative of the applicable sub-group;
  3. the endorsement of manufacturer sub-groups and full sub-group ratings for category B2 licence holders requires demonstration of practical experience which shall include a representative cross section of maintenance activities relevant to the licence category and to the applicable aircraft sub-group.
- (f) For group 3 aircraft:
1. the endorsement of the full group 3 rating for category B1, B2 and C licence holders requires demonstration of practical experience, which shall include a representative cross section of maintenance activities relevant to the licence category and to the group 3.
  2. for category B1, unless the applicant provides evidence of appropriate experience, the group 3 rating shall be subject to the following limitations, which shall be endorsed on the licence:
    - pressurised aeroplanes
    - metal structure aeroplanes
    - composite structure aeroplanes
    - wooden structure aeroplanes
    - aeroplanes with metal tubing structure covered with fabric.

- (g) For the B3 licence:
1. the endorsement of the rating 'piston-engine non-pressurised aeroplanes of 2000 kg MTOM and below' requires demonstration of practical experience which shall include a representative cross-section of maintenance activities relevant to the licence category.
  2. unless the applicant provides evidence of appropriate experience, the rating referred to in point 1 shall be subject to the following limitations, which shall be endorsed on the licence:

- wooden structure aeroplanes
- aeroplanes with metal tubing structure covered with fabric
- metal structure aeroplanes
- composite structure aeroplanes.

## GM 66.A.45 Endorsement with aircraft ratings

ED Decision 2015/029/R

The following table shows a summary of the aircraft rating requirements contained in [66.A.45](#), [66.A.50](#) and [Appendix III to Part-66](#).

The table contains the following:

- The different aircraft groups.
- For each licence (sub)category, which ratings are possible (at the choice of the applicant):
  - Individual type ratings.
  - Full and/or Manufacturer (sub)group ratings
- For each rating option, which are the qualification options.
- For the B1.2 licence (Group 3 aircraft) and for the B3 licence (piston-engine non-pressurized aeroplanes of 2 000 kg MTOM and below), which are the possible limitations to be included in the licence if not sufficient experience can be demonstrated in those areas.

Note: OJT means 'On-the-Job Training' ([Appendix III to Part-66, Section 6](#)) and is only required for the first aircraft rating in the licence (sub)category.

<b>Aircraft rating requirements</b>			
<b>Aircraft Groups</b>	<b>B1/B3 licence</b>	<b>B2 licence</b>	<b>C licence</b>
<u>Group 1</u>  - Complex motor-powered aircraft. - Multiple engine helicopters. - Aeroplanes certified above FL290. - Aircraft equipped with fly-by-wire. - Other aircraft when defined by the Agency.	(For B1)  <b>Individual TYPE RATING</b>  Type training: - Theory + examination - Practical + assessment <b>PLUS</b> OJT (for first aircraft in licence subcategory)	<b>Individual TYPE RATING</b>  Type training: - Theory + examination - Practical + assessment <b>PLUS</b> OJT (for first aircraft in licence subcategory)	<b>Individual TYPE RATING</b>  Type training: - Theory + examination
<u>Group 2</u>  <u>Subgroups:</u>  <u>2a:</u> single turboprop aeroplanes (*)  <u>2b:</u> single turbine engine helicopters (*)  <u>2c:</u> single piston engine helicopters (*)  (*) Except those classified in Group 1.	(For B1.1, B1.3, B1.4)  <b>Individual TYPE RATING</b> (type training + OJT) <b>or</b> (type examination + practical experience)  <b>Full SUBGROUP RATING</b> (type training + OJT) <b>or</b> (type examination + practical experience) on at least 3 aircraft representative of that subgroup  <b>Manufacturer SUBGROUP RATING</b> (type training + OJT) <b>or</b> (type examination + practical experience) on at least 2 aircraft representative of that manufacturer subgroup	<b>Individual TYPE RATING</b> (type training + OJT) <b>or</b> (type examination + practical experience)  <b>Full SUBGROUP RATING</b> based on demonstration of practical experience  <b>Manufacturer SUBGROUP RATING</b> based on demonstration of practical experience	<b>Individual TYPE RATING</b> type training <b>or</b> type examination  <b>Full SUBGROUP RATING</b> type training <b>or</b> type examination on at least 3 aircraft representative of that subgroup  <b>Manufacturer SUBGROUP RATING</b> type training <b>or</b> type examination on at least 2 aircraft representative of that manufacturer subgroup

Aircraft rating requirements			
Aircraft Groups	B1/B3 licence	B2 licence	C licence
<u>Group3</u>  Piston engine aeroplanes (except those classified in Group 1)	(For B1.2)  <b>Individual TYPE RATING</b> (type training + OJT) or (type examination + practical experience)  <b>Full GROUP 3 RATING</b> based on demonstration of practical experience <b>Limitations:</b> - Pressurized aeroplanes - Metal aeroplanes - Composite aeroplanes - Wooden aeroplanes - Metal tubing & fabric Aeroplanes	<b>Individual TYPE RATING</b> (type training + OJT) or (type examination + practical experience)  <b>Full GROUP 3 RATING</b> based on demonstration of appropriate experience	<b>Individual TYPE RATING</b> type training or type examination  <b>Full GROUP 3 RATING</b> based on demonstration of practical experience
<u>Piston-engine non-pressurized aeroplanes of 2 000 kg MTOM and below</u>	(For B3)  <b>FULL RATING "Piston-engine non-pressurized aeroplanes of 2 000 kg MTOM and below"</b> based on demonstration of practical experience <b>Limitations:</b> - Metal aeroplanes - Composite aeroplanes - Wooden aeroplanes - Metal tubing & fabric aeroplanes	<b>Not applicable</b>	<b>Not applicable</b>

## GM 66.A.45(b) Endorsement with aircraft ratings

ED Decision 2015/029/R

An aircraft type rating includes all the aircraft models/variants listed in column 2 of Appendix I to AMC to [Part-66](#).

When a person already holds a type rating on the licence and such type rating is amended in the [Appendix I to AMC to Part-66](#) in order to include additional models/variants, there is no need for additional type training for the purpose of amending the type rating in the licence. The rating should be amended to include the new variants, upon request by the applicant, without additional requirements. However, it is the responsibility of the licence holder and, if applicable, the



maintenance organisation where he/she is employed to comply with [66.A.20\(b\)3](#), [145.A.35\(a\)](#) and [M.A.607\(a\)](#), as applicable, before he/she exercises certification privileges.

Similarly, type training courses covering certain, but not all the models/variants included in a type rating, are valid for the purpose of endorsing the full type rating.

## AMC 66.A.45(d), (e)3, (f)1 and (g)1 Endorsement with aircraft ratings

ED Decision 2015/029/R

1. The 'practical experience' should cover a representative cross section including at least 50% of tasks contained in Appendix II to AMC relevant to the licence category and to the applicable aircraft type ratings or aircraft (sub)group ratings being endorsed. This experience should cover tasks from each paragraph of the Appendix II list. Other tasks than those in the Appendix II may be considered as a replacement when they are relevant. In the case of (sub)group ratings, this experience may be shown by covering one or several aircraft types of the applicable (sub)group and may include experience on aircraft classified in group 1, 2 and/or 3 as long as the experience is relevant. The practical experience should be obtained under the supervision of authorised certifying staff.
2. In the case of endorsement of individual type ratings for Group 2 and Group 3 aircraft, for the second aircraft type of each manufacturer (sub)group the practical experience should be reduced to 30% of the tasks contained in Appendix II to AMC relevant to the licence category and to the applicable aircraft type. For subsequent aircraft types of each manufacturer (sub)group this should be reduced to 20%.
3. Practical experience should be demonstrated by the submission of records or a log book showing the Appendix II tasks performed by the applicant. Typical data to be recorded are similar to those described in [AMC 66.A.20\(b\)2](#).

## AMC 66.A.45(e) Endorsement with aircraft ratings

ED Decision 2015/029/R

1. For the granting of manufacturer subgroup ratings for Group 2 aircraft, for B1 and C licence holders, the sentence 'at least two aircraft types from the same manufacturer which combined are representative of the applicable manufacturer subgroup' means that the selected aircraft types should cover the technologies relevant to the manufacturer subgroup in the following areas:
  - Flight control systems (mechanical controls/hydraulically powered controls / electromechanically powered controls); and
  - Avionic systems (analogue systems / digital systems); and
  - Structure (manufactured of metal / composite / wood).

In cases where there are very different aircraft types within the same manufacturer subgroup, it may be necessary to cover more than two aircraft types to ensure adequate representation.

For this purpose it may be possible to use aircraft types from the same manufacturer classified in Group 1 as long as the selected aircraft belong to the same licence subcategory for which the rating will be endorsed.

2. For the granting of full subgroup ratings for Group 2 aircraft, for B1 and C licence holders, the sentence 'at least three aircraft types from different manufacturers which combined are

representative of the applicable subgroup' means that the selected aircraft types should cover all the technologies relevant to the manufacturer subgroup in the following areas:

- Flight control systems (mechanical controls/hydraulically powered controls / electromechanically powered controls); and
- Avionic systems (analogue systems / digital systems); and
- Structure (manufactured of metal / composite / wood).

In cases where there are very different aircraft types within the same subgroup, it may be necessary to cover more than three aircraft types to ensure adequate representation.

For this purpose it may be possible to use aircraft types from different manufacturers classified in Group 1 as long as the selected aircraft belong to the same licence subcategory for which the rating will be endorsed.

3. For manufacturer subgroup ratings, the term 'manufacturer' means the TC holder defined in the certification data sheet, which is reflected in the list of type ratings in [Appendix I to AMC to Part-66](#).

In the case of an aircraft rating where the type rating refers to a TC holder made of a combination of two manufacturers which produce a similar aircraft (i.e. AGUSTA / BELL HELICOPTER TEXTRON or any case of aircraft similarly built by another manufacturer) this combination should be considered as one manufacturer.

As a consequence:

- When a licence holder gets a manufacturer type or a manufacturer subgroup rating made of a combination of manufacturers, it covers the combination of such manufacturers.
- When a licence holder who intends to endorse a full subgroup rating selects three aircraft from different manufacturers, this means from different combinations of manufacturers as applicable.

## 66.A.50 Limitations

*Regulation (EU) No 1321/2014*

- (a) Limitations introduced on an aircraft maintenance licence are exclusions from the certification privileges and affect the aircraft in its entirety.
- (b) For limitations referred to in point [66.A.45](#), limitations shall be removed upon:
  1. demonstration of appropriate experience; or
  2. after a satisfactory practical assessment performed by the competent authority.
- (c) For limitations referred to in point [66.A.70](#), limitations shall be removed upon satisfactory completion of examination on those modules/subjects defined in the applicable conversion report referred to in point [66.B.300](#).

## AMC 66.A.50(b) Limitations

*ED Decision 2015/029/R*

1. The appropriate experience required to remove the limitations referred in [66.A.45\(f\) and \(g\)](#) should consist of the performance of a variety of tasks appropriate to the limitations under the supervision of authorised certifying staff. This should include the tasks required by a scheduled annual inspection. Alternatively, this experience may also be gained, if agreed by the competent

authority, by theoretical and practical training provided by the manufacturer, as long as an assessment is further carried out and recorded by this manufacturer.

2. It may be acceptable to have this experience on just one aircraft type, provided this type is representative of the (sub)group in relation to the limitation being removed.
3. The application for the limitation removal should be supported by a record of experience signed by the authorised certifying staff or by an assessment signed by the manufacturer after completion of the applicable theoretical and practical training.

## 66.A.55 Evidence of qualification

*Regulation (EU) No 1321/2014*

Personnel exercising certification privileges as well as support staff shall produce their licence, as evidence of qualification, within 24 hours upon request by an authorised person.

## 66.A.70 Conversion provisions

*Regulation (EU) 2015/1536*

- (a) The holder of a certifying staff qualification valid in a Member State, prior to the date of entry into force of [Annex III \(Part-66\)](#) shall be issued an aircraft maintenance licence by the competent authority of this Member State without further examination subject to the conditions specified in [Section B Subpart D](#).
- (b) A person undergoing a certifying staff qualification process valid in a Member State, prior to the date of entry into force of [Annex III \(Part-66\)](#) may continue to be qualified. The holder of a certifying staff qualification gained following such process shall be issued an aircraft maintenance licence by the competent authority of this Member State without further examination subject to the conditions specified in [Section B Subpart D](#).
- (c) Where necessary, the aircraft maintenance licence shall contain limitations in accordance with point [66.A.50](#) to reflect the differences between (i) the scope of the certifying staff qualification valid in the Member State before the entry into force of Regulation (EC) No 2042/2003 and (ii) the basic knowledge requirements and the basic examination standards laid down in [Appendix I and II to this Annex \(Part-66\)](#).
- (d) By derogation from point (c), for aircraft not used by licenced air carriers in accordance with Regulation (EC) No 1008/2008 other than complex motor-powered aircraft, the aircraft maintenance licence shall contain limitations in accordance with point [66.A.50](#) to ensure that the certifying staff privileges valid in the Member State before the entry into force of this Regulation and the privileges of the converted [Part-66](#) aircraft maintenance licence remain the same.

## GM 66.A.70 Conversion provisions

*ED Decision 2015/029/R*

1. As described in point [66.A.70](#), the conversion provisions apply to the holder of a certifying staff qualification valid in a Member State prior to the date of entry into force of [Annex III \(Part-66\)](#). The sentence ‘the holder of a certifying staff qualification valid in a Member State’ means any person who had a qualification valid in that Member State allowing that person the performance of activities identical to the privileges of ‘certifying staff’ contained in Regulation (EU) 1321/2014. This means that the signature of that person was sufficient to declare that the

maintenance had been properly performed and the aircraft was ready for service and fit for flight in respect to such maintenance.

This should not be mistaken with the responsibilities linked to the airworthiness review, which was performed at different periods (typically varying from 6 months to 3 years) in the national systems. This is an activity which is performed at very specific points of time and not after every maintenance activity. Since an airworthiness review (or equivalent term used in the national systems) is not performed after every maintenance event before the aircraft takes flight, an airworthiness review cannot be considered as a maintenance release. This means that the conversion provisions described in [66.A.70](#) are not applicable to persons performing airworthiness review functions unless their signature was required after every maintenance event before the aircraft can take flight.

2. The conversion applies to ‘certifying staff qualifications’ such as, for example:
  - Holding a national licence (or completed the process to obtain such a national licence);
  - Having completed a qualification process defined by the competent authority to become certifying staff;
  - Having completed the qualification requirements for certifying staff within a maintenance organisation, as defined in their procedures.

This does not mean that in order to be entitled to a conversion process, the applicant has to be exercising certification privileges. A person may hold a ‘certifying staff qualification’ while not having certification privileges (or while exercising very limited certification privileges below his/her qualification) for different reasons such as, for example, the following:

- The person is working as ‘support staff’ in the base maintenance environment;
- The person has been authorised only for a very limited range of tasks (lower than what he/she would be entitled if his/her qualification is considered) since the person is working in a line station where the scope of tasks is very limited;
- The person holds a licence with a wider scope than the scope of the organisation where he/she is employed;
- The person is working outside the aviation industry or is temporarily on leave due to different reasons (medical, personal, etc).

These persons are entitled to have the conversion performed in accordance with the full scope of their qualification and the full privileges that they would be entitled to hold on the basis of such qualification.

3. As described in point [66.A.70](#), certifying staff qualifications eligible for conversion are those valid ‘prior to the date of entry into force of [Annex III \(Part-66\)](#)’, which means those qualifications valid before the following dates:
  - 28 September 2005 for aircraft above 5 700 kg MTOM (ref. (EC) No 2042/2003, Article 7, point 3(e));
  - 28 September 2006 for aircraft of 5 700 kg MTOM and below (ref. (EC) No 2042/2003, Article 7, point 3(f)).

Nevertheless, since the B3 licence did not exist at those dates, certifying staff qualifications eligible for conversion to a B3 licence are those valid before 28 September 2012, which is the date where the authority has been obliged to start issuing such licences in accordance with (EC) No 2042/2003, Article 7, point 3(h), item (i).

4. Although only those certifying staff qualifications gained prior to the dates indicated above are eligible for conversion, this does not mean that the application for conversion has to be submitted prior to those dates. The applicant is entitled to have the conversion performed irrespective of when he/she applies for conversion.
5. A certifying staff qualification can be subject to more than one conversion process and can also be converted to more than one licence (with any applicable limitations). This could be the case, for example, of a person who already had the certifying staff qualification converted to a B1.2 licence with limitations linked to some missing elements of the [Part-66 Appendix I](#) and II standard (following [66.A.70\(c\)](#)). This person would be entitled to apply and have his/her certifying staff qualification converted to a B1.2 or a B3 licence on the basis of [66.A.70\(d\)](#), which would mean no need to compare with the [Part-66 Appendix I](#) and II standard, introducing only those limitations required in order to maintain the existing privileges.

## GM 66.A.70(c) Conversion provisions

ED Decision 2015/029/R

For example, a limitation could be where a person holds a pre-existing certifying staff qualification which covered, to the standard of [Part-66 Appendix I](#) and II, all the modules/subjects corresponding to the B1 licence except for electrical power systems. This person would be issued a [Part-66](#) aircraft maintenance licence in the B1 category with a limitation (exclusion) on electrical power systems.

For removal of limitations, refer to [66.A.50\(c\)](#).

## GM 66.A.70(d) Conversion provisions

ED Decision 2016/011/R

For aircraft not used by air carriers licensed in accordance with Regulation (EC) No 1008/2008 other than complex motor-powered aircraft, an example of limitations could be where a person holds a pre-Part-66 qualification which covered privileges to release work performed on aircraft structures, powerplant, mechanical and electrical systems but excluded privileges on aircraft equipped with turbine engine, aircraft above 2 000 kg MTOM, pressurised aircraft and aircraft equipped with retractable landing gear. This person would be issued with a [Part-66](#) aircraft maintenance licence in the B1.2 or B3 (sub)category with the following limitations (exclusions):

- aircraft used by air carriers licensed in accordance with Regulation (EU) No 1008/2008 (this limitation always exists);
- aircraft above 2 000 kg MTOM;
- pressurised aircraft;
- aircraft equipped with retractable landing gear.

Another example of limitations could be where a pilot-owner holds a pre-[Part-66](#) qualification which covered privileges to release work performed on aircraft structures, powerplant, mechanical and electrical systems but limited to their own aircraft and limited to a particular aircraft type (for example, a Cessna 172). This pilot-owner would receive a Part-66 aircraft maintenance licence in the B1.2 or B3 (sub)category with the following limitations (exclusions):

- aircraft used by air carriers licensed in accordance with Regulation (EC) No 1008/2008 (this limitation always exists);
- aircraft other than a Cessna 172;

- aircraft not owned by the licence holder.

The essential aspect is that the limitations are established in order to maintain the privileges of the pre-Part-66 qualification without comparing the previous qualification with the standard of [Part-66 Appendix I and II](#).

For removal of limitations, refer to [66.A.50\(c\)](#).

## SECTION B — PROCEDURES FOR COMPETENT AUTHORITIES

### SUBPART A — GENERAL

#### 66.B.1 Scope

Regulation (EU) No 1321/2014

This section establishes the procedures including the administrative requirements to be followed by the competent authorities in charge of the implementation and the enforcement of [Section A of this Annex \(Part-66\)](#).

#### 66.B.10 Competent authority

Regulation (EU) No 1321/2014

(a) General

The Member State shall designate a competent authority with allocated responsibilities for the issuance, continuation, change, suspension or revocation of aircraft maintenance licences.

This competent authority shall establish an adequate organisational structure to ensure compliance with this [Annex \(Part-66\)](#).

(b) Resources

The competent authority shall be appropriately staffed to ensure the implementation of the requirements of this [Annex \(Part-66\)](#).

(c) Procedures

The competent authority shall establish documented procedures detailing how compliance with this [Annex \(Part-66\)](#) is accomplished. These procedures shall be reviewed and amended to ensure continued compliance.

#### 66.B.20 Record-keeping

Regulation (EU) No 1321/2014

(a) The competent authority shall establish a system of record-keeping that allows adequate traceability of the process to issue, revalidate, change, suspend or revoke each aircraft maintenance licence.

(b) These records shall include for each licence:

1. the application for an aircraft maintenance licence or change to that licence, including all supporting documentation;
2. a copy of the aircraft maintenance licence including any changes;
3. copies of all relevant correspondence;
4. details of any exemption and enforcement actions;
5. any report from other competent authorities relating to the aircraft maintenance licence holder;
6. the records of examinations conducted by the competent authority;
7. the applicable conversion report used for conversion;

8. the applicable credit report used for crediting.
- (c) Records referred to in points 1 to 5 of point (b) shall be kept at least 5 years after the end of the licence validity.
- (d) Records referred to in points 6, 7 and 8 of point (b) shall be kept for an unlimited period.

## AMC 66.B.20 Record-keeping

*ED Decision 2015/029/R*

1. The record-keeping system should ensure that all records are accessible whenever needed within a reasonable time. These records should be organized in a consistent way throughout the competent authority (chronological, alphabetical order, etc.).
2. All records containing sensitive data regarding applicants or organisations should be stored in a secure manner with controlled access to ensure confidentiality of this kind of data.
3. All computer hardware used to ensure data backup should be stored in a different location from that containing the working data in an environment that ensures they remain in good condition. When hardware or software changes take place special care should be taken that all necessary data continues to be accessible at least through the full period specified in [66.B.20](#).

## 66.B.25 Mutual exchange of information

*Regulation (EU) No 1321/2014*

- (a) In order to implement the requirement of this Regulation, the competent authorities shall participate in a mutual exchange of information in accordance with Article 15 of Regulation (EC) No 216/2008.
- (b) Without prejudice to the competencies of the Member States, in the case of a potential safety threat involving several Member States, the concerned competent authorities shall assist each other in carrying out the necessary oversight action.

## 66.B.30 Exemptions

*Regulation (EU) No 1321/2014*

All exemptions granted in accordance with Article 14.4 of Regulation (EC) No 216/2008 shall be recorded and retained by the competent authority.



## SUBPART B — ISSUE OF AN AIRCRAFT MAINTENANCE LICENCE

Regulation (EU) No 1321/2014

This Subpart provides the procedures to be followed by the competent authority to issue, change or continue an aircraft maintenance licence.

### 66.B.100 Procedure for the issue of an aircraft maintenance licence by the competent authority

Regulation (EU) No 1321/2014

- (a) On receipt of [EASA Form 19](#) and any supporting documentation, the competent authority shall verify [EASA Form 19](#) for completeness and ensure that the experience claimed meets the requirement of this [Annex \(Part-66\)](#).
- (b) The competent authority shall verify an applicant's examination status and/or confirm the validity of any credits to ensure that all required modules of Appendix I have been met as required by this [Annex \(Part-66\)](#).
- (c) When having verified the identity and date of birth of the applicant and being satisfied that the applicant meets the standards of knowledge and experience required by this [Annex \(Part-66\)](#), the competent authority shall issue the relevant aircraft maintenance licence to the applicant. The same information shall be kept on competent authority records.
- (d) In the case where aircraft types or groups are endorsed at the time of the issuance of the first aircraft maintenance licence, the competent authority shall verify compliance with point [66.B.115](#).

### AMC 66.B.100 Procedure for the issue of an aircraft maintenance licence by the competent authority

ED Decision 2015/029/R

1. Applicants claiming the maximum reduction in [66.A.30\(a\)](#) total experience based upon successful completion of a [147.A.200](#) approved basic training course should include the [Part-147](#) certificate of recognition for approved basic training.
2. Applicants claiming reduction in [66.A.30\(a\)](#) total experience based upon successful completion of training considered relevant by the competent authority as a skilled worker in a technical trade, should include the relevant certificate of successful completion of training.
3. Applicants claiming credit against the [66.A.30\(a\)](#) total experience requirement by virtue of [66.A.30\(a\)](#) non-civil aircraft maintenance experience may only be granted such credit where the Member State has recognised such non-civil aircraft maintenance experience. The competent authority in recognising non-civil aircraft maintenance experience should have specified who within the non-civil environment may make a statement that the applicant has met relevant maintenance experience. The applicant should include a detailed statement of such maintenance experience signed by the non-civil maintenance authority in accordance with the conditions specified by the competent authority.
4. The competent authority should check that the experience record satisfies above paragraphs in terms of content and the countersigning signature.

**AMC 66.B.100 to 115**

ED Decision 2015/029/R

Aircraft type endorsement should use the standard codes contained in Appendix I to the AMCs.

**66.B.105 Procedure for the issue of an aircraft maintenance licence via a maintenance organisation approved in accordance with Annex II (Part-145)**

Regulation (EU) No 1321/2014

- (a) A maintenance organisation approved in accordance with [Annex II \(Part-145\)](#), when authorised to carry out this activity by the competent authority, may (i) prepare the aircraft maintenance licence on behalf of the competent authority or (ii) make recommendations to the competent authority regarding the application from an individual for a aircraft maintenance licence so that the competent authority may prepare and issue such licence.
- (b) Maintenance organisations referred to in point (a) shall ensure compliance with points [66.B.100\(a\) and \(b\)](#).
- (c) In all cases, the aircraft maintenance licence can only be issued to the applicant by the competent authority.

**AMC 66.B.105 Procedure for the issue of an aircraft maintenance licence via the Part-145 approved maintenance organisation**

ED Decision 2015/029/R

1. The maintenance organisation approved under [Part-145](#) should include the procedure in the organisation's exposition (Chapter 3.16) and this procedure should be audited by the competent authority at least once in each 12-month period. This procedure should include a limitation stating that it is only applicable to the case where the competent authority for the [Part-145](#) approval and for the [Part-66](#) licence is the same.
2. The [Part-145](#) organisation should check that the experience records have been properly countersigned.
3. The maintenance organisation approved under Part-145 may keep the experience record of applicants in a different form from that of application [EASA Form 19](#) but such different form or manner should be acceptable to the competent authority.

**66.B.110 Procedure for the change of an aircraft maintenance licence to include an additional basic category or subcategory**

Regulation (EU) No 1321/2014

- (a) At the completion of the procedures specified in points [66.B.100](#) or [66.B.105](#), the competent authority shall endorse the additional basic category or subcategory on the aircraft maintenance licence by stamp and signature or reissue the licence.
- (b) The competent authority record system shall be changed accordingly.

## AMC 66.B.110 Procedure for the change of an aircraft maintenance licence to include an additional basic category or subcategory

ED Decision 2015/029/R

In the case of computer generated licences, the licence should be reissued.

## 66.B.115 Procedure for the change of an aircraft maintenance licence to include an aircraft rating or to remove limitations

Regulation (EU) No 1321/2014

- (a) On receipt of a satisfactory [EASA Form 19](#) and any supporting documentation demonstrating compliance with the requirements of the applicable rating together with the accompanying aircraft maintenance licence, the competent authority shall either:
1. endorse the applicant's aircraft maintenance licence with the applicable aircraft rating; or
  2. reissue the said licence to include the applicable aircraft rating; or
  3. remove the applicable limitations in accordance with point [66.A.50](#).

The competent authority record system shall be changed accordingly.

- (b) In the case where the complete type training is not conducted by maintenance training organisation appropriately approved in accordance with [Annex IV \(Part-147\)](#), the competent authority shall be satisfied that all type training requirements are complied with before the type rating is issued.
- (c) In the case where the On the Job Training is not required, the aircraft type rating shall be endorsed based on a Certificate of Recognition issued by a maintenance training organisation approved in accordance with Annex IV (part-147).
- (d) In the case where the aircraft type training is not covered by a single course, the competent authority shall be satisfied prior to the type rating endorsement that the content and length of the courses fully satisfy the scope of the licence category and that the interface areas have been appropriately addressed.
- (e) In the case of differences training, the competent authority shall be satisfied that (i) the applicant's previous qualification, supplemented by (ii) either a course approved in accordance with [Annex IV \(Part-147\)](#) or a course directly approved by the competent authority, are acceptable for type rating endorsement.
- (f) Compliance with the practical elements shall be demonstrated (i) by the provision of detailed practical training records or a logbook provided by a maintenance organisation appropriately approved in accordance with [Annex II \(Part-145\)](#) or, where available, (ii) by a training certificate covering the practical training element issued by a maintenance training organisation appropriately approved in accordance with Annex IV (part-147).
- (g) Aircraft type endorsement shall use the aircraft type ratings specified by the Agency.

## AMC 66.B.115 Procedure for the change of an aircraft maintenance licence to include an aircraft rating or to remove limitations

ED Decision 2015/029/R

- (a) Where the type training has not been conducted by a [Part-147](#) organisation, there should be supporting documents confirming to the competent authority that:
- The type training has been approved by the competent authority in accordance with [66.B.130](#),
  - the applicant has completed the elements of the approved type training; and
  - the trainee has been successfully examined/assessed.
- (b) Aircraft type training may be subdivided in airframe and/or powerplant and/or avionics/electrical systems type training courses.
1. Airframe type training course means a type training course including all relevant aircraft structure and electrical and mechanical systems excluding the powerplant.
  2. Powerplant type training course means a type training course on the bare engine, including the build-up to a quick engine change unit.
  3. The interface of the engine/airframe systems should be addressed by either airframe or powerplant type training course. *In some cases, such as for general aviation, it may be more appropriate to cover the interface during the airframe course due to the large variety of aircraft that can have the same engine type installed.*
  4. Avionics/electrical systems type training course means type training on avionics and electrical systems covered by but not necessarily limited to ATA Chapters 22, 23, 24, 25, 27, 31, 33, 34, 42, 44, 45, 46, 73 and 77 or equivalent.
- (c) For the acceptance of the OJT programme described in [Section 6 of Appendix III to Part-66](#), the licensing competent authority should develop adequate procedures which may be similar to the procedure described in [AMC 66.B.130](#) for the ‘direct approval of aircraft type training’.

In the case where the licensing competent authority is different from the competent authority of the maintenance organisation which provides the OJT, the licensing authority may take into consideration the fact that the maintenance organisation may already have the OJT programme accepted by their own competent authority (through chapter 3.15 of the MOE, as described in [AMC 145.A.70\(a\)](#)).

## 66.B.120 Procedure for the renewal of an aircraft maintenance licence validity

Regulation (EU) No 1321/2014

- (a) The competent authority shall compare the holder's aircraft maintenance licence with the competent authority records and verify any pending revocation, suspension or change action pursuant to point [66.B.500](#). If the documents are identical and no action is pending pursuant to point [66.B.500](#), the holder's copy shall be renewed for 5 years and the file endorsed accordingly.
- (b) If the competent authority records are different from the aircraft maintenance licence held by the licence holder:
1. the competent authority shall investigate the reasons for such differences and may choose not to renew the aircraft maintenance licence.

2. the competent authority shall inform the licence holder and any known maintenance organisation approved in accordance with [Annex I \(Part-M\) Subpart F](#) or [Annex II \(Part-145\)](#) that may be directly affected of such fact.
3. the competent authority shall, if necessary, take action in accordance with point 66.B.500 to revoke, suspend or change the licence in question.

## AMC 66.B.120 Procedure for the renewal of an aircraft maintenance licence validity

*ED Decision 2015/029/R*

The competent authority should not carry out any investigation to ensure that the licence holder is in current maintenance practice as this is not a condition for the renewal of a licence. Ensuring the continued validity of the certification privileges is a matter for the approved [Part-145](#) / Subpart F maintenance organization or the certifying staff in accordance with [M.A.801\(b\)2](#).

For the purpose of ensuring the continued validity of the certification privileges the competent authority may, when periodically reviewing the organizations in accordance with [145.B.30](#) or [M.B.604](#), or during on-the-spot checks, request the licence holder to provide documentary evidence of compliance with [66.A.20\(b\)](#) when exercising certification privileges.

## 66.B.125 Procedure for the conversion of licences including group ratings

*Regulation (EU) No 1321/2014*

- (a) Individual aircraft type ratings already endorsed on the aircraft maintenance licence referred to in point 4 of [Article 5](#) shall remain on the licence and shall not be converted to new ratings unless the licence holder fully meets the requirements for endorsement defined in point [66.A.45](#) of this [Annex \(Part-66\)](#) for the corresponding group/sub-group ratings.
- (b) The conversion shall be performed in accordance with the following conversion table:
  1. for category B1 or C:
    - helicopter piston engine, full group: converted to ‘full sub-group 2c’ plus the aircraft type ratings for those single piston engine helicopters which are in group 1,
    - helicopter piston engine, manufacturer group: converted to the corresponding ‘manufacturer sub-group 2c’ plus the aircraft type ratings for those single piston engine helicopters of that manufacturer which are in group 1,
    - helicopter turbine engine, full group: converted to ‘full sub-group 2b’ plus the aircraft type ratings for those single turbine engine helicopters which are in group 1,
    - helicopter turbine engine, manufacturer group: converted to the corresponding ‘manufacturer sub-group 2b’ plus the aircraft type ratings for those single turbine engine helicopters of that manufacturer which are in group 1,
    - aeroplane single piston engine — metal structure, either full group or manufacturer group: converted to ‘full group 3’. For the B1 licence the following limitations shall be included: composite structure aeroplanes, wooden structure aeroplanes and metal tubing and fabric aeroplanes,

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- aeroplane multiple piston engines — metal structure, either full group or manufacturer group: converted to ‘full group 3’. For the B1 licence the following limitations shall be included: composite structure aeroplanes, wooden structure aeroplanes and metal tubing and fabric aeroplanes,
  - aeroplane single piston engine — wooden structure, either full group or manufacturer group: converted to ‘full group 3’. For the B1 licence the following limitations shall be included: metal structure aeroplanes, composite structure aeroplanes and metal tubing and fabric aeroplanes,
  - aeroplane multiple piston engine — wooden structure, either full group or manufacturer group: converted to ‘full group 3’. For the B1 licence the following limitations shall be included: metal structure aeroplanes, composite structure aeroplanes and metal tubing and fabric aeroplanes,
  - aeroplane single piston engine — composite structure, either full group or manufacturer group: converted to ‘full group 3’. For the B1 licence the following limitations shall be included: metal structure aeroplanes, wooden structure aeroplanes and metal tubing and fabric aeroplanes,
  - aeroplane multiple piston engine — composite structure, either full group or manufacturer group: converted to ‘full group 3’. For the B1 licence the following limitations shall be included: metal structure aeroplanes, wooden structure aeroplanes and metal tubing and fabric aeroplanes,
  - aeroplane turbine — single engine, full group: converted to ‘full sub-group 2a’ plus the aircraft type ratings for those single turboprop aeroplanes which did not require an aircraft type rating in the previous system and are in group 1,
  - aeroplane turbine — single engine, manufacturer group: converted to the corresponding ‘manufacturer sub-group 2a’ plus the aircraft type ratings for those single turboprop aeroplanes of that manufacturer which did not require an aircraft type rating in the previous system and are in group 1,
  - aeroplane turbine — multiple engine, full group: converted to the aircraft type ratings for those multiple turboprop aeroplanes which did not require an aircraft type rating in the previous system;
2. for category B2:
- aeroplane: converted to ‘full sub-group 2a’ and ‘full group 3’, plus the aircraft type ratings for those aeroplanes which did not require an aircraft type rating in the previous system and are in group 1,
  - helicopter: converted to ‘full sub-groups 2b and 2c’, plus the aircraft type ratings for those helicopters which did not require an aircraft type rating in the previous system and are in group 1;
3. for category C:
- aeroplane: converted to ‘full sub-group 2a’ and ‘full group 3’, plus the aircraft type ratings for those aeroplanes which did not require an aircraft type rating in the previous system and are in group 1,
  - helicopter: converted to ‘full sub-groups 2b and 2c’, plus the aircraft type ratings for those helicopters which did not require an aircraft type rating in the previous system and are in group 1.

- (c) If the licence was subject to limitations following the conversion process referred to in point [66.A.70](#), these limitations shall remain on the licence, unless they are removed under the conditions defined in the relevant conversion report referred to in point [66.B.300](#).

## 66.B.130 Procedure for the direct approval of aircraft type training

*Regulation (EU) No 1321/2014*

The competent authority may approve aircraft type training not conducted by a maintenance training organisation approved in accordance with [Annex IV \(Part-147\)](#), pursuant to [point 1 of Appendix III to this Annex \(part-66\)](#). In such case the competent authority shall have a procedure to ensure the aircraft type training complies with Appendix III of this [Annex \(Part-66\)](#).

## AMC 66.B.130 Procedure for the direct approval of aircraft type training

*ED Decision 2015/029/R*

1. The procedure for the direct approval of type training courses by the competent authority should require that the following aspects are described by the organisation providing the training:
  - The content and the duration of the theoretical and/or practical elements, as applicable, in accordance with [Appendix III to Part-66](#), including the Training Need Analysis (TNA);
  - The teaching methods and instructional equipment;
  - The material and documentation provided to the student;
  - The qualification of instructors, examiners and/or assessors, as applicable;
  - The examination and/or assessment procedure, as applicable. Further guidance about the assessment and the designated assessors is given in [Appendix III to AMC to Part-66](#).
  - The documentation and records to be provided to the student to justify the satisfactory completion of the training course and related examination/assessment. This should include not only a certificate of completion but enough documentation and records to justify that the content and duration approved has been met and that the examination/assessment has been successfully passed.
2. The above criteria apply to a full course as well as to a partial course such as the practical element of a type training course and its assessment.
3. The procedure should also indicate how the competent authority is going to audit the proper performance of the approved course.
4. The direct approval of aircraft type training should be done on a case by case basis and should not be granted for long term periods, since it is not a privilege of the organisation providing the training.



## SUBPART C — EXAMINATIONS

Regulation (EU) No 1321/2014;

This Subpart provides the procedures to be followed for the examinations conducted by the competent authority.

### 66.B.200 Examination by the competent authority

Regulation (EU) No 1321/2014

- (a) All examination questions shall be kept in a secure manner prior to an examination, to ensure that candidates will not know which particular questions will form the basis of the examination.
- (b) The competent authority shall nominate:
  - 1. persons who control the questions to be used for each examination;
  - 2. examiners who shall be present during all examinations to ensure the integrity of the examination.
- (c) Basic examinations shall follow the standard specified in [Appendix I and II to this Annex \(Part-66\)](#).
- (d) Type training examinations and type examinations shall follow the standard specified in [Appendix III to this Annex \(Part-66\)](#).
- (e) New essay questions shall be raised at least every 6 months and questions already used withdrawn or rested from use. A record of the questions used shall be retained in the records for reference.
- (f) All examination papers shall be handed out at the start of the examination to the candidate and handed back to the examiner at the end of the allotted examination time period. No examination paper may be removed from the examination room during the allotted examination time period.
- (g) Apart from specific documentation needed for type examinations, only the examination paper may be available to the candidate during the examination.
- (h) Examination candidates shall be separated from each other so that they cannot read each other's examination papers. They may not speak to any person other than the examiner.
- (i) Candidates who are proven to be cheating shall be banned from taking any further examination within 12 months of the date of the examination in which they were found cheating.

### GM 66.B.200 Examination by the competent authority

ED Decision 2015/029/R

- 1. Questions may be prepared in the national language but the use of aviation English is recommended wherever possible.
- 2. The primary purpose of essay questions is to determine that the candidate can express themselves in a clear and concise manner and can prepare a concise technical report for the maintenance record, which is why only a few essay questions are required.
- 3. Oral type questions may not be used as the primary means of examination because of the difficulty in establishing consistency of standards between examiners or day-to-day.



However, nothing prevents the competent authority from meeting potential certifying staff for the purpose of ensuring they understand their obligations and responsibilities in the application of maintenance Parts.

4. For pass mark purposes, the essay questions should be considered as separate from the multiple choice questions.
5. Multiple choice question (MCQ) generation.

The following principles should be observed when developing multiple choice question:

- (a) The examination should measure clearly formulated goals. Therefore the field and depth of knowledge to be measured by each question should be fully identified.
  - (b) All the questions should be of the multiple choice type with three alternative answers.
  - (c) Questions that require specialised knowledge of specific aircraft types should not be asked in a basic licence examination.
  - (d) The use of abbreviations and acronyms should generally be avoided. However where needed, only internationally recognised abbreviations and acronyms should be used. In case of doubt use the full form, e.g. angle of attack = 12 degrees instead of  $\alpha = 12^\circ$ .
  - (e) Questions and answers should be formulated as simply as possible: the examination is not a test of language. Complex sentences, unusual grammar and double negatives should be avoided.
  - (f) A question should comprise one complete positive proposition. No more than 3 different statements should appear among the suggested responses otherwise the candidate may be able to deduce the correct answer by eliminating the unlikely combinations of statements.
  - (g) Questions should have only one true answer.
  - (h) The correct answer should be absolutely correct and complete or, without doubt, the most preferable. Responses that are so essentially similar that the choice is a matter of opinion rather than a matter of fact should be avoided. The main interest in MCQs is that they can be quickly performed: this is not achieved if doubt exists about the correct answer.
  - (i) The incorrect alternatives should seem equally plausible to anyone ignorant of the subject. All alternatives should be clearly related to the question and of similar vocabulary, grammatical structure and length. In numerical questions, the incorrect answers should correspond to procedural errors such as corrections applied in the wrong sense or incorrect unit conversions: they should not be mere random numbers.
  - (j) Calculators are not allowed during examination. Therefore all calculations should be feasible without a calculator. Where a question involves calculations not feasible without a calculator, such as  $\sqrt{10}$ , then the question should specify the approximate value of  $\sqrt{10}$ .
  - (k) Questions should be referred to [Part-66 Appendix I](#) examination syllabus.
6. Essay question generation
    - (a) The purpose of the essay is to allow the competent authority to determine if candidates can express themselves in a clear and concise manner in the form of a written response, in a technical report format using the technical language of the aviation industry. The

essay examination also allows to assess, in part, the technical knowledge retained by the individual and with a practical application relevant to a maintenance scenario.

- (b) Questions should be written so as to be broad enough to be answered by candidates for all licence category or sub-categories (Cat A, B1 & B2) and comply with the following general guidelines:
- the question topic selected should be generic, applicable to mechanical as well as avionics licence categories and have a common technical difficulty level as indicated in [Part-66 Appendix I](#);
  - cover technology applicable to most areas of aircraft maintenance;
  - reflects common working practices;
  - it is not type or manufacturer specific and avoids subjects which are rarely found in practice;
  - when drafting a question there is need to ensure consideration is given to the limited practical experience that most candidates will have.
- (c) To make the questions and the marking procedures as consistent as possible, each question and model answer, with the required key areas required (see below), should be reviewed independently by at least 2 technical staff members.
- (d) When raising questions the following should be considered:
- Each essay question will have a time allowance of 20 minutes.
  - A complete A4 side is provided for each question and answer, if required the answer can be extended onto the reverse side of the page.
  - The question should be such that the answer expected will be at the level shown for that subject in the module syllabus.
  - The question should not be ambiguous but should seek a broad reply rather than be limited in scope for answer.
  - The question should lend itself to be written in a technical report style, in a logical sequence (beginning, middle and end), containing the applicable and relevant technical words needed in the answer.
  - Do not ask for drawings/sketches to support the essay.
  - The question should be relevant to the category and level of difficulty listed in the syllabus, e.g. a description of a typical general aviation system may not be acceptable for a typical commercial aeroplane.
  - Subject to obvious constraints in relation to the topic being addressed the question should have a strong bias towards the practical maintenance of a system/component and the answer should show an understanding of normal and deteriorated conditions of an aircraft and its systems.
- Variations on alternative possible answers which have not been thought of, may have to be taken into account to aid the examiner when marking. If considered relevant, the model answer should be amended to include these new points.
- (e) Because of the difficulty in marking an essay answer using key points only, there is a need for the way in which the report was written to be assessed and taken into consideration.

- (f) The total points for each question will add up to 100 and will need to reflect both the combination of the technical (key point) element and the report style element.
- (g) Each key point will be graded upon its importance and have point weighting allocated to it. The total weight will represent 60% of the mark.
- (h) Key points are the 'important elements' that may be knowledge or experience-based and will include other maintenance orientated factors such as relevant safety precautions or legislative practices if applicable. Excessive reference to the need for MM referral or safety checks may be considered wasteful.
- (i) The question answer will be analysed for the clarity and manner in which the essay report is presented and have a weighting allocated to it which will represent 40% of the mark.
- (j) The answer should show the candidate's ability to express himself in technical language. This includes readability of the language, basic grammar and use of terminology.
- (k) The report starts in the beginning and has logical process to reach a conclusion.
- (l) Supporting diagrams should not be encouraged but if used should supplement the answer and not replace the need for a broad text answer.
- (m) The report should not be indexed, itemised or listed.
- (n) Within reason the candidate should not be penalised for incorrect spelling.
- (o) A zero mark should only be given in exceptional circumstances. Even if the student misunderstands the question and gives an answer to a different question, a sympathetic mark even if only for the report style should be given, this could up to the maximum percentage allowed.
- (p) The two allocated marks should be added together and written into the answer paper.
- (q) If a question answer resulting in a borderline failure is principally due to 'written report errors,' the paper should be discussed and the mark agreed if possible with another examiner.

## SUBPART D — CONVERSION OF CERTIFYING STAFF QUALIFICATIONS

Regulation (EU) No 1321/2014

This Subpart provides the procedures for the conversion of certifying staff qualifications referred to in point [66.A.70](#) to aircraft maintenance licences.

### 66.B.300 General

Regulation (EU) No 1321/2014

- (a) The competent authority may only convert qualifications (i) obtained in the Member State for which it is competent, without prejudice to bilateral agreements and (ii) valid prior to the entry into force of the applicable requirements of this [Annex \(Part-66\)](#).
- (b) The competent authority may only perform the conversion in accordance with a conversion report established pursuant to points [66.B.305](#) or [66.B.310](#), as applicable.
- (c) Conversion reports shall be either (i) developed by the competent authority or (ii) approved by the competent authority to ensure compliance with this [Annex \(Part-66\)](#).
- (d) Conversion reports together with any change of these shall be kept on record by the competent authority in accordance with point [66.B.20](#).

### GM 66.B.300 General

ED Decision 2015/029/R

As described in point [66.B.300](#), certifying staff qualifications eligible for conversion are those valid 'prior to the entry into force of the applicable requirements of this [Annex \(Part-66\)](#)', which means those qualifications valid before the following dates:

- 28 September 2005 for aircraft above 5 700 kg MTOM (ref. (EC) No 2042/2003, Article 7, point 3(e));
- 28 September 2006 for aircraft of 5 700 kg MTOM and below (ref. (EC) No 2042/2003, Article 7, point 3(f)).

Nevertheless, since the B3 licence did not exist at those dates, certifying staff qualifications eligible for conversion to a B3 licence are those valid before 28 September 2012, which is the date where the authority has been obliged to start issuing such licences in accordance with (EC) No 2042/2003, Article 7, point 3(h), item (i).

### 66.B.305 Conversion report for national qualifications

Regulation (EU) No 1321/2014

- (a) The conversion report for national certifying staff qualifications shall describe the scope of each type of qualification, including the associated national licence, if any, the associated privileges and include a copy of the relevant national regulations defining these.
- (b) The conversion report shall show for each type of qualification referred to in point (a):
  1. to which aircraft maintenance licence it will be converted; and
  2. which limitations shall be added in accordance with points [66.A.70\(c\)](#) or [\(d\)](#), as applicable; and
  3. the conditions to remove the limitations, specifying the module/subjects on which examination is needed to remove the limitations and obtain a full aircraft maintenance

licence, or to include an additional (sub-) category. This shall include the modules defined in [Appendix III to this Annex \(Part-66\)](#) not covered by the national qualification.

### AMC 66.B.305(a) Conversion report for national qualifications

ED Decision 2016/011/R

1. Conversion reports prepared on the basis of point [66.A.70\(c\)](#) should include a comparison between the scope of the national qualification (i.e., the national qualification requirements) and the scope of the [Part-66](#) licence qualification (i.e., the [Part-66](#) qualification requirements), which should be performed on the basis of a detailed analysis of the national and Part-66 basic qualification standards. The report should identify where a difference between the two standards exists and where such a difference would lead to a limitation on the Part-66 licence.
2. Conversion reports prepared on the basis of point [66.A.70\(d\)](#), which are limited to other-than-complex motor-powered aircraft not used by air carriers licensed in accordance with Regulation (EC) No 1008/2008 should include the privileges associated to the national qualification. The reports should identify which limitations are needed to the Part-66 licence in order to maintain these privileges.

### GM 66.B.305(b)3 Conversion report for national qualifications

ED Decision 2015/029/R

As conversions performed on the basis of [66.A.70\(d\)](#) are aimed to maintain the privileges of the pre-existing national qualification, the limitations introduced on the [Part-66](#) licence are not linked to possible differences between the scope of the national qualification and the scope of the [Part-66](#) licence qualification. This conversion does not include such comparison.

This means that, in order to remove such limitations, full compliance with the conditions of Part-66 needs to be demonstrated.

### 66.B.310 Conversion report for approved maintenance organisations authorisations

Regulation (EU) No 1321/2014

- (a) For each approved maintenance organisation concerned, the conversion report shall describe the scope of each type of authorisation issued by the maintenance organisation and include a copy of the relevant approved maintenance organisation's procedures for the qualification and the authorisation of certifying staff on which the conversion process is based.
- (b) The conversion report shall show for each type of authorisation referred to in point (a):
  1. to which aircraft maintenance licence it will be converted, and
  2. which limitations shall be added in accordance with points [66.A.70\(c\)](#) or [\(d\)](#), as applicable, and
  3. the conditions to remove the limitations, specifying the module/subjects on which examination is needed to remove the limitations and obtain a full aircraft maintenance licence, or to include an additional (sub-) category. This shall include the modules defined in [Appendix III to this Annex \(Part-66\)](#) not covered by the national qualification.

## AMC 66.B.310(a) Conversion report for approved maintenance organisations' authorisations

ED Decision 2016/011/R

1. Conversion reports prepared on the basis of point [66.A.70\(c\)](#) should include a comparison between the qualification required for each type of organisation authorisation and the scope of the [Part-66](#) licence qualification, which should be performed on the basis of a detailed analysis of the organisation and [Part-66](#) basic qualification standards. The report should identify where a difference between the two standards exists and where such a difference would lead to a limitation on the Part-66 licence.
2. Conversion reports prepared on the basis of point [66.A.70\(d\)](#), which are limited to other-than-complex motor-powered aircraft not used by air carriers licensed in accordance with Regulation (EC) No 1008/2008 should include the privileges associated to the organisation authorisation. The reports should identify which limitations are needed to the Part-66 licence in order to maintain these privileges.

## GM 66.B.310(b)3 Conversion report for approved maintenance organisations authorisations

ED Decision 2015/029/R

As conversions performed on the basis of [66.A.70\(d\)](#) are aimed to maintain the privileges of the pre-existing organisation authorisations, the limitations introduced on the [Part-66](#) licence are not linked to possible differences between the qualification required for the organisation authorisation and the [Part-66](#) licence qualification. This conversion does not include such comparison.

This means that, in order to remove such limitations, full compliance with the conditions of Part-66 needs to be demonstrated.

## SUBPART E — EXAMINATION CREDITS

Regulation (EU) No 1321/2014

This Subpart provides the procedures for granting examination credits referred to in point [66.A.25\(c\)](#).

### 66.B.400 General

Regulation (EU) No 1321/2014

- (a) The competent authority may only grant credit on the basis of a credit report prepared in accordance with point [66.B.405](#).
- (b) The credit report shall be either (i) developed by the competent authority or (ii) approved by the competent authority to ensure compliance with this [Annex \(Part-66\)](#).
- (c) Credit reports together with any change of these shall be dated and kept on record by the competent authority in accordance with point [66.B.20](#).

### 66.B.405 Examination credit report

Regulation (EU) No 1321/2014

- (a) The credit report shall include a comparison between:
  - (i) the modules, sub-modules, subjects and knowledge levels contained in [Appendix I to this Annex \(Part-66\)](#), as applicable; and
  - (ii) the syllabus of the technical qualification concerned relevant to the particular category being sought.

This comparison shall state if compliance is demonstrated and contain the justifications for each statement.

- (b) Credit for examinations, other than basic knowledge examinations carried out in maintenance training organisations approved in accordance with [Annex IV \(Part-147\)](#), can only be granted by the competent authority of the Member State in which the qualification has been obtained, without prejudice to bilateral agreements.
- (c) No credit can be granted unless there is a statement of compliance against each module and sub-module, stating where, in the technical qualification, the equivalent standard can be found.
- (d) The competent authority shall check on a regular basis whether (i) the national qualification standard or (ii) [Appendix I to this Annex \(Part-66\)](#) have changed and assess if changes to the credit report are consequently required. Such changes shall be documented, dated and recorded.

### 66.B.410 Examination credit validity

Regulation (EU) No 1321/2014

- (a) The competent authority shall notify to the applicant in writing any credits granted together with the reference to the credit report used.
- (b) Credits shall expire 10 years after they are granted.
- (c) Upon expiration of the credits, the applicant may apply for new credits. The competent authority shall continue the validity of the credits for an additional period of 10 years without further consideration if basic knowledge requirements defined in [Appendix I to this Annex \(Part-66\)](#) have not been changed.

## GM 66.B.410 Examination credit validity

ED Decision 2015/029/R

In the case of credits expired in accordance with [66.A.25\(d\)](#) and [66.B.410\(b\)](#), the new application for credits will lead to a reassessment in accordance with [66.B.405](#) and [66.B.410](#) only in those cases where the requirements contained in [Appendix I to Part-66](#) have changed. This may lead to a requirement for further examinations on particular modules/sub-modules/subjects.



## SUBPART F — CONTINUING OVERSIGHT

Regulation (EU) No 1321/2014

This Subpart describes the procedures for the continuing oversight of the aircraft maintenance licence and in particular for the revocation, suspension or limitation of the aircraft maintenance licence.

### 66.B.500 Revocation, suspension or limitation of the aircraft maintenance licence

Regulation (EU) No 1321/2014

The competent authority shall suspend, limit or revoke the aircraft maintenance licence where it has identified a safety issue or if it has clear evidence that the person has carried out or been involved in one or more of the following activities:

1. obtaining the aircraft maintenance licence and/or the certification privileges by falsification of documentary evidence;
2. failing to carry out requested maintenance combined with failure to report such fact to the organisation or person who requested the maintenance;
3. failing to carry out required maintenance resulting from own inspection combined with failure to report such fact to the organisation or person for whom the maintenance was intended to be carried out;
4. negligent maintenance;
5. falsification of the maintenance record;
6. issuing a certificate of release to service knowing that the maintenance specified on the certificate of release to service has not been carried out or without verifying that such maintenance has been carried out;
7. carrying out maintenance or issuing a certificate of release to service when adversely affected by alcohol or drugs;
8. issuing certificate of release to service while not in compliance with [Annex I \(Part-M\)](#), [Annex II \(Part-145\)](#) or [Annex III \(Part-66\)](#).

## APPENDICES TO ANNEX III (PART-66)

### Appendix I — Basic Knowledge Requirements

#### 1. Knowledge levels for Category A, B1, B2, B3 and C Aircraft Maintenance Licence

Regulation (EU) No 1321/2014

Basic knowledge for categories A, B1, B2 and B3 are indicated by knowledge levels (1, 2 or 3) against each applicable subject. Category C applicants shall meet either the category B1 or the category B2 basic knowledge levels.

The knowledge level indicators are defined on 3 levels as follows:

- *LEVEL 1: A familiarisation with the principal elements of the subject.*

Objectives:

- (a) The applicant should be familiar with the basic elements of the subject.
- (b) The applicant should be able to give a simple description of the whole subject, using common words and examples.
- (c) The applicant should be able to use typical terms.

- *LEVEL 2: A general knowledge of the theoretical and practical aspects of the subject and an ability to apply that knowledge.*

Objectives:

- (a) The applicant should be able to understand the theoretical fundamentals of the subject.
- (b) The applicant should be able to give a general description of the subject using, as appropriate, typical examples.
- (c) The applicant should be able to use mathematical formulae in conjunction with physical laws describing the subject.
- (d) The applicant should be able to read and understand sketches, drawings and schematics describing the subject.
- (e) The applicant should be able to apply his knowledge in a practical manner using detailed procedures.

- *LEVEL 3: A detailed knowledge of the theoretical and practical aspects of the subject and a capacity to combine and apply the separate elements of knowledge in a logical and comprehensive manner.*

Objectives:

- (a) The applicant should know the theory of the subject and interrelationships with other subjects.
- (b) The applicant should be able to give a detailed description of the subject using theoretical fundamentals and specific examples.
- (c) The applicant should understand and be able to use mathematical formulae related to the subject.
- (d) The applicant should be able to read, understand and prepare sketches, simple drawings and schematics describing the subject.

- (e) The applicant should be able to apply his knowledge in a practical manner using manufacturer's instructions.
- (f) The applicant should be able to interpret results from various sources and measurements and apply corrective action where appropriate.

## 2. Modularisation

Regulation (EU) No 1321/2014

Qualification on basic subjects for each aircraft maintenance licence category or subcategory should be in accordance with the following matrix, where applicable subjects are indicated by an 'X':

Subject module	A or B1 aeroplane with:		A or B1 helicopter with:		B2 Avionics	B3 Piston-engine non-pressurised aeroplanes 2000 kg MTOM and below
	Turbine engine(s)	Piston engine(s)	Turbine engine(s)	Piston engine(s)		
1	X	X	X	X	X	X
2	X	X	X	X	X	X
3	X	X	X	X	X	X
4	X	X	X	X	X	X
5	X	X	X	X	X	X
6	X	X	X	X	X	X
7A	X	X	X	X	X	
7B						X
8	X	X	X	X	X	X
9A	X	X	X	X	X	
9B						X
10	X	X	X	X	X	X
11A	X					
11B		X				
11C						X
12			X	X		
13					X	
14					X	
15	X		X			
16		X		X		X
17A	X	X				
17B						X

## MODULE 1. MATHEMATICS

Regulation (EU) No 1321/2014

	LEVEL			
	A	B1	B2	B3
<b>1.1 Arithmetic</b> Arithmetical terms and signs, methods of multiplication and division, fractions and decimals, factors and multiples, weights, measures and conversion factors, ratio and proportion, averages and percentages, areas and volumes, squares, cubes, square and cube roots.	1	2	2	2
<b>1.2 Algebra</b>				

		LEVEL			
		A	B1	B2	B3
(a)	Evaluating simple algebraic expressions, addition, subtraction, multiplication and division, use of brackets, simple algebraic fractions;	1	2	2	2
(b)	Linear equations and their solutions; Indices and powers, negative and fractional indices; Binary and other applicable numbering systems; Simultaneous equations and second degree equations with one unknown; Logarithms.	—	1	1	1
<b>1.3 Geometry</b>					
(a)	Simple geometrical constructions;	—	1	1	1
(b)	Graphical representation; nature and uses of graphs, graphs of equations/functions;	2	2	2	2
(c)	Simple trigonometry; trigonometrical relationships, use of tables and rectangular and polar coordinates.	—	2	2	2

**MODULE 2. PHYSICS**
*Regulation (EU) No 1321/2014*

		LEVEL			
		A	B1	B2	B3
<b>2.1 Matter</b>		1	1	1	1
Nature of matter: the chemical elements, structure of atoms, molecules; Chemical compounds; States: solid, liquid and gaseous; Changes between states.					
<b>2.2 Mechanics</b>					
<b>2.2.1 Statics</b>		1	2	1	1
Forces, moments and couples, representation as vectors; Centre of gravity; Elements of theory of stress, strain and elasticity: tension, compression, shear and torsion; Nature and properties of solid, fluid and gas; Pressure and buoyancy in liquids (barometers).					
<b>2.2.2 Kinetics</b>		1	2	1	1
Linear movement: uniform motion in a straight line, motion under constant acceleration (motion under gravity); Rotational movement: uniform circular motion (centrifugal/centripetal forces); Periodic motion: pendular movement; Simple theory of vibration, harmonics and resonance; Velocity ratio, mechanical advantage and efficiency.					
<b>2.2.3 Dynamics</b>					
(a)	Mass;	1	2	1	1

		LEVEL			
		A	B1	B2	B3
	Force, inertia, work, power, energy (potential, kinetic and total energy), heat, efficiency;				
(b)	Momentum, conservation of momentum; Impulse; Gyroscopic principles; Friction: nature and effects, coefficient of friction (rolling resistance).	1	2	2	1
<i>2.2.4 Fluid dynamics</i>					
(a)	Specific gravity and density;	2	2	2	2
(b)	Viscosity, fluid resistance, effects of streamlining; Effects of compressibility on fluids; Static, dynamic and total pressure: Bernoulli's Theorem, venturi.	1	2	1	1
<i>2.3 Thermodynamics</i>					
(a)	Temperature: thermometers and temperature scales: Celsius, Fahrenheit and Kelvin; Heat definition;	2	2	2	2
(b)	Heat capacity, specific heat; Heat transfer: convection, radiation and conduction; Volumetric expansion; First and second law of thermodynamics; Gases: ideal gases laws; specific heat at constant volume and constant pressure, work done by expanding gas; Isothermal, adiabatic expansion and compression, engine cycles, constant volume and constant pressure, refrigerators and heat pumps; Latent heats of fusion and evaporation, thermal energy, heat of combustion.	—	2	2	1
<i>2.4 Optics (Light)</i>					
	Nature of light; speed of light; Laws of reflection and refraction: reflection at plane surfaces, reflection by spherical mirrors, refraction, lenses; Fibre optics.	—	2	2	—
<i>2.5 Wave Motion and Sound</i>					
	Wave motion: mechanical waves, sinusoidal wave motion, interference phenomena, standing waves; Sound: speed of sound, production of sound, intensity, pitch and quality, Doppler effect.	—	2	2	—

## MODULE 3. ELECTRICAL FUNDAMENTALS

Regulation (EU) No 1321/2014

	LEVEL			
	A	B1	B2	B3
<b>3.1 Electron Theory</b> Structure and distribution of electrical charges within: atoms, molecules, ions, compounds; Molecular structure of conductors, semiconductors and insulators.	1	1	1	1
<b>3.2 Static Electricity and Conduction</b> Static electricity and distribution of electrostatic charges; Electrostatic laws of attraction and repulsion; Units of charge, Coulomb's Law; Conduction of electricity in solids, liquids, gases and a vacuum.	1	2	2	1
<b>3.3 Electrical Terminology</b> The following terms, their units and factors affecting them: potential difference, electromotive force, voltage, current, resistance, conductance, charge, conventional current flow, electron flow.	1	2	2	1
<b>3.4 Generation of Electricity</b> Production of electricity by the following methods: light, heat, friction, pressure, chemical action, magnetism and motion.	1	1	1	1
<b>3.5 DC Sources of Electricity</b> Construction and basic chemical action of: primary cells, secondary cells, lead acid cells, nickel cadmium cells, other alkaline cells; Cells connected in series and parallel; Internal resistance and its effect on a battery; Construction, materials and operation of thermocouples; Operation of photo-cells.	1	2	2	2
<b>3.6 DC Circuits</b> Ohms Law, Kirchoff's Voltage and Current Laws; Calculations using the above laws to find resistance, voltage and current; Significance of the internal resistance of a supply.	—	2	2	1
<b>3.7 Resistance/Resistor</b> (a) Resistance and affecting factors; Specific resistance; Resistor colour code, values and tolerances, preferred values, wattage ratings; Resistors in series and parallel; Calculation of total resistance using series, parallel and series parallel combinations; Operation and use of potentiometers and rheostats; Operation of Wheatstone Bridge;	—	2	2	1
(b) Positive and negative temperature coefficient conductance; Fixed resistors, stability, tolerance and limitations, methods of construction; Variable resistors, thermistors, voltage dependent resistors;	—	1	1	—

	LEVEL			
	A	B1	B2	B3
Construction of potentiometers and rheostats; Construction of Wheatstone Bridge.				
<b>3.8 Power</b> Power, work and energy (kinetic and potential); Dissipation of power by a resistor; Power formula; Calculations involving power, work and energy.	—	2	2	1
<b>3.9 Capacitance/Capacitor</b> Operation and function of a capacitor; Factors affecting capacitance area of plates, distance between plates, number of plates, dielectric and dielectric constant, working voltage, voltage rating; Capacitor types, construction and function; Capacitor colour coding; Calculations of capacitance and voltage in series and parallel circuits; Exponential charge and discharge of a capacitor, time constants; Testing of capacitors.	—	2	2	1
<b>3.10 Magnetism</b> (a) Theory of magnetism; Properties of a magnet; Action of a magnet suspended in the Earth's magnetic field; Magnetisation and demagnetisation; Magnetic shielding; Various types of magnetic material; Electromagnets construction and principles of operation; Hand clasp rules to determine: magnetic field around current carrying conductor;	—	2	2	1
(b) Magnetomotive force, field strength, magnetic flux density, permeability, hysteresis loop, retentivity, coercive force reluctance, saturation point, eddy currents; Precautions for care and storage of magnets.	—	2	2	1
<b>3.11 Inductance/Inductor</b>	—	2	2	1

	LEVEL			
	A	B1	B2	B3
Faraday's Law; Action of inducing a voltage in a conductor moving in a magnetic field; Induction principles; Effects of the following on the magnitude of an induced voltage: magnetic field strength, rate of change of flux, number of conductor turns; Mutual induction; The effect the rate of change of primary current and mutual inductance has on induced voltage; Factors affecting mutual inductance: number of turns in coil, physical size of coil, permeability of coil, position of coils with respect to each other; Lenz's Law and polarity determining rules; Back emf, self induction; Saturation point; Principle uses of inductors.				
<b>3.12 DC Motor/Generator Theory</b> Basic motor and generator theory; Construction and purpose of components in DC generator; Operation of, and factors affecting output and direction of current flow in DC generators; Operation of, and factors affecting output power, torque, speed and direction of rotation of DC motors; Series wound, shunt wound and compound motors; Starter Generator construction.	—	2	2	1
<b>3.13 AC Theory</b> Sinusoidal waveform: phase, period, frequency, cycle; Instantaneous, average, root mean square, peak, peak to peak current values and calculations of these values, in relation to voltage, current and power; Triangular/Square waves; Single/3 phase principles.	1	2	2	1
<b>3.14 Resistive (R), Capacitive (C) and Inductive (L) Circuits</b> Phase relationship of voltage and current in L, C and R circuits, parallel, series and series parallel; Power dissipation in L, C and R circuits; Impedance, phase angle, power factor and current calculations; True power, apparent power and reactive power calculations.	—	2	2	1
<b>3.15 Transformers</b> Transformer construction principles and operation; Transformer losses and methods for overcoming them; Transformer action under load and no-load conditions; Power transfer, efficiency, polarity markings; Calculation of line and phase voltages and currents; Calculation of power in a three phase system; Primary and Secondary current, voltage, turns ratio, power, efficiency; Auto transformers.	—	2	2	1
<b>3.16 Filters</b>	—	1	1	—



	LEVEL			
	A	B1	B2	B3
Operation, application and uses of the following filters: low pass, high pass, band pass, band stop.				
<b>3.17 AC Generators</b> Rotation of loop in a magnetic field and waveform produced; Operation and construction of revolving armature and revolving field type AC generators; Single phase, two phase and three phase alternators; Three phase star and delta connections advantages and uses; Permanent Magnet Generators.	—	2	2	1
<b>3.18 AC Motors</b> Construction, principles of operation and characteristics of: AC synchronous and induction motors both single and polyphase; Methods of speed control and direction of rotation; Methods of producing a rotating field: capacitor, inductor, shaded or split pole.	—	2	2	1

**MODULE 4. ELECTRONIC FUNDAMENTALS**
*Regulation (EU) No 1321/2014*

	LEVEL			
	A	B1	B2	B3
<b>4.1 Semiconductors</b> <b>4.1.1 Diodes</b> (a) Diode symbols; Diode characteristics and properties; Diodes in series and parallel; Main characteristics and use of silicon controlled rectifiers (thyristors), light emitting diode, photo conductive diode, varistor, rectifier diodes; Functional testing of diodes.	—	2	2	1
(b) Materials, electron configuration, electrical properties; P and N type materials: effects of impurities on conduction, majority and minority characters; PN junction in a semiconductor, development of a potential across a PN junction in unbiased, forward biased and reverse biased conditions; Diode parameters: peak inverse voltage, maximum forward current, temperature, frequency, leakage current, power dissipation; Operation and function of diodes in the following circuits: clippers, clampers, full and half wave rectifiers, bridge rectifiers, voltage doublers and triplers; Detailed operation and characteristics of the following devices: silicon controlled rectifier (thyristor), light	—	—	2	—

	LEVEL			
	A	B1	B2	B3
emitting diode, Schottky diode, photo conductive diode, varactor diode, varistor, rectifier diodes, Zener diode.				
<b>4.1.2 Transistors</b>				
(a) Transistor symbols; Component description and orientation; Transistor characteristics and properties.	—	1	2	1
(b) Construction and operation of PNP and NPN transistors; Base, collector and emitter configurations; Testing of transistors; Basic appreciation of other transistor types and their uses; Application of transistors: classes of amplifier (A, B, C); Simple circuits including: bias, decoupling, feedback and stabilisation; Multistage circuit principles: cascades, push-pull, oscillators, multivibrators, flip-flop circuits.	—	—	2	—
<b>4.1.3 Integrated Circuits</b>				
(a) Description and operation of logic circuits and linear circuits/operational amplifiers;	—	1	—	1
(b) Description and operation of logic circuits and linear circuits; Introduction to operation and function of an operational amplifier used as: integrator, differentiator, voltage follower, comparator; Operation and amplifier stages connecting methods: resistive capacitive, inductive (transformer), inductive resistive (IR), direct; Advantages and disadvantages of positive and negative feedback.	—	—	2	—
<b>4.2 Printed Circuit Boards</b>				
Description and use of printed circuit boards.	—	1	2	—
<b>4.3 Servomechanisms</b>				
(a) Understanding of the following terms: Open and closed loop systems, feedback, follow up, analogue transducers; Principles of operation and use of the following synchro system components/features: resolvers, differential, control and torque, transformers, inductance and capacitance transmitters;	—	1	—	—
(b) Understanding of the following terms: Open and closed loop, follow up, servomechanism, analogue, transducer, null, damping, feedback, deadband; Construction operation and use of the following synchro system components: resolvers, differential, control and	—	—	2	—

	LEVEL			
	A	B1	B2	B3
torque, E and I transformers, inductance transmitters, capacitance transmitters, synchronous transmitters; Servomechanism defects, reversal of synchro leads, hunting.				

**MODULE 5. DIGITAL TECHNIQUES/ELECTRONIC INSTRUMENT SYSTEMS**
*Regulation (EU) No 1321/2014*

	LEVEL				
	A	B1-1 B1-3	B1-2 B1-4	B2	B3
<b>5.1 Electronic Instrument Systems</b> Typical systems arrangements and cockpit layout of electronic instrument systems.	1	2	2	3	1
<b>5.2 Numbering Systems</b> Numbering systems: binary, octal and hexadecimal; Demonstration of conversions between the decimal and binary, octal and hexadecimal systems and vice versa.	—	1	—	2	—
<b>5.3 Data Conversion</b> Analogue Data, Digital Data; Operation and application of analogue to digital, and digital to analogue converters, inputs and outputs, limitations of various types.	—	1	—	2	—
<b>5.4 Data Buses</b> Operation of data buses in aircraft systems, including knowledge of ARINC and other specifications. Aircraft Network/Ethernet.	—	2	—	2	—
<b>5.5 Logic Circuits</b> (a) Identification of common logic gate symbols, tables and equivalent circuits; Applications used for aircraft systems, schematic diagrams. (b) Interpretation of logic diagrams.	— —	2 —	— —	2 2	1 —
<b>5.6 Basic Computer Structure</b> (a) Computer terminology (including bit, byte, software, hardware, CPU, IC, and various memory devices such as RAM, ROM, PROM); Computer technology (as applied in aircraft systems). (b) Computer related terminology; Operation, layout and interface of the major components in a micro computer including their associated bus systems; Information contained in single and multiaddress instruction words;	1 —	2 —	— —	— 2	— —

	LEVEL				
	A	B1-1 B1-3	B1-2 B1-4	B2	B3
Memory associated terms; Operation of typical memory devices; Operation, advantages and disadvantages of the various data storage systems.					
<b>5.7 Microprocessors</b> Functions performed and overall operation of a microprocessor; Basic operation of each of the following microprocessor elements: control and processing unit, clock, register, arithmetic logic unit.	—	—	—	2	—
<b>5.8 Integrated Circuits</b> Operation and use of encoders and decoders; Function of encoder types; Uses of medium, large and very large scale integration.	—	—	—	2	—
<b>5.9 Multiplexing</b> Operation, application and identification in logic diagrams of multiplexers and demultiplexers.	—	—	—	2	—
<b>5.10 Fibre Optics</b> Advantages and disadvantages of fibre optic data transmission over electrical wire propagation; Fibre optic data bus; Fibre optic related terms; Terminations; Couplers, control terminals, remote terminals; Application of fibre optics in aircraft systems.	—	1	1	2	—
<b>5.11 Electronic Displays</b> Principles of operation of common types of displays used in modern aircraft, including Cathode Ray Tubes, Light Emitting Diodes and Liquid Crystal Display.	—	2	1	2	1
<b>5.12 Electrostatic Sensitive Devices</b> Special handling of components sensitive to electrostatic discharges; Awareness of risks and possible damage, component and personnel anti-static protection devices.	1	2	2	2	1
<b>5.13 Software Management Control</b> Awareness of restrictions, airworthiness requirements and possible catastrophic effects of unapproved changes to software programmes.	—	2	1	2	1
<b>5.14 Electromagnetic Environment</b> Influence of the following phenomena on maintenance practices for electronic system: EMC-Electromagnetic Compatibility EMI-Electromagnetic Interference HIRF-High Intensity Radiated Field Lightning/lightning protection.	—	2	2	2	1
<b>5.15 Typical Electronic/Digital Aircraft Systems</b>	—	2	2	2	1

	LEVEL				
	A	B1-1 B1-3	B1-2 B1-4	B2	B3
General arrangement of typical electronic/digital aircraft systems and associated BITE (Built In Test Equipment) such as: (a) For B1 and B2 only: ACARS-ARINC Communication and Addressing and Reporting System EICAS-Engine Indication and Crew Alerting System FBW-Fly-by-Wire FMS-Flight Management System IRS-Inertial Reference System; (b) For B1, B2 and B3: ECAM-Electronic Centralised Aircraft Monitoring EFIS-Electronic Flight Instrument System GPS-Global Positioning System TCAS-Traffic Alert Collision Avoidance System Integrated Modular Avionics Cabin Systems Information Systems.					

**MODULE 6. MATERIALS AND HARDWARE**

Regulation (EU) No 1321/2014

	LEVEL			
	A	B1	B2	B3
<b>6.1 Aircraft Materials — Ferrous</b> (a) Characteristics, properties and identification of common alloy steels used in aircraft; Heat treatment and application of alloy steels.	1	2	1	2
(b) Testing of ferrous materials for hardness, tensile strength, fatigue strength and impact resistance.	—	1	1	1
<b>6.2 Aircraft Materials — Non-Ferrous</b> (a) Characteristics, properties and identification of common non-ferrous materials used in aircraft; Heat treatment and application of non-ferrous materials;	1	2	1	2
(b) Testing of non-ferrous material for hardness, tensile strength, fatigue strength and impact resistance.	—	1	1	1
<b>6.3 Aircraft Materials — Composite and Non-Metallic</b> <b>6.3.1 Composite and non-metallic other than wood and fabric</b>				

		LEVEL			
		A	B1	B2	B3
(a)	Characteristics, properties and identification of common composite and non-metallic materials, other than wood, used in aircraft;  Sealant and bonding agents;	1	2	2	2
(b)	The detection of defects/deterioration in composite and non-metallic material;  Repair of composite and non-metallic material.	1	2	—	2
<b>6.3.2 Wooden structures</b> Construction methods of wooden airframe structures; Characteristics, properties and types of wood and glue used in aeroplanes; Preservation and maintenance of wooden structure; Types of defects in wood material and wooden structures; The detection of defects in wooden structure; Repair of wooden structure.		1	2	—	2
<b>6.3.3 Fabric covering</b> Characteristics, properties and types of fabrics used in aeroplanes; Inspections methods for fabric; Types of defects in fabric; Repair of fabric covering.		1	2	—	2
<b>6.4 Corrosion</b>					
(a)	Chemical fundamentals;  Formation by, galvanic action process, microbiological, stress;	1	1	1	1
(b)	Types of corrosion and their identification;  Causes of corrosion;  Material types, susceptibility to corrosion.	2	3	2	2
<b>6.5 Fasteners</b>					
<b>6.5.1 Screw threads</b> Screw nomenclature; Thread forms, dimensions and tolerances for standard threads used in aircraft; Measuring screw threads.		2	2	2	2
<b>6.5.2 Bolts, studs and screws</b> Bolt types: specification, identification and marking of aircraft bolts, international standards; Nuts: self locking, anchor, standard types; Machine screws: aircraft specifications; Studs: types and uses, insertion and removal; Self tapping screws, dowels.		2	2	2	2
<b>6.5.3 Locking devices</b> Tab and spring washers, locking plates, split pins, pal-nuts, wire locking, quick release fasteners, keys, circlips, cotter pins.		2	2	2	2
<b>6.5.4 Aircraft rivets</b>		1	2	1	2

	LEVEL			
	A	B1	B2	B3
Types of solid and blind rivets: specifications and identification, heat treatment.				
<b>6.6 Pipes and Unions</b>				
(a) Identification of, and types of rigid and flexible pipes and their connectors used in aircraft;	2	2	2	2
(b) Standard unions for aircraft hydraulic, fuel, oil, pneumatic and air system pipes.	2	2	1	2
<b>6.7 Springs</b>				
Types of springs, materials, characteristics and applications.	—	2	1	1
<b>6.8 Bearings</b>				
Purpose of bearings, loads, material, construction; Types of bearings and their application.	1	2	2	1
<b>6.9 Transmissions</b>				
Gear types and their application; Gear ratios, reduction and multiplication gear systems, driven and driving gears, idler gears, mesh patterns; Belts and pulleys, chains and sprockets.	1	2	2	1
<b>6.10 Control Cables</b>				
Types of cables; End fittings, turnbuckles and compensation devices; Pulleys and cable system components; Bowden cables; Aircraft flexible control systems.	1	2	1	2
<b>6.11 Electrical Cables and Connectors</b>				
Cable types, construction and characteristics; High tension and co-axial cables; Crimping; Connector types, pins, plugs, sockets, insulators, current and voltage rating, coupling, identification codes.	1	2	2	2

MODULE 7A. MAINTENANCE PRACTICES

Regulation (EU) No 1321/2014

**Note:** This module does not apply to category B3. Relevant subject matters for category B3 are defined in module 7B.

	LEVEL		
	A	B1	B2
<b>7.1 Safety Precautions-Aircraft and Workshop</b>			
Aspects of safe working practices including precautions to take when working with electricity, gases especially oxygen, oils and chemicals. Also, instruction in the remedial action to be taken in the event of a fire or another accident with one or more of these hazards including knowledge on extinguishing agents.	3	3	3
<b>7.2 Workshop Practices</b>			
Care of tools, control of tools, use of workshop materials; Dimensions, allowances and tolerances, standards of workmanship; Calibration of tools and equipment, calibration standards.	3	3	3

	LEVEL		
	A	B1	B2
<b>7.3 Tools</b> Common hand tool types; Common power tool types; Operation and use of precision measuring tools; Lubrication equipment and methods. Operation, function and use of electrical general test equipment.	3	3	3
<b>7.4 Avionic General Test Equipment</b> Operation, function and use of avionic general test equipment.	—	2	3
<b>7.5 Engineering Drawings, Diagrams and Standards</b> Drawing types and diagrams, their symbols, dimensions, tolerances and projections; Identifying title block information; Microfilm, microfiche and computerised presentations; Specification 100 of the Air Transport Association (ATA) of America; Aeronautical and other applicable standards including ISO, AN, MS, NAS and MIL; Wiring diagrams and schematic diagrams.	1	2	2
<b>7.6 Fits and Clearances</b> Drill sizes for bolt holes, classes of fits; Common system of fits and clearances; Schedule of fits and clearances for aircraft and engines; Limits for bow, twist and wear; Standard methods for checking shafts, bearings and other parts.	1	2	1
<b>7.7 Electrical Wiring Interconnection System (EWIS)</b> Continuity, insulation and bonding techniques and testing; Use of crimp tools: hand and hydraulic operated; Testing of crimp joints; Connector pin removal and insertion; Co-axial cables: testing and installation precautions; Identification of wire types, their inspection criteria and damage tolerance. Wiring protection techniques: Cable looming and loom support, cable clamps, protective sleeving techniques including heat shrink wrapping, shielding; EWIS installations, inspection, repair, maintenance and cleanliness standards.	1	3	3
<b>7.8 Riveting</b> Riveted joints, rivet spacing and pitch; Tools used for riveting and dimpling; Inspection of riveted joints.	1	2	—
<b>7.9 Pipes and Hoses</b> Bending and belling/flaring aircraft pipes; Inspection and testing of aircraft pipes and hoses; Installation and clamping of pipes.	1	2	—
<b>7.10 Springs</b> Inspection and testing of springs.	1	2	—
<b>7.11 Bearings</b>	1	2	—



	LEVEL		
	A	B1	B2
Testing, cleaning and inspection of bearings; Lubrication requirements of bearings; Defects in bearings and their causes.			
<b>7.12 Transmissions</b> Inspection of gears, backlash; Inspection of belts and pulleys, chains and sprockets; Inspection of screw jacks, lever devices, push-pull rod systems.	1	2	—
<b>7.13 Control Cables</b> Swaging of end fittings; Inspection and testing of control cables; Bowden cables; aircraft flexible control systems.	1	2	—
<b>7.14 Material handling</b> <b>7.14.1 Sheet Metal</b> Marking out and calculation of bend allowance; Sheet metal working, including bending and forming; Inspection of sheet metal work.	—	2	—
<b>7.14.2 Composite and non-metallic</b> Bonding practices; Environmental conditions; Inspection methods.	—	2	—
<b>7.15 Welding, Brazing, Soldering and Bonding</b> (a) Soldering methods; inspection of soldered joints.	—	2	2
(b) Welding and brazing methods; Inspection of welded and brazed joints; Bonding methods and inspection of bonded joints.	—	2	—
<b>7.16 Aircraft Weight and Balance</b> (a) Centre of Gravity/Balance limits calculation: use of relevant documents;	—	2	2
(b) Preparation of aircraft for weighing; Aircraft weighing.	—	2	—
<b>7.17 Aircraft Handling and Storage</b> Aircraft taxiing/towing and associated safety precautions; Aircraft jacking, chocking, securing and associated safety precautions; Aircraft storage methods; Refuelling/defuelling procedures; De-icing/anti-icing procedures; Electrical, hydraulic and pneumatic ground supplies. Effects of environmental conditions on aircraft handling and operation.	2	2	2
<b>7.18 Disassembly, Inspection, Repair and Assembly Techniques</b> (a) Types of defects and visual inspection techniques; Corrosion removal, assessment and reprotection;	2	3	3
(b) General repair methods, Structural Repair Manual; Ageing, fatigue and corrosion control programmes;	—	2	—

		LEVEL		
		A	B1	B2
(c)	Non-destructive inspection techniques including, penetrant, radiographic, eddy current, ultrasonic and boroscope methods;	—	2	1
(d)	Disassembly and re-assembly techniques;	2	2	2
(e)	Trouble shooting techniques.	—	2	2
<b>7.19 Abnormal Events</b>				
(a)	Inspections following lightning strikes and HIRF penetration;	2	2	2
(b)	Inspections following abnormal events such as heavy landings and flight through turbulence.	2	2	—
<b>7.20 Maintenance Procedures</b>				
Maintenance planning;		1	2	2
Modification procedures;				
Stores procedures;				
Certification/release procedures;				
Interface with aircraft operation;				
Maintenance Inspection/Quality Control/Quality Assurance;				
Additional maintenance procedures;				
Control of life limited components.				

**MODULE 7B. MAINTENANCE PRACTICES**
*Regulation (EU) No 1321/2014*

**Note:** The scope of this module shall reflect the technology of aeroplanes relevant to the B3 category.

		LEVEL B3
<b>7.1 Safety Precautions-Aircraft and Workshop</b>	Aspects of safe working practices including precautions to take when working with electricity, gases especially oxygen, oils and chemicals. Also, instruction in the remedial action to be taken in the event of a fire or another accident with one or more of these hazards including knowledge on extinguishing agents.	3
<b>7.2 Workshop Practices</b>	Care of tools, control of tools, use of workshop materials; Dimensions, allowances and tolerances, standards of workmanship; Calibration of tools and equipment, calibration standards.	3
<b>7.3 Tools</b>	Common hand tool types; Common power tool types; Operation and use of precision measuring tools; Lubrication equipment and methods; Operation, function and use of electrical general test equipment.	3
<b>7.4 Avionic General Test Equipment</b>	Operation, function and use of avionic general test equipment.	—
<b>7.5 Engineering Drawings, Diagrams and Standards</b>		2

LEVEL B3	
Drawing types and diagrams, their symbols, dimensions, tolerances and projections; Identifying title block information; Microfilm, microfiche and computerised presentations; Specification 100 of the Air Transport Association (ATA) of America; Aeronautical and other applicable standards including ISO, AN, MS, NAS and MIL; Wiring diagrams and schematic diagrams.	
<b>7.6 Fits and Clearances</b> Drill sizes for bolt holes, classes of fits; Common system of fits and clearances; Schedule of fits and clearances for aircraft and engines; Limits for bow, twist and wear; Standard methods for checking shafts, bearings and other parts.	2
<b>7.7 Electrical Cables and Connectors</b> Continuity, insulation and bonding techniques and testing; Use of crimp tools: hand and hydraulic operated; Testing of crimp joints; Connector pin removal and insertion; Co-axial cables: testing and installation precautions; Wiring protection techniques: Cable looming and loom support, cable clamps, protective sleeving techniques including heat shrink wrapping, shielding.	2
<b>7.8 Riveting</b> Riveted joints, rivet spacing and pitch; Tools used for riveting and dimpling; Inspection of riveted joints.	2
<b>7.9 Pipes and Hoses</b> Bending and belling/flaring aircraft pipes; Inspection and testing of aircraft pipes and hoses; Installation and clamping of pipes.	2
<b>7.10 Springs</b> Inspection and testing of springs.	1
<b>7.11 Bearings</b> Testing, cleaning and inspection of bearings; Lubrication requirements of bearings; Defects in bearings and their causes.	2
<b>7.12 Transmissions</b> Inspection of gears, backlash; Inspection of belts and pulleys, chains and sprockets; Inspection of screw jacks, lever devices, push-pull rod systems.	2
<b>7.13 Control Cables</b> Swaging of end fittings; Inspection and testing of control cables; Bowden cables; aircraft flexible control systems.	2
<b>7.14 Material handling</b> <b>7.14.1 Sheet Metal</b> Marking out and calculation of bend allowance; Sheet metal working, including bending and forming; Inspection of sheet metal work.	2
<b>7.14.2 Composite and non-metallic</b>	2

LEVEL B3	
Bonding practices; Environmental conditions; Inspection methods.	
<b>7.15 Welding, Brazing, Soldering and Bonding</b>	
(a) Soldering methods; inspection of soldered joints;	2
(b) Welding and brazing methods; Inspection of welded and brazed joints; Bonding methods and inspection of bonded joints.	2
<b>7.16 Aircraft Weight and Balance</b>	
(a) Centre of Gravity/Balance limits calculation: use of relevant documents;	2
(b) Preparation of aircraft for weighing; Aircraft weighing.	2
<b>7.17 Aircraft Handling and Storage</b>	2
Aircraft taxiing/towing and associated safety precautions; Aircraft jacking, chocking, securing and associated safety precautions; Aircraft storage methods; Refuelling/defuelling procedures; De-icing/anti-icing procedures; Electrical, hydraulic and pneumatic ground supplies; Effects of environmental conditions on aircraft handling and operation.	
<b>7.18 Disassembly, Inspection, Repair and Assembly Techniques</b>	
(a) Types of defects and visual inspection techniques; Corrosion removal, assessment and re-protection;	3
(b) General repair methods, Structural Repair Manual; Ageing, fatigue and corrosion control programmes;	2
(c) Non-destructive inspection techniques including, penetrant, radiographic, eddy current, ultrasonic and boroscope methods;	2
(d) Disassembly and re-assembly techniques;	2
(e) Trouble shooting techniques.	2
<b>7.19 Abnormal Events</b>	
(a) Inspections following lightning strikes and HIRF penetration.	2
(b) Inspections following abnormal events such as heavy landings and flight through turbulence.	2
<b>7.20 Maintenance Procedures</b>	2
Maintenance planning; Modification procedures; Stores procedures; Certification/release procedures; Interface with aircraft operation; Maintenance Inspection/Quality Control/Quality Assurance; Additional maintenance procedures; Control of life limited components.	

MODULE 8. BASIC AERODYNAMICS

Regulation (EU) No 1321/2014

	LEVEL			
	A	B1	B2	B3
<b>8.1 Physics of the Atmosphere</b> International Standard Atmosphere (ISA), application to aerodynamics.	1	2	2	1
<b>8.2 Aerodynamics</b> Airflow around a body; Boundary layer, laminar and turbulent flow, free stream flow, relative airflow, upwash and downwash, vortices, stagnation; The terms: camber, chord, mean aerodynamic chord, profile (parasite) drag, induced drag, centre of pressure, angle of attack, wash in and wash out, fineness ratio, wing shape and aspect ratio; Thrust, Weight, Aerodynamic Resultant; Generation of Lift and Drag: Angle of Attack, Lift coefficient, Drag coefficient, polar curve, stall; Aerofoil contamination including ice, snow, frost.	1	2	2	1
<b>8.3 Theory of Flight</b> Relationship between lift, weight, thrust and drag; Glide ratio; Steady state flights, performance; Theory of the turn; Influence of load factor: stall, flight envelope and structural limitations; Lift augmentation.	1	2	2	1
<b>8.4 Flight Stability and Dynamics</b> Longitudinal, lateral and directional stability (active and passive).	1	2	2	1

MODULE 9A. HUMAN FACTORS

Regulation (EU) No 1321/2014

*Note:* This module does not apply to category B3. Relevant subject matters for category B3 are defined in module 9B.

	LEVEL		
	A	B1	B2
<b>9.1 General</b> The need to take human factors into account; Incidents attributable to human factors/human error; 'Murphy's' law.	1	2	2
<b>9.2 Human Performance and Limitations</b> Vision; Hearing; Information processing; Attention and perception; Memory; Claustrophobia and physical access.	1	2	2
<b>9.3 Social Psychology</b>	1	1	1

	LEVEL		
	A	B1	B2
Responsibility: individual and group; Motivation and de-motivation; Peer pressure; 'Culture' issues; Team working; Management, supervision and leadership.			
<b>9.4 Factors Affecting Performance</b> Fitness/health; Stress: domestic and work related; Time pressure and deadlines; Workload: overload and underload; Sleep and fatigue, shiftwork; Alcohol, medication, drug abuse.	2	2	2
<b>9.5 Physical Environment</b> Noise and fumes; Illumination; Climate and temperature; Motion and vibration; Working environment.	1	1	1
<b>9.6 Tasks</b> Physical work; Repetitive tasks; Visual inspection; Complex systems.	1	1	1
<b>9.7 Communication</b> Within and between teams; Work logging and recording; Keeping up to date, currency; Dissemination of information.	2	2	2
<b>9.8 Human Error</b> Error models and theories; Types of error in maintenance tasks; Implications of errors (i.e. accidents); Avoiding and managing errors.	1	2	2
<b>9.9 Hazards in the Workplace</b> Recognising and avoiding hazards; Dealing with emergencies.	1	2	2

**MODULE 9B. HUMAN FACTORS**
*Regulation (EU) No 1321/2014*

**Note:** The scope of this module shall reflect the less demanding environment of maintenance for B3 licence holders.

LEVEL B3	
<b>9.1 General</b>	2

LEVEL B3	
The need to take human factors into account; Incidents attributable to human factors/human error; 'Murphy's' law.	
<i>9.2 Human Performance and Limitations</i> Vision; Hearing; Information processing; Attention and perception; Memory; Claustrophobia and physical access.	2
<i>9.3 Social Psychology</i> Responsibility: individual and group; Motivation and de-motivation; Peer pressure; 'Culture' issues; Team working; Management, supervision and leadership.	1
<i>9.4 Factors Affecting Performance</i> Fitness/health; Stress: domestic and work related; Time pressure and deadlines; Workload: overload and underload; Sleep and fatigue, shiftwork; Alcohol, medication, drug abuse.	2
<i>9.5 Physical Environment</i> Noise and fumes; Illumination; Climate and temperature; Motion and vibration; Working environment.	1
<i>9.6 Tasks</i> Physical work; Repetitive tasks; Visual inspection; Complex systems.	1
<i>9.7 Communication</i> Within and between teams; Work logging and recording; Keeping up to date, currency; Dissemination of information.	2
<i>9.8 Human Error</i> Error models and theories; Types of error in maintenance tasks; Implications of errors (i.e. accidents); Avoiding and managing errors.	2
<i>9.9 Hazards in the Workplace</i> Recognising and avoiding hazards; Dealing with emergencies.	2

## MODULE 10. AVIATION LEGISLATION

Regulation (EU) No 1321/2014

	LEVEL			
	A	B1	B2	B3
<b>10.1 Regulatory Framework</b> Role of the International Civil Aviation Organisation; Role of the European Commission; Role of EASA; Role of the Member States and National Aviation Authorities; Regulation (EC) No 216/2008 and its implementing rules Regulations (EU) No 748/2012 and (EU) No 1321/2014; Relationship between the various Annexes (Parts) such as Part-21, <a href="#">Part-M</a> , <a href="#">Part-145</a> , <a href="#">Part-66</a> , <a href="#">Part-147</a> and Regulation (EU) No 965/2012.	1	1	1	1
<b>10.2 Certifying Staff — Maintenance</b> Detailed understanding of <a href="#">Part-66</a> .	2	2	2	2
<b>10.3 Approved Maintenance Organisations</b> Detailed understanding of <a href="#">Part-145</a> and <a href="#">Part-M Subpart F</a> .	2	2	2	2
<b>10.4 Air operations</b> General understanding of Regulation (EU) No 965/2012. Air Operators Certificates; Operator's responsibilities, in particular regarding continuing airworthiness and maintenance; Aircraft Maintenance Programme; MEL//CDL; Documents to be carried on board; Aircraft placarding (markings).	1	1	1	1
<b>10.5 Certification of aircraft, parts and appliances</b> (a) General General understanding of Part-21 and EASA certification specifications CS-23, 25, 27, 29.	—	1	1	1
(b) Documents Certificate of Airworthiness; restricted certificates of airworthiness and permit to fly; Certificate of Registration; Noise Certificate; Weight Schedule; Radio Station Licence and Approval.	—	2	2	2
<b>10.6 Continuing airworthiness</b> Detailed understanding of Part-21 provisions related to continuing airworthiness. Detailed understanding of <a href="#">Part-M</a> .	2	2	2	2
<b>10.7 Applicable National and International Requirements for (if not superseded by EU requirements).</b>				



		LEVEL			
		A	B1	B2	B3
(a)	Maintenance Programmes, Maintenance checks and inspections; Airworthiness Directives; Service Bulletins, manufacturers service information; Modifications and repairs; Maintenance documentation: maintenance manuals, structural repair manual, illustrated parts catalogue, etc.; Only for A to B2 licences: Master Minimum Equipment Lists, Minimum Equipment List, Dispatch Deviation Lists;	1	2	2	2
(b)	Continuing airworthiness; Minimum equipment requirements — Test flights; Only for B1 and B2 licences: ETOPS, maintenance and dispatch requirements; All Weather Operations, Category 2/3 operations.	—	1	1	1

**MODULE 11A. TURBINE AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS**
*Regulation (EU) No 1321/2014*

		LEVEL	
		A1	B1.1
<b>11.1 Theory of Flight</b>			
<b>11.1.1. Aeroplane Aerodynamics and Flight Controls</b>		1	2
Operation and effect of: - roll control: ailerons and spoilers, - pitch control: elevators, stabilators, variable incidence stabilisers and canards, - yaw control, rudder limiters; Control using elevons, ruddervators; High lift devices, slots, slats, flaps, flaperons; Drag inducing devices, spoilers, lift dumpers, speed brakes; Effects of wing fences, saw tooth leading edges; Boundary layer control using, vortex generators, stall wedges or leading edge devices; Operation and effect of trim tabs, balance and antibalance (leading) tabs, servo tabs, spring tabs, mass balance, control surface bias, aerodynamic balance panels.		—	—
<b>11.1.2. High Speed Flight</b>		1	2
Speed of sound, subsonic flight, transonic flight, supersonic flight; Mach number, critical Mach number, compressibility buffet, shock wave, aerodynamic heating, area rule; Factors affecting airflow in engine intakes of high speed aircraft; Effects of sweepback on critical Mach number.			
<b>11.2 Airframe Structures — General Concepts</b>			
(a)	Airworthiness requirements for structural strength;	2	2

	LEVEL	
	A1	B1.1
Structural classification, primary, secondary and tertiary; Fail safe, safe life, damage tolerance concepts; Zonal and station identification systems; Stress, strain, bending, compression, shear, torsion, tension, hoop stress, fatigue; Drains and ventilation provisions; System installation provisions; Lightning strike protection provision; Aircraft bonding.		
(b) Construction methods of: stressed skin fuselage, formers, stringers, longerons, bulkheads, frames, doublers, struts, ties, beams, floor structures, reinforcement, methods of skinning, anti-corrosive protection, wing, empennage and engine attachments; Structure assembly techniques: riveting, bolting, bonding; Methods of surface protection, such as chromating, anodising, painting; Surface cleaning; Airframe symmetry: methods of alignment and symmetry checks.	1	2
<b>11.3 Airframe Structures — Aeroplanes</b> <b>11.3.1 Fuselage (ATA 52/53/56)</b> Construction and pressurisation sealing; Wing, stabiliser, pylon and undercarriage attachments; Seat installation and cargo loading system; Doors and emergency exits: construction, mechanisms, operation and safety devices; Windows and windscreen construction and mechanisms.	1	2
<b>11.3.2 Wings (ATA 57)</b> Construction; Fuel storage; Landing gear, pylon, control surface and high lift/drag attachments.	1	2
<b>11.3.3 Stabilisers (ATA 55)</b> Construction; Control surface attachment.	1	2
<b>11.3.4 Flight Control Surfaces (ATA 55/57)</b> Construction and attachment; Balancing — mass and aerodynamic.	1	2
<b>11.3.5 Nacelles/Pylons (ATA 54)</b> Nacelles/Pylons: - Construction, - Firewalls, - Engine mounts.	1	2
<b>11.4 Air Conditioning and Cabin Pressurisation (ATA 21)</b> <b>11.4.1 Air supply</b> Sources of air supply including engine bleed, APU and ground cart.	1	2

	LEVEL	
	A1	B1.1
<b>11.4.2 Air Conditioning</b> Air conditioning systems; Air cycle and vapour cycle machines; Distribution systems; Flow, temperature and humidity control system.	1	3
<b>11.4.3 Pressurisation</b> Pressurisation systems; Control and indication including control and safety valves; Cabin pressure controllers.	1	3
<b>11.4.4 Safety and warning devices</b> Protection and warning devices.	1	3
<b>11.5 Instruments/Avionic Systems</b> <b>11.5.1 Instrument Systems (ATA 31)</b> Pitot static: altimeter, air speed indicator, vertical speed indicator; Gyroscopic: artificial horizon, attitude director, direction indicator, horizontal situation indicator, turn and slip indicator, turn coordinator; Compasses: direct reading, remote reading; Angle of attack indication, stall warning systems; Glass cockpit; Other aircraft system indication.	1	2
<b>11.5.2 Avionic Systems</b> Fundamentals of system lay-outs and operation of: - Auto Flight (ATA 22), - Communications (ATA 23), - Navigation Systems (ATA 34).	1	1
<b>11.6 Electrical Power (ATA 24)</b> Batteries Installation and Operation; DC power generation; AC power generation; Emergency power generation; Voltage regulation; Power distribution; Inverters, transformers, rectifiers; Circuit protection; External/Ground power.	—	—
<b>11.7 Equipment and Furnishings (ATA 25)</b> (a) Emergency equipment requirements; Seats, harnesses and belts.	1	3
(b) Cabin lay-out; Equipment lay-out; Cabin Furnishing installation; Cabin entertainment equipment; Galley installation; Cargo handling and retention equipment; Airstairs.	2	2
	1	1

	LEVEL	
	A1	B1.1
<b>11.8 Fire Protection (ATA 26)</b>		
(a) Fire and smoke detection and warning systems; Fire extinguishing systems; System tests;	1	3
(b) Portable fire extinguisher.	1	1
<b>11.9 Flight Controls (ATA 27)</b>	1	3
Primary controls: aileron, elevator, rudder, spoiler; Trim control; Active load control; High lift devices; Lift dump, speed brakes; System operation: manual, hydraulic, pneumatic, electrical, fly-by-wire; Artificial feel, Yaw damper, Mach trim, rudder limiter, gust lock systems; Balancing and rigging; Stall protection/warning system.		
<b>11.10 Fuel Systems (ATA 28)</b>	1	3
System lay-out; Fuel tanks; Supply systems; Dumping, venting and draining; Cross-feed and transfer; Indications and warnings; Refuelling and defuelling; Longitudinal balance fuel systems.		
<b>11.11 Hydraulic Power (ATA 29)</b>	1	3
System lay-out; Hydraulic fluids; Hydraulic reservoirs and accumulators; Pressure generation: electric, mechanical, pneumatic; Emergency pressure generation; Filters; Pressure Control; Power distribution; Indication and warning systems; Interface with other systems.		
<b>11.12 Ice and Rain Protection (ATA 30)</b>	1	3
Ice formation, classification and detection; Anti-icing systems: electrical, hot air and chemical; De-icing systems: electrical, hot air, pneumatic and chemical; Rain repellent; Probe and drain heating; Wiper systems.		
<b>11.13 Landing Gear (ATA 32)</b>	2	3

	LEVEL	
	A1	B1.1
Construction, shock absorbing; Extension and retraction systems: normal and emergency; Indications and warning; Wheels, brakes, antiskid and autobraking; Tyres; Steering; Air-ground sensing.		
<b>11.14 Lights (ATA 33)</b> External: navigation, anti collision, landing, taxiing, ice; Internal: cabin, cockpit, cargo; Emergency.	2	3
<b>11.15 Oxygen (ATA 35)</b> System lay-out: cockpit, cabin; Sources, storage, charging and distribution; Supply regulation; Indications and warnings.	1	3
<b>11.16 Pneumatic/Vacuum (ATA 36)</b> System lay-out; Sources: engine/APU, compressors, reservoirs, ground supply; Pressure control; Distribution; Indications and warnings; Interfaces with other systems.	1	3
<b>11.17 Water/Waste (ATA 38)</b> Water system lay-out, supply, distribution, servicing and draining; Toilet system lay-out, flushing and servicing; Corrosion aspects.	2	3
<b>11.18 On Board Maintenance Systems (ATA 45)</b> Central maintenance computers; Data loading system; Electronic library system; Printing; Structure monitoring (damage tolerance monitoring).	1	2
<b>11.19 Integrated Modular Avionics (ATA42)</b> Functions that may be typically integrated in the Integrated Modular Avionic (IMA) modules are, among others: Bleed Management, Air Pressure Control, Air Ventilation and Control, Avionics and Cockpit Ventilation Control, Temperature Control, Air Traffic Communication, Avionics Communication Router, Electrical Load Management, Circuit Breaker Monitoring, Electrical System BITE, Fuel Management, Braking Control, Steering Control, Landing Gear Extension and Retraction, Tyre Pressure Indication, Oleo Pressure Indication, Brake Temperature Monitoring, etc. Core System; Network Components.	1	2
<b>11.20 Cabin Systems (ATA44)</b>	1	2

	LEVEL	
	A1	B1.1
<p>The units and components which furnish a means of entertaining the passengers and providing communication within the aircraft (Cabin Intercommunication Data System) and between the aircraft cabin and ground stations (Cabin Network Service). Includes voice, data, music and video transmissions.</p> <p>The Cabin Intercommunication Data System provides an interface between cockpit/cabin crew and cabin systems. These systems support data exchange of the different related LRU's and they are typically operated via Flight Attendant Panels.</p> <p>The Cabin Network Service typically consists on a server, typically interfacing with, among others, the following systems:</p> <ul style="list-style-type: none"> <li>- Data/Radio Communication, In-Flight Entertainment System.</li> </ul> <p>The Cabin Network Service may host functions such as:</p> <ul style="list-style-type: none"> <li>- Access to pre-departure/departure reports,</li> <li>- E-mail/intranet/Internet access,</li> <li>- Passenger database;</li> </ul> <p>Cabin Core System; In-flight Entertainment System; External Communication System; Cabin Mass Memory System; Cabin Monitoring System; Miscellaneous Cabin System.</p>	—	—
<p><b>11.21 Information Systems (ATA46)</b></p> <p>The units and components which furnish a means of storing, updating and retrieving digital information traditionally provided on paper, microfilm or microfiche. Includes units that are dedicated to the information storage and retrieval function such as the electronic library mass storage and controller. Does not include units or components installed for other uses and shared with other systems, such as flight deck printer or general use display.</p> <p>Typical examples include Air Traffic and Information Management Systems and Network Server Systems</p> <p>Aircraft General Information System; Flight Deck Information System; Maintenance Information System; Passenger Cabin Information System; Miscellaneous Information System.</p>	1	2

MODULE 11B. PISTON AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS

Regulation (EU) No 1321/2014

**Note 1:** This module does not apply to category B3. Relevant subject matters for category B3 are defined in module 11C.

**Note 2:** The scope of this Module shall reflect the technology of aeroplanes pertinent to the A2 and B1.2 subcategory.

	LEVEL	
	A2	B1.2
<p><b>11.1 Theory of Flight</b></p> <p>11.1.1. Aeroplane Aerodynamics and Flight Controls</p>	1	2

	LEVEL	
	A2	B1.2
Operation and effect of: - roll control: ailerons and spoilers, - pitch control: elevators, stabilators, variable incidence stabilisers and canards, - yaw control, rudder limiters; Control using elevons, ruddervators; High lift devices, slots, slats, flaps, flaperons; Drag inducing devices, spoilers, lift dumpers, speed brakes; Effects of wing fences, saw tooth leading edges; Boundary layer control using, vortex generators, stall wedges or leading edge devices; Operation and effect of trim tabs, balance and antibalance (leading) tabs, servo tabs, spring tabs, mass balance, control surface bias, aerodynamic balance panels.	—	—
<i>11.1.2. High Speed Flight — N/A</i>	—	—
<i>11.2 Airframe Structures — General Concepts</i>		
(a) Airworthiness requirements for structural strength; Structural classification, primary, secondary and tertiary; Fail safe, safe life, damage tolerance concepts; Zonal and station identification systems; Stress, strain, bending, compression, shear, torsion, tension, hoop stress, fatigue; Drains and ventilation provisions; System installation provisions; Lightning strike protection provision; Aircraft bonding.	2	2
(b) Construction methods of: stressed skin fuselage, formers, stringers, longerons, bulkheads, frames, doublers, struts, ties, beams, floor structures, reinforcement, methods of skinning, anti-corrosive protection, wing, empennage and engine attachments; Structure assembly techniques: riveting, bolting, bonding; Methods of surface protection, such as chromating, anodising, painting; Surface cleaning; Airframe symmetry: methods of alignment and symmetry checks.	1	2
<i>11.3 Airframe Structures — Aeroplanes</i>		
<i>11.3.1 Fuselage (ATA 52/53/56)</i> Construction and pressurisation sealing; Wing, tail-plane, pylon and undercarriage attachments; Seat installation; Doors and emergency exits: construction and operation; Windows and windscreen attachment.	1	2
<i>11.3.2 Wings (ATA 57)</i> Construction; Fuel storage; Landing gear, pylon, control surface and high lift/drag attachments.	1	2

	LEVEL	
	A2	B1.2
<b>11.3.3 Stabilisers (ATA 55)</b> Construction; Control surface attachment.	1	2
<b>11.3.4 Flight Control Surfaces (ATA 55/57)</b> Construction and attachment; Balancing — mass and aerodynamic.	1	2
<b>11.3.5 Nacelles/Pylons (ATA 54)</b> Nacelles/Pylons: - Construction, - Firewalls, - Engine mounts.	1 —	2 —
<b>11.4 Air Conditioning and Cabin Pressurisation (ATA 21)</b> Pressurisation and air conditioning systems; Cabin pressure controllers, protection and warning devices; Heating systems.	1	3
<b>11.5 Instruments/Avionic Systems</b> <b>11.5.1 Instrument Systems (ATA 31)</b> Pitot static: altimeter, air speed indicator, vertical speed indicator; Gyroscopic: artificial horizon, attitude director, direction indicator, horizontal situation indicator, turn and slip indicator, turn coordinator; Compasses: direct reading, remote reading; Angle of attack indication, stall warning systems; Glass cockpit; Other aircraft system indication.	1	2
<b>11.5.2 Avionic Systems</b> Fundamentals of system lay-outs and operation of: - Auto Flight (ATA 22), - Communications (ATA 23), - Navigation Systems (ATA 34).	1 —	1 —
<b>11.6 Electrical Power (ATA 24)</b> Batteries Installation and Operation; DC power generation; Voltage regulation; Power distribution; Circuit protection; Inverters, transformers.	1	3
<b>11.7 Equipment and Furnishings (ATA 25)</b> (a) Emergency equipment requirements; Seats, harnesses and belts;	2	2
(b) Cabin lay-out; Equipment lay-out; Cabin Furnishing installation; Cabin entertainment equipment; Galley installation; Cargo handling and retention equipment;	1	1



	LEVEL	
	A2	B1.2
Airstairs.		
<b>11.8 Fire Protection (ATA 26)</b>		
(a) Fire and smoke detection and warning systems; Fire extinguishing systems; System tests;	1	3
(b) Portable fire extinguisher.	1	3
<b>11.9 Flight Controls (ATA 27)</b>	1	3
Primary controls: aileron, elevator, rudder; Trim tabs; High lift devices; System operation: manual; Gust locks; Balancing and rigging; Stall warning system.		
<b>11.10 Fuel Systems (ATA 28)</b>	1	3
System lay-out; Fuel tanks; Supply systems; Cross-feed and transfer; Indications and warnings; Refuelling and defuelling.		
<b>11.11 Hydraulic Power (ATA 29)</b>	1	3
System lay-out; Hydraulic fluids; Hydraulic reservoirs and accumulators; Pressure generation: electric, mechanical; Filters; Pressure Control; Power distribution; Indication and warning systems.		
<b>11.12 Ice and Rain Protection (ATA 30)</b>	1	3
Ice formation, classification and detection; De-icing systems: electrical, hot air, pneumatic and chemical; Probe and drain heating; Wiper systems.		
<b>11.13 Landing Gear (ATA 32)</b>	2	3
Construction, shock absorbing; Extension and retraction systems: normal and emergency; Indications and warning; Wheels, brakes, antiskid and autobraking; Tyres; Steering; Air-ground sensing.		
<b>11.14 Lights (ATA 33)</b>	2	3
External: navigation, anti collision, landing, taxiing, ice; Internal: cabin, cockpit, cargo; Emergency.		

	LEVEL	
	A2	B1.2
<b>11.15 Oxygen (ATA 35)</b> System lay-out: cockpit, cabin; Sources, storage, charging and distribution; Supply regulation; Indications and warnings.	1	3
<b>11.16 Pneumatic/Vacuum (ATA 36)</b> System lay-out; Sources: engine/APU, compressors, reservoirs, ground supply; Pressure control; Distribution; Indications and warnings; Interfaces with other systems.	1	3
<b>11.17 Water/Waste (ATA 38)</b> Water system lay-out, supply, distribution, servicing and draining; Toilet system lay-out, flushing and servicing; Corrosion aspects.	2	3

**MODULE 11C. PISTON AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS**
*Regulation (EU) No 1321/2014*

**Note:** The scope of this module shall reflect the technology of aeroplanes pertinent to the B3 category.

	LEVEL B3
<b>11.1 Theory of Flight</b> Aeroplane Aerodynamics and Flight Controls Operation and effect of: - roll control: ailerons, - pitch control: elevators, stabilators, variable incidence stabilisers and canards, - yaw control, rudder limiters; Control using elevons, ruddervators; High lift devices, slots, slats, flaps, flaperons; Drag inducing devices, lift dumpers, speed brakes; Effects of wing fences, saw tooth leading edges; Boundary layer control using, vortex generators, stall wedges or leading edge devices; Operation and effect of trim tabs, balance and anti-balance (leading) tabs, servo tabs, spring tabs, mass balance, control surface bias, aerodynamic balance panels.	1
<b>11.2 Airframe Structures — General Concepts</b> (a) Airworthiness requirements for structural strength; Structural classification, primary, secondary and tertiary; Fail safe, safe life, damage tolerance concepts; Zonal and station identification systems; Stress, strain, bending, compression, shear, torsion, tension, hoop stress, fatigue; Drains and ventilation provisions; System installation provisions; Lightning strike protection provision; Aircraft bonding;	2

	<b>LEVEL B3</b>
<p>(b) Construction methods of: stressed skin fuselage, formers, stringers, longerons, bulkheads, frames, doublers, struts, ties, beams, floor structures, reinforcement, methods of skinning, anti-corrosive protection, wing, empennage and engine attachments;</p> <p>Structure assembly techniques: riveting, bolting, bonding;</p> <p>Methods of surface protection, such as chromating, anodising, painting;</p> <p>Surface cleaning;</p> <p>Airframe symmetry: methods of alignment and symmetry checks.</p>	2
<p><b>11.3 Airframe Structures — Aeroplanes</b></p> <p><b>11.3.1 Fuselage (ATA 52/53/56)</b></p> <p>Construction;</p> <p>Wing, tail-plane, pylon and undercarriage attachments;</p> <p>Seat installation;</p> <p>Doors and emergency exits: construction and operation;</p> <p>Window and windscreen attachment.</p>	1
<p><b>11.3.2 Wings (ATA 57)</b></p> <p>Construction;</p> <p>Fuel storage;</p> <p>Landing gear, pylon, control surface and high lift/drag attachments.</p>	1
<p><b>11.3.3 Stabilisers (ATA 55)</b></p> <p>Construction;</p> <p>Control surface attachment.</p>	1
<p><b>11.3.4 Flight Control Surfaces (ATA 55/57)</b></p> <p>Construction and attachment;</p> <p>Balancing — mass and aerodynamic.</p>	1
<p><b>11.3.5 Nacelles/Pylons (ATA 54)</b></p> <p>Nacelles/Pylons:</p> <ul style="list-style-type: none"> <li>- Construction,</li> <li>- Firewalls,</li> <li>- Engine mounts.</li> </ul>	1
<p><b>11.4 Air Conditioning (ATA 21)</b></p> <p>Heating and ventilation systems.</p>	1
<p><b>11.5 Instruments/Avionic Systems</b></p> <p><b>11.5.1 Instrument Systems (ATA 31)</b></p> <p>Pitot static: altimeter, air speed indicator, vertical speed indicator;</p> <p>Gyroscopic: artificial horizon, attitude director, direction indicator, horizontal situation indicator, turn and slip indicator, turn coordinator;</p> <p>Compasses: direct reading, remote reading;</p> <p>Angle of attack indication, stall warning systems;</p> <p>Glass cockpit;</p> <p>Other aircraft system indication.</p>	1
<p><b>11.5.2 Avionic Systems</b></p> <p>Fundamentals of system lay-outs and operation of:</p> <ul style="list-style-type: none"> <li>- Auto Flight (ATA 22),</li> <li>- Communications (ATA 23),</li> <li>- Navigation Systems (ATA 34).</li> </ul>	1
<p><b>11.6 Electrical Power (ATA 24)</b></p>	2

	LEVEL B3
Batteries Installation and Operation; DC power generation; Voltage regulation; Power distribution; Circuit protection; Inverters, transformers.	
<i>11.7 Equipment and Furnishings (ATA 25)</i> Emergency equipment requirements; Seats, harnesses and belts.	2
<i>11.8 Fire Protection (ATA 26)</i> Portable fire extinguisher.	2
<i>11.9 Flight Controls (ATA 27)</i> Primary controls: aileron, elevator, rudder; Trim tabs; High lift devices; System operation: manual; Gust locks; Balancing and rigging; Stall warning system.	3
<i>11.10 Fuel Systems (ATA 28)</i> System lay-out; Fuel tanks; Supply systems; Cross-feed and transfer; Indications and warnings; Refuelling and defuelling.	2
<i>11.11 Hydraulic Power (ATA 29)</i> System lay-out; Hydraulic fluids; Hydraulic reservoirs and accumulators; Pressure generation: electric, mechanical; Filters; Pressure Control; Power distribution; Indication and warning systems.	2
<i>11.12 Ice and Rain Protection (ATA 30)</i> Ice formation, classification and detection; De-icing systems: electrical, hot air, pneumatic and chemical; Probe and drain heating; Wiper systems.	1
<i>11.13 Landing Gear (ATA 32)</i> Construction, shock absorbing; Extension and retraction systems: normal and emergency; Indications and warning; Wheels, brakes, antiskid and autobraking; Tyres; Steering.	2
<i>11.14 Lights (ATA 33)</i>	2

LEVEL B3	
External: navigation, anti collision, landing, taxiing, ice; Internal: cabin, cockpit, cargo; Emergency.	
11.15 Oxygen (ATA 35) System lay-out: cockpit, cabin; Sources, storage, charging and distribution; Supply regulation; Indications and warnings.	2
11.16 Pneumatic/Vacuum (ATA 36) System lay-out; Sources: engine/APU, compressors, reservoirs, ground supply; Pressure and vacuum pumps Pressure control; Distribution; Indications and warnings; Interfaces with other systems.	2

**MODULE 12. HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS**

Regulation (EU) No 1321/2014

	LEVEL	
	A3	B1.3
	A4	B1.4
12.1 Theory of Flight — Rotary Wing Aerodynamics Terminology; Effects of gyroscopic precession; Torque reaction and directional control; Dissymmetry of lift, Blade tip stall; Translating tendency and its correction; Coriolis effect and compensation; Vortex ring state, power settling, overpitching; Auto-rotation; Ground effect.	1	2
12.2 Flight Control Systems Cyclic control; Collective control; Swashplate; Yaw control: Anti-Torque Control, Tail rotor, bleed air; Main Rotor Head: Design and Operation features; Blade Dampers: Function and construction; Rotor Blades: Main and tail rotor blade construction and attachment; Trim control, fixed and adjustable stabilisers; System operation: manual, hydraulic, electrical and fly-by-wire; Artificial feel; Balancing and rigging.	2	3
12.3 Blade Tracking and Vibration Analysis Rotor alignment; Main and tail rotor tracking; Static and dynamic balancing; Vibration types, vibration reduction methods; Ground resonance.	1	3

	LEVEL	
	A3	B1.3
	A4	B1.4
<b>12.4 Transmission</b> Gear boxes, main and tail rotors; Clutches, free wheel units and rotor brake; Tail rotor drive shafts, flexible couplings, bearings, vibration dampers and bearing hangers.	1	3
<b>12.5 Airframe Structures</b> (a) Airworthiness requirements for structural strength; Structural classification, primary, secondary and tertiary; Fail safe, safe life, damage tolerance concepts; Zonal and station identification systems; Stress, strain, bending, compression, shear, torsion, tension, hoop stress, fatigue; Drains and ventilation provisions; System installation provisions; Lightning strike protection provision;	2	2
(b) Construction methods of: stressed skin fuselage, formers, stringers, longerons, bulkheads, frames, doublers, struts, ties, beams, floor structures, reinforcement, methods of skinning and anti-corrosive protection. Pylon, stabiliser and undercarriage attachments; Seat installation; Doors: construction, mechanisms, operation and safety devices; Windows and windscreen construction; Fuel storage; Firewalls; Engine mounts; Structure assembly techniques: riveting, bolting, bonding; Methods of surface protection, such as chromating, anodising, painting; Surface cleaning. Airframe symmetry: methods of alignment and symmetry checks.	1	2
<b>12.6 Air Conditioning (ATA 21)</b> <b>12.6.1 Air supply</b> Sources of air supply including engine bleed and ground cart.	1	2
<b>12.6.2 Air conditioning</b> Air conditioning systems; Distribution systems; Flow and temperature control systems; Protection and warning devices.	1	3
<b>12.7 Instruments/Avionic Systems</b> <b>12.7.1 Instrument Systems (ATA 31)</b>	1	2

	LEVEL	
	A3	B1.3
	A4	B1.4
Pitot static: altimeter, air speed indicator, vertical speed indicator; Gyroscopic: artificial horizon, attitude director, direction indicator, horizontal situation indicator, turn and slip indicator, turn coordinator; Compasses: direct reading, remote reading; Vibration indicating systems — HUMS; Glass cockpit; Other aircraft system indication.		
<b>12.7.2 Avionic Systems</b> Fundamentals of system layouts and operation of: Auto Flight (ATA 22); Communications (ATA 23); Navigation Systems (ATA 34).	1	1
<b>12.8 Electrical Power (ATA 24)</b> Batteries Installation and Operation; DC power generation, AC power generation; Emergency power generation; Voltage regulation, Circuit protection. Power distribution; Inverters, transformers, rectifiers; External/Ground power.	1	3
<b>12.9 Equipment and Furnishings (ATA 25)</b> (a) Emergency equipment requirements; Seats, harnesses and belts; Lifting systems; (b) Emergency flotation systems; Cabin lay-out, cargo retention; Equipment lay-out; Cabin Furnishing Installation.	2	2
	1	1
<b>12.10 Fire Protection (ATA 26)</b> Fire and smoke detection and warning systems; Fire extinguishing systems; System tests.	1	3
<b>12.11 Fuel Systems (ATA 28)</b> System lay-out; Fuel tanks; Supply systems; Dumping, venting and draining; Cross-feed and transfer; Indications and warnings; Refuelling and defuelling.	1	3
<b>12.12 Hydraulic Power (ATA 29)</b>	1	3

	LEVEL	
	A3	B1.3
	A4	B1.4
System lay-out; Hydraulic fluids; Hydraulic reservoirs and accumulators; Pressure generation: electric, mechanical, pneumatic; Emergency pressure generation; Filters; Pressure Control; Power distribution; Indication and warning systems; Interface with other systems.		
<b>12.13 Ice and Rain Protection (ATA 30)</b> Ice formation, classification and detection; Anti-icing and De-icing systems: electrical, hot air and chemical; Rain repellent and removal; Probe and drain heating; Wiper system.	1	3
<b>12.14 Landing Gear (ATA 32)</b> Construction, shock absorbing; Extension and retraction systems: normal and emergency; Indications and warning; Wheels, Tyres, brakes; Steering; Air-ground sensing; Skids, floats.	2	3
<b>12.15 Lights (ATA 33)</b> External: navigation, landing, taxiing, ice; Internal: cabin, cockpit, cargo; Emergency.	2	3
<b>12.16 Pneumatic/Vacuum (ATA 36)</b> System lay-out; Sources: engine/APU, compressors, reservoirs, ground supply; Pressure control; Distribution; Indications and warnings; Interfaces with other systems.	1	3
<b>12.17 Integrated Modular Avionics (ATA42)</b> Functions that may be typically integrated in the Integrated Modular Avionic (IMA) modules are, among others: Bleed Management, Air Pressure Control, Air Ventilation and Control, Avionics and Cockpit Ventilation Control, Temperature Control, Air Traffic Communication, Avionics Communication Router, Electrical Load Management, Circuit Breaker Monitoring, Electrical System BITE, Fuel Management, Braking Control, Steering Control, Landing Gear Extension and Retraction, Tyre Pressure Indication, Oleo Pressure Indication, Brake Temperature Monitoring, etc. Core System; Network Components.	1	2
<b>12.18 On Board Maintenance Systems (ATA45)</b>	1	2



	LEVEL	
	A3	B1.3
	A4	B1.4
Central maintenance computers; Data loading system; Electronic library system; Printing; Structure monitoring (damage tolerance monitoring).		
<b>12.19 Information Systems (ATA46)</b> The units and components which furnish a means of storing, updating and retrieving digital information traditionally provided on paper, microfilm or microfiche. Includes units that are dedicated to the information storage and retrieval function such as the electronic library mass storage and controller. Does not include units or components installed for other uses and shared with other systems, such as flight deck printer or general use display. Typical examples include Air Traffic and Information Management Systems and Network Server Systems. Aircraft General Information System; Flight Deck Information System; Maintenance Information System; Passenger Cabin Information System; Miscellaneous Information System.	1	2

## MODULE 13. AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS

Regulation (EU) No 1321/2014

	LEVEL B2
<b>13.1 Theory of Flight</b>	
(a) Aeroplane Aerodynamics and Flight Controls	1
Operation and effect of:	—
- roll control: ailerons and spoilers,	
- pitch control: elevators, stabilators, variable incidence stabilisers and canards,	
- yaw control, rudder limiters;	
Control using elevons, ruddervators;	
High lift devices: slots, slats, flaps;	
Drag inducing devices: spoilers, lift dumpers, speed brakes;	
Operation and effect of trim tabs, servo tabs, control surface bias;	
(b) High Speed Flight	1
Speed of sound, subsonic flight, transonic flight, supersonic flight;	
Mach number, critical Mach number;	
(c) Rotary Wing Aerodynamics	1
Terminology;	
Operation and effect of cyclic, collective and anti-torque controls.	
<b>13.2 Structures — General Concepts</b>	
(a) Fundamentals of structural systems;	1

	<b>LEVEL B2</b>
(b) Zonal and station identification systems; Electrical bonding; Lightning strike protection provision.	2
<b>13.3 Autoflight (ATA 22)</b> Fundamentals of automatic flight control including working principles and current terminology; Command signal processing; Modes of operation: roll, pitch and yaw channels; Yaw dampers; Stability Augmentation System in helicopters; Automatic trim control; Autopilot navigation aids interface; Autothrottle systems; Automatic Landing Systems: principles and categories, modes of operation, approach, glideslope, land, go-around, system monitors and failure conditions.	3
<b>13.4 Communication/Navigation (ATA 23/34)</b> Fundamentals of radio wave propagation, antennas, transmission lines, communication, receiver and transmitter; Working principles of following systems: <ul style="list-style-type: none"> <li>- Very High Frequency (VHF) communication,</li> <li>- High Frequency (HF) communication,</li> <li>- Audio,</li> <li>- Emergency Locator Transmitters,</li> <li>- Cockpit Voice Recorder,</li> <li>- Very High Frequency omnidirectional range (VOR),</li> <li>- Automatic Direction Finding (ADF),</li> <li>- Instrument Landing System (ILS),</li> <li>- Microwave Landing System (MLS),</li> <li>- Flight Director systems, Distance Measuring Equipment (DME),</li> <li>- Very Low Frequency and hyperbolic navigation (VLF/Omega),</li> <li>- Doppler navigation,</li> <li>- Area navigation, RNAV systems,</li> <li>- Flight Management Systems,</li> <li>- Global Positioning System (GPS), Global Navigation Satellite Systems (GNSS),</li> <li>- Inertial Navigation System,</li> <li>- Air Traffic Control transponder, secondary surveillance radar,</li> <li>- Traffic Alert and Collision Avoidance System (TCAS),</li> <li>- Weather avoidance radar,</li> <li>- Radio altimeter,</li> <li>- ARINC communication and reporting.</li> </ul>	3
<b>13.5 Electrical Power (ATA 24)</b> Batteries Installation and Operation; DC power generation; AC power generation; Emergency power generation; Voltage regulation; Power distribution; Inverters, transformers, rectifiers; Circuit protection; External/Ground power.	3
<b>13.6 Equipment and Furnishings (ATA 25)</b>	3

	LEVEL B2
Electronic emergency equipment requirements; Cabin entertainment equipment.	
<b>13.7 Flight Controls (ATA 27)</b>	
(a) Primary controls: aileron, elevator, rudder, spoiler;  Trim control;  Active load control;  High lift devices;  Lift dump, speed brakes;  System operation: manual, hydraulic, pneumatic;  Artificial feel, Yaw damper, Mach trim, rudder limiter, gust locks.  Stall protection systems;	2
(b) System operation: electrical, fly-by-wire.	3
<b>13.8 Instruments (ATA 31)</b> Classification; Atmosphere; Terminology; Pressure measuring devices and systems; Pitot static systems; Altimeters; Vertical speed indicators; Airspeed indicators; Machmeters; Altitude reporting/alerting systems; Air data computers; Instrument pneumatic systems; Direct reading pressure and temperature gauges; Temperature indicating systems; Fuel quantity indicating systems; Gyroscopic principles; Artificial horizons; Slip indicators; Directional gyros; Ground Proximity Warning Systems; Compass systems; Flight Data Recording systems; Electronic Flight Instrument Systems; Instrument warning systems including master warning systems and centralised warning panels; Stall warning systems and angle of attack indicating systems; Vibration measurement and indication; Glass cockpit.	3
<b>13.9 Lights (ATA 33)</b> External: navigation, landing, taxiing, ice; Internal: cabin, cockpit, cargo; Emergency.	3
<b>13.10 On Board Maintenance Systems (ATA 45)</b>	3

	LEVEL B2
Central maintenance computers; Data loading system; Electronic library system; Printing; Structure monitoring (damage tolerance monitoring).	
<b>13.11 Air Conditioning and Cabin Pressurisation (ATA21)</b>	
<b>13.11.1. Air supply</b>	2
Sources of air supply including engine bleed, APU and ground cart;	
<b>13.11.2. Air Conditioning</b>	2
Air conditioning systems;	3
Air cycle and vapour cycle machines;	1
Distribution systems;	3
Flow, temperature and humidity control system.	
<b>13.11.3. Pressurisation</b>	3
Pressurisation systems;	
Control and indication including control and safety valves;	
Cabin pressure controllers.	
<b>13.11.4. Safety and warning devices</b>	3
Protection and warning devices.	
<b>13.12 Fire Protection (ATA 26)</b>	
(a) Fire and smoke detection and warning systems;	3
Fire extinguishing systems;	
System tests;	
(b) Portable fire extinguisher.	1
<b>13.13 Fuel Systems (ATA 28)</b>	
System lay-out;	1
Fuel tanks;	1
Supply systems;	1
Dumping, venting and draining;	1
Cross-feed and transfer;	2
Indications and warnings;	3
Refuelling and defuelling;	2
Longitudinal balance fuel systems.	3
<b>13.14 Hydraulic Power (ATA 29)</b>	
System lay-out;	1
Hydraulic fluids;	1
Hydraulic reservoirs and accumulators;	1
Pressure generation: electrical, mechanical, pneumatic;	3
Emergency pressure generation;	3
Filters;	1
Pressure control;	3
Power distribution;	1
Indication and warning systems;	3
Interface with other systems.	3
<b>13.15 Ice and Rain Protection (ATA 30)</b>	

	LEVEL B2
Ice formation, classification and detection;	2
Anti-icing systems: electrical, hot air and chemical;	2
De-icing systems: electrical, hot air, pneumatic, chemical;	3
Rain repellent;	1
Probe and drain heating;	3
Wiper Systems.	1
<b>13.16 Landing Gear (ATA 32)</b>	
Construction, shock absorbing;	1
Extension and retraction systems: normal and emergency;	3
Indications and warnings;	3
Wheels, brakes, antiskid and autobraking;	3
Tyres;	1
Steering;	3
Air-ground sensing.	3
<b>13.17 Oxygen (ATA 35)</b>	
System lay-out: cockpit, cabin;	3
Sources, storage, charging and distribution;	3
Supply regulation;	3
Indications and warnings.	3
<b>13.18 Pneumatic/Vacuum (ATA 36)</b>	
System lay-out;	2
Sources: engine/APU, compressors, reservoirs, ground supply;	2
Pressure control;	3
Distribution;	1
Indications and warnings;	3
Interfaces with other systems.	3
<b>13.19 Water/Waste (ATA 38)</b>	2
Water system lay-out, supply, distribution, servicing and draining;	
Toilet system lay-out, flushing and servicing.	
<b>13.20 Integrated Modular Avionics (ATA42)</b>	3
Functions that may be typically integrated in the Integrated Modular Avionic (IMA) modules are, among others: Bleed Management, Air Pressure Control, Air Ventilation and Control, Avionics and Cockpit Ventilation Control, Temperature Control, Air Traffic Communication, Avionics Communication Router, Electrical Load Management, Circuit Breaker Monitoring, Electrical System BITE, Fuel Management, Braking Control, Steering Control, Landing Gear Extension and Retraction, Tyre Pressure Indication, Oleo Pressure Indication, Brake Temperature Monitoring, etc.;	
Core System;	
Network Components.	
<b>13.21 Cabin Systems (ATA44)</b>	3
The units and components which furnish a means of entertaining the passengers and providing communication within the aircraft (Cabin Intercommunication Data System) and between the aircraft cabin and ground stations (Cabin Network Service). Includes voice, data, music and video transmissions. The Cabin Intercommunication Data System provides an interface between cockpit/cabin crew and cabin systems. These systems support data exchange of the different related LRU's and they are typically operated via Flight Attendant Panels.	

LEVEL B2	
<p>The Cabin Network Service typically consists on a server, typically interfacing with, among others, the following systems:</p> <ul style="list-style-type: none"> <li>- Data/Radio Communication, In-Flight Entertainment System.</li> </ul> <p>The Cabin Network Service may host functions such as:</p> <ul style="list-style-type: none"> <li>- Access to pre-departure/departure reports,</li> <li>- E-mail/intranet/Internet access,</li> <li>- Passenger database;</li> </ul> <p>Cabin Core System; In-flight Entertainment System; External Communication System; Cabin Mass Memory System; Cabin Monitoring System; Miscellaneous Cabin System.</p>	—
<p>13.22 Information Systems (ATA46)</p> <p>The units and components which furnish a means of storing, updating and retrieving digital information traditionally provided on paper, microfilm or microfiche. Includes units that are dedicated to the information storage and retrieval function such as the electronic library mass storage and controller. Does not include units or components installed for other uses and shared with other systems, such as flight deck printer or general use display.</p> <p>Typical examples include Air Traffic and Information Management Systems and Network Server Systems.</p> <p>Aircraft General Information System; Flight Deck Information System; Maintenance Information System; Passenger Cabin Information System; Miscellaneous Information System.</p>	3

## MODULE 14. PROPULSION

Regulation (EU) No 1321/2014

LEVEL B2	
<p>14.1 Turbine Engines</p> <p>(a) Constructional arrangement and operation of turbojet, turbofan, turboshaft and turbopropeller engines;</p> <p>(b) Electronic Engine control and fuel metering systems (FADEC).</p>	1
<p>14.2 Engine Indicating Systems</p> <p>Exhaust gas temperature/Interstage turbine temperature systems; Engine speed; Engine Thrust Indication: Engine Pressure Ratio, engine turbine discharge pressure or jet pipe pressure systems; Oil pressure and temperature; Fuel pressure, temperature and flow; Manifold pressure; Engine torque; Propeller speed.</p>	2
<p>14.3 Starting and Ignition Systems</p> <p>Operation of engine start systems and components; Ignition systems and components; Maintenance safety requirements.</p>	2

**MODULE 15. GAS TURBINE ENGINE**
*Regulation (EU) No 1321/2014*

	LEVEL	
	A	B1
<b>15.1 Fundamentals</b> Potential energy, kinetic energy, Newton's laws of motion, Brayton cycle; The relationship between force, work, power, energy, velocity, acceleration; Constructional arrangement and operation of turbojet, turbofan, turboshaft, turboprop.	1	2
<b>15.2 Engine Performance</b> Gross thrust, net thrust, choked nozzle thrust, thrust distribution, resultant thrust, thrust horsepower, equivalent shaft horsepower, specific fuel consumption; Engine efficiencies; By-pass ratio and engine pressure ratio; Pressure, temperature and velocity of the gas flow; Engine ratings, static thrust, influence of speed, altitude and hot climate, flat rating, limitations.	—	2
<b>15.3 Inlet</b> Compressor inlet ducts Effects of various inlet configurations; Ice protection.	2	2
<b>15.4 Compressors</b> Axial and centrifugal types; Constructional features and operating principles and applications; Fan balancing; Operation: Causes and effects of compressor stall and surge; Methods of air flow control: bleed valves, variable inlet guide vanes, variable stator vanes, rotating stator blades; Compressor ratio.	1	2
<b>15.5 Combustion Section</b> Constructional features and principles of operation.	1	2
<b>15.6 Turbine Section</b> Operation and characteristics of different turbine blade types; Blade to disk attachment; Nozzle guide vanes; Causes and effects of turbine blade stress and creep.	2	2
<b>15.7 Exhaust</b> Constructional features and principles of operation; Convergent, divergent and variable area nozzles; Engine noise reduction; Thrust reversers.	1	2
<b>15.8 Bearings and Seals</b> Constructional features and principles of operation.	—	2
<b>15.9 Lubricants and Fuels</b> Properties and specifications; Fuel additives; Safety precautions.	1	2

	LEVEL	
	A	B1
<b>15.10 Lubrication Systems</b> System operation/lay-out and components.	1	2
<b>15.11 Fuel Systems</b> Operation of engine control and fuel metering systems including electronic engine control (FADEC); Systems lay-out and components.	1	2
<b>15.12 Air Systems</b> Operation of engine air distribution and anti-ice control systems, including internal cooling, sealing and external air services.	1	2
<b>15.13 Starting and Ignition Systems</b> Operation of engine start systems and components; Ignition systems and components; Maintenance safety requirements.	1	2
<b>15.14 Engine Indication Systems</b> Exhaust Gas Temperature/Interstage Turbine Temperature; Engine Thrust Indication: Engine Pressure Ratio, engine turbine discharge pressure or jet pipe pressure systems; Oil pressure and temperature; Fuel pressure and flow; Engine speed; Vibration measurement and indication; Torque; Power.	1	2
<b>15.15 Power Augmentation Systems</b> Operation and applications; Water injection, water methanol; Afterburner systems.	—	1
<b>15.16 Turbo-prop Engines</b> Gas coupled/free turbine and gear coupled turbines; Reduction gears; Integrated engine and propeller controls; Overspeed safety devices.	1	2
<b>15.17 Turbo-shaft Engines</b> Arrangements, drive systems, reduction gearing, couplings, control systems.	1	2
<b>15.18 Auxiliary Power Units (APUs)</b> Purpose, operation, protective systems.	1	2
<b>15.19 Powerplant Installation</b> Configuration of firewalls, cowlings, acoustic panels, engine mounts, anti-vibration mounts, hoses, pipes, feeders, connectors, wiring looms, control cables and rods, lifting points and drains.	1	2
<b>15.20 Fire Protection Systems</b> Operation of detection and extinguishing systems.	1	2
<b>15.21 Engine Monitoring and Ground Operation</b>	1	3



	LEVEL	
	A	B1
Procedures for starting and ground run-up; Interpretation of engine power output and parameters; Trend (including oil analysis, vibration and boroscope) monitoring; Inspection of engine and components to criteria, tolerances and data specified by engine manufacturer; Compressor washing/cleaning; Foreign Object Damage.		
<b>15.22 Engine Storage and Preservation</b> Preservation and depreservation for the engine and accessories/systems.	—	2

**MODULE 16. PISTON ENGINE**

Regulation (EU) No 1321/2014

	LEVEL		
	A	B1	B3
<b>16.1 Fundamentals</b> Mechanical, thermal and volumetric efficiencies; Operating principles — 2 stroke, 4 stroke, Otto and Diesel; Piston displacement and compression ratio; Engine configuration and firing order.	1	2	2
<b>16.2 Engine Performance</b> Power calculation and measurement; Factors affecting engine power; Mixtures/leaning, pre-ignition.	1	2	2
<b>16.3 Engine Construction</b> Crank case, crank shaft, cam shafts, sumps; Accessory gearbox; Cylinder and piston assemblies; Connecting rods, inlet and exhaust manifolds; Valve mechanisms; Propeller reduction gearboxes.	1	2	2
<b>16.4 Engine Fuel Systems</b> <b>16.4.1 Carburettors</b> Types, construction and principles of operation; Icing and heating.	1	2	2
<b>16.4.2 Fuel injection systems</b> Types, construction and principles of operation.	1	2	2
<b>16.4.3 Electronic engine control</b> Operation of engine control and fuel metering systems including electronic engine control (FADEC); Systems lay-out and components.	1	2	2
<b>16.5 Starting and Ignition Systems</b> Starting systems, pre-heat systems; Magneto types, construction and principles of operation; Ignition harnesses, spark plugs; Low and high tension systems.	1	2	2

	LEVEL		
	A	B1	B3
<b>16.6 Induction, Exhaust and Cooling Systems</b> Construction and operation of: induction systems including alternate air systems; Exhaust systems, engine cooling systems — air and liquid.	1	2	2
<b>16.7 Supercharging/Turbocharging</b> Principles and purpose of supercharging and its effects on engine parameters; Construction and operation of supercharging/turbocharging systems; System terminology; Control systems; System protection.	1	2	2
<b>16.8 Lubricants and Fuels</b> Properties and specifications; Fuel additives; Safety precautions.	1	2	2
<b>16.9 Lubrication Systems</b> System operation/lay-out and components.	1	2	2
<b>16.10 Engine Indication Systems</b> Engine speed; Cylinder head temperature; Coolant temperature; Oil pressure and temperature; Exhaust Gas Temperature; Fuel pressure and flow; Manifold pressure.	1	2	2
<b>16.11 Powerplant Installation</b> Configuration of firewalls, cowlings, acoustic panels, engine mounts, anti-vibration mounts, hoses, pipes, feeders, connectors, wiring looms, control cables and rods, lifting points and drains.	1	2	2
<b>16.12 Engine Monitoring and Ground Operation</b> Procedures for starting and ground run-up; Interpretation of engine power output and parameters; Inspection of engine and components: criteria, tolerances, and data specified by engine manufacturer.	1	3	2
<b>16.13 Engine Storage and Preservation</b> Preservation and depreservation for the engine and accessories/systems.	—	2	1

**MODULE 17A. PROPELLER**
*Regulation (EU) No 1321/2014*

**Note:** This module does not apply to category B3. Relevant subject matters for category B3 are defined in module 17B.

	LEVEL	
	A	B1
<b>17.1 Fundamentals</b>	1	2

	LEVEL	
	A	B1
Blade element theory; High/low blade angle, reverse angle, angle of attack, rotational speed; Propeller slip; Aerodynamic, centrifugal, and thrust forces; Torque; Relative airflow on blade angle of attack; Vibration and resonance.		
<b>17.2 Propeller Construction</b> Construction methods and materials used in wooden, composite and metal propellers; Blade station, blade face, blade shank, blade back and hub assembly; Fixed pitch, controllable pitch, constant speed propeller; Propeller/spinner installation.	1	2
<b>17.3 Propeller Pitch Control</b> Speed control and pitch change methods, mechanical and electrical/electronic; Feathering and reverse pitch; Overspeed protection.	1	2
<b>17.4 Propeller Synchronising</b> Synchronising and synchrophasing equipment.	—	2
<b>17.5 Propeller Ice Protection</b> Fluid and electrical de-icing equipment.	1	2
<b>17.6 Propeller Maintenance</b> Static and dynamic balancing; Blade tracking; Assessment of blade damage, erosion, corrosion, impact damage, delamination; Propeller treatment/repair schemes; Propeller engine running.	1	3
<b>17.7 Propeller Storage and Preservation</b> Propeller preservation and depreservation.	1	2

**MODULE 17B. PROPELLER**
*Regulation (EU) No 1321/2014*

**Note:** The scope of this Module shall reflect the propeller technology of aeroplanes pertinent to the B3 category.

	LEVEL B3
<b>17.1 Fundamentals</b> Blade element theory; High/low blade angle, reverse angle, angle of attack, rotational speed; Propeller slip; Aerodynamic, centrifugal, and thrust forces; Torque; Relative airflow on blade angle of attack; Vibration and resonance.	2
<b>17.2 Propeller Construction</b>	2

	<b>LEVEL B3</b>
Construction methods and material used in wooden, composite and metal propellers; Blade station, blade face, blade shank, blade back and hub assembly; Fixed pitch, controllable pitch, constant speed propeller; Propeller/spinner installation.	
<b>17.3 Propeller Pitch Control</b> Speed control and pitch change methods, mechanical and electrical/electronic; Feathering and reverse pitch; Overspeed protection.	2
<b>17.4 Propeller Synchronising</b> Synchronising and synchrophasing equipment.	2
<b>17.5 Propeller Ice Protection</b> Fluid and electrical de-icing equipment.	2
<b>17.6 Propeller Maintenance</b> Static and dynamic balancing; Blade tracking; Assessment of blade damage, erosion, corrosion, impact damage, delamination; Propeller treatment/repair schemes; Propeller engine running.	2
<b>17.7 Propeller Storage and Preservation</b> Propeller preservation and depreservation.	2

## Appendix II — Basic examination standard

### 1. General

*Regulation (EU) No 1321/2014*

- 1.1. All basic examinations shall be carried out using the multi-choice question format and essay questions as specified below. The incorrect alternatives shall seem equally plausible to anyone ignorant of the subject. All of the alternatives shall be clearly related to the question and of similar vocabulary, grammatical construction and length. In numerical questions, the incorrect answers shall correspond to procedural errors such as corrections applied in the wrong sense or incorrect unit conversions: they shall not be mere random numbers.
- 1.2. Each multi-choice question shall have three alternative answers of which only one shall be the correct answer and the candidate shall be allowed a time per module which is based upon a nominal average of 75 seconds per question.
- 1.3. Each essay question requires the preparation of a written answer and the candidate shall be allowed 20 minutes to answer each such question.
- 1.4. Suitable essay questions shall be drafted and evaluated using the knowledge syllabus in Appendix I Modules 7A, 7B, 9A, 9B and 10.
- 1.5. Each question will have a model answer drafted for it, which will also include any known alternative answers that may be relevant for other subdivisions.
- 1.6. The model answer will also be broken down into a list of the important points known as Key Points.
- 1.7. The pass mark for each module and sub-module multi-choice part of the examination is 75 %.
- 1.8. The pass mark for each essay question is 75 % in that the candidates answer shall contain 75 % of the required key points addressed by the question and no significant error related to any required key point.
- 1.9. If either the multi-choice part only or the essay part only is failed, then it is only necessary to retake the multi-choice or essay part, as appropriate.
- 1.10. Penalty marking systems shall not be used to determine whether a candidate has passed.
- 1.11. A failed module may not be retaken for at least 90 days following the date of the failed module examination, except in the case of a maintenance training organisation approved in accordance with [Annex IV \(Part-147\)](#) which conducts a course of retraining tailored to the failed subjects in the particular module when the failed module may be retaken after 30 days.
- 1.12. The time periods required by point [66.A.25](#) apply to each individual module examination, with the exception of those module examinations which were passed as part of another category licence, where the licence has already been issued.
- 1.13. The maximum number of consecutive attempts for each module is three. Further sets of three attempts are allowed with a 1 year waiting period between sets.

The applicant shall confirm in writing to the approved maintenance training organisation or the competent authority to which they apply for an examination, the number and dates of attempts during the last year and the organisation or the competent authority where these attempts took place. The maintenance training organisation or the competent authority is responsible for checking the number of attempts within the applicable timeframes.

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## 2. Number of questions per module

*Regulation (EU) No 1321/2014*

### 2.1. MODULE 1 — MATHEMATICS

Category A: 16 multi-choice and 0 essay questions. Time allowed 20 minutes.

Category B1: 32 multi-choice and 0 essay questions. Time allowed 40 minutes.

Category B2: 32 multi-choice and 0 essay questions. Time allowed 40 minutes.

Category B3: 28 multi-choice and 0 essay questions. Time allowed 35 minutes.

### 2.2. MODULE 2 — PHYSICS

Category A: 32 multi-choice and 0 essay questions. Time allowed 40 minutes.

Category B1: 52 multi-choice and 0 essay questions. Time allowed 65 minutes.

Category B2: 52 multi-choice and 0 essay questions. Time allowed 65 minutes.

Category B3: 28 multi-choice and 0 essay questions. Time allowed 35 minutes.

### 2.3. MODULE 3 — ELECTRICAL FUNDAMENTALS

Category A: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.

Category B1: 52 multi-choice and 0 essay questions. Time allowed 65 minutes.

Category B2: 52 multi-choice and 0 essay questions. Time allowed 65 minutes.

Category B3: 24 multi-choice and 0 essay questions. Time allowed 30 minutes.

### 2.4. MODULE 4 — ELECTRONIC FUNDAMENTALS

Category B1: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.

Category B2: 40 multi-choice and 0 essay questions. Time allowed 50 minutes.

Category B3: 8 multi-choice and 0 essay questions. Time allowed 10 minutes.

### 2.5. MODULE 5 — DIGITAL TECHNIQUES/ELECTRONIC INSTRUMENT SYSTEMS

Category A: 16 multi-choice and 0 essay questions. Time allowed 20 minutes.

Category B1.1 and B1.3: 40 multi-choice and 0 essay questions. Time allowed 50 minutes.

Category B1.2 and B1.4: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.

Category B2: 72 multi-choice and 0 essay questions. Time allowed 90 minutes.

Category B3: 16 multi-choice and 0 essay questions. Time allowed 20 minutes.

### 2.6. MODULE 6 — MATERIALS AND HARDWARE

Category A: 52 multi-choice and 0 essay questions. Time allowed 65 minutes.

Category B1: 72 multi-choice and 0 essay questions. Time allowed 90 minutes.

Category B2: 60 multi-choice and 0 essay questions. Time allowed 75 minutes.

Category B3: 60 multi-choice and 0 essay questions. Time allowed 75 minutes.

### 2.7. MODULE 7A — MAINTENANCE PRACTICES

Category A: 72 multi-choice and 2 essay questions. Time allowed 90 minutes plus 40 minutes.

Category B1: 80 multi-choice and 2 essay questions. Time allowed 100 minutes plus 40 minutes.

- Category B2: 60 multi-choice and 2 essay questions. Time allowed 75 minutes plus 40 minutes.
- MODULE 7B — MAINTENANCE PRACTICES**
- Category B3: 60 multi-choice and 2 essay questions. Time allowed 75 minutes plus 40 minutes.
- 2.8. MODULE 8 — BASIC AERODYNAMICS**
- Category A: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.
- Category B1: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.
- Category B2: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.
- Category B3: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.
- 2.9. MODULE 9A — HUMAN FACTORS**
- Category A: 20 multi-choice and 1 essay question. Time allowed 25 minutes plus 20 minutes.
- Category B1: 20 multi-choice and 1 essay question. Time allowed 25 minutes plus 20 minutes.
- Category B2: 20 multi-choice and 1 essay question. Time allowed 25 minutes plus 20 minutes.
- MODULE 9B — HUMAN FACTORS**
- Category B3: 16 multi-choice and 1 essay questions. Time allowed 20 minutes plus 20 minutes.
- 2.10. MODULE 10 — AVIATION LEGISLATION**
- Category A: 32 multi-choice and 1 essay question. Time allowed 40 minutes plus 20 minutes.
- Category B1: 40 multi-choice and 1 essay question. Time allowed 50 minutes plus 20 minutes.
- Category B2: 40 multi-choice and 1 essay question. Time allowed 50 minutes plus 20 minutes.
- Category B3: 32 multi-choice and 1 essay questions. Time allowed 40 minutes plus 20 minutes.
- 2.11. MODULE 11A — TURBINE AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS**
- Category A: 108 multi-choice and 0 essay questions. Time allowed 135 minutes.
- Category B1: 140 multi-choice and 0 essay questions. Time allowed 175 minutes.
- MODULE 11B — PISTON AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS**
- Category A: 72 multi-choice and 0 essay questions. Time allowed 90 minutes.
- Category B1: 100 multi-choice and 0 essay questions. Time allowed 125 minutes.
- MODULE 11C — PISTON AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS**
- Category B3: 60 multi-choice and 0 essay questions. Time allowed 75 minutes.
- 2.12. MODULE 12 — HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS:**
- Category A: 100 multi-choice and 0 essay questions. Time allowed 125 minutes.
- Category B1: 128 multi-choice and 0 essay questions. Time allowed 160 minutes.
- 2.13. MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS**
- Category B2: 180 multi-choice and 0 essay questions. Time allowed 225 minutes. Questions and time allowed may be split into two examinations as appropriate.
- 2.14. MODULE 14 — PROPULSION**
- Category B2: 24 multi-choice and 0 essay questions. Time allowed 30 minutes.

**2.15. MODULE 15 — GAS TURBINE ENGINE**

Category A: 60 multi-choice and 0 essay questions. Time allowed 75 minutes.

Category B1: 92 multi-choice and 0 essay questions. Time allowed 115 minutes.

**2.16. MODULE 16 — PISTON ENGINE**

Category A: 52 multi-choice and 0 essay questions. Time allowed 65 minutes.

Category B1: 72 multi-choice and 0 essay questions. Time allowed 90 minutes.

Category B3: 68 multi-choice and 0 essay questions. Time allowed 85 minutes.

**2.17. MODULE 17A — PROPELLER**

Category A: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.

Category B1: 32 multi-choice and 0 essay questions. Time allowed 40 minutes.

**MODULE 17B — PROPELLER**

Category B3: 28 multi-choice and 0 essay questions. Time allowed 35 minutes.



## Appendix III — Aircraft type training and examination standard — On the job training

### 1. General

Regulation (EU) No 1321/2014;

Aircraft type training shall consist of theoretical training and examination, and, except for the category C ratings, practical training and assessment.

- (a) Theoretical training and examination shall comply with the following requirements:
- (i) Shall be conducted by a maintenance training organisation appropriately approved in accordance with [Annex IV \(Part-147\)](#) or, when conducted by other organisations, as directly approved by the competent authority.
  - (ii) Shall comply, except as permitted by the differences training described in point (c), with:  
the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012 or, if such elements are not available, the standard described in [point 3.1 of this Appendix](#), and  
the type training examination standard described in [point 4.1 of this Appendix](#).
  - (iii) In the case of a category C person qualified by holding an academic degree as specified in point [66.A.30\(a\)\(5\)](#), the first relevant aircraft type theoretical training shall be at the category B1 or B2 level.
  - (iv) Shall have been started and completed within the 3 years preceding the application for a type rating endorsement.
- (b) Practical training and assessment shall comply with the following requirements:
- (i) Shall be conducted by a maintenance training organisation appropriately approved in accordance with [Annex IV \(Part-147\)](#) or, when conducted by other organisations, as directly approved by the competent authority.
  - (ii) Shall comply, except as permitted by the differences training described in point (c), with:  
the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012 or, if such elements are not available, the standard described in [point 3.2 of this Appendix](#), and  
the type training assessment standard described in [point 4.2 of this Appendix](#).
  - (iii) Shall include a representative cross section of maintenance activities relevant to the aircraft type.
  - (iv) Shall include demonstrations using equipment, components, simulators, other training devices or aircraft.
  - (v) Shall have been started and completed within the 3 years preceding the application for a type rating endorsement.
- (c) Differences training
- (i) Differences training is the training required in order to cover the differences between two different aircraft type ratings of the same manufacturer as determined by the Agency.

- (ii) Differences training has to be defined on a case-to-case basis taking into account the requirements contained in this Appendix III in respect of both theoretical and practical elements of type rating training.
- (iii) A type rating shall only be endorsed on a licence after differences training when the applicant also complies with one of the following conditions:
  - having already endorsed on the licence the aircraft type rating from which the differences are being identified, or
  - having completed the type training requirements for the aircraft from which the differences are being identified.

## 2. Aircraft type training levels

*Regulation (EU) No 1321/2014*

The three levels listed below define the objectives, the depth of training and the level of knowledge that the training is intended to achieve.

- *Level 1: A brief overview of the airframe, systems and powerplant as outlined in the Systems Description Section of the Aircraft Maintenance Manual/Instructions for Continued Airworthiness.*

Course objectives: Upon completion of Level 1 training, the student will be able to:

- (a) provide a simple description of the whole subject, using common words and examples, using typical terms and identify safety precautions related to the airframe, its systems and powerplant;
  - (b) identify aircraft manuals, maintenance practices important to the airframe, its systems and powerplant;
  - (c) define the general layout of the aircraft's major systems;
  - (d) define the general layout and characteristics of the powerplant;
  - (e) identify special tooling and test equipment used with the aircraft.
- *Level 2: Basic system overview of controls, indicators, principal components, including their location and purpose, servicing and minor troubleshooting. General knowledge of the theoretical and practical aspects of the subject.*

Course objectives: In addition to the information contained in the Level 1 training, at the completion of Level 2 training, the student will be able to:

- (a) understand the theoretical fundamentals; apply knowledge in a practical manner using detailed procedures;
- (b) recall the safety precautions to be observed when working on or near the aircraft, powerplant and systems;
- (c) describe systems and aircraft handling particularly access, power availability and sources;
- (d) identify the locations of the principal components;
- (e) explain the normal functioning of each major system, including terminology and nomenclature;
- (f) perform the procedures for servicing associated with the aircraft for the following systems: Fuel, Power Plants, Hydraulics, Landing Gear, Water/Waste, and Oxygen;

- (g) demonstrate proficiency in use of crew reports and on-board reporting systems (minor troubleshooting) and determine aircraft airworthiness per the MEL/CDL;
  - (h) demonstrate the use, interpretation and application of appropriate documentation including instructions for continued airworthiness, maintenance manual, illustrated parts catalogue, etc.
- *Level 3: Detailed description, operation, component location, removal/installation and bite and troubleshooting procedures to maintenance manual level.*

Course objectives: In addition to the information contained in Level 1 and Level 2 training, at the completion of Level 3 training, the student will be able to:

- (a) demonstrate a theoretical knowledge of aircraft systems and structures and interrelationships with other systems, provide a detailed description of the subject using theoretical fundamentals and specific examples and to interpret results from various sources and measurements and apply corrective action where appropriate;
- (b) perform system, powerplant, component and functional checks as specified in the aircraft maintenance manual;
- (c) demonstrate the use, interpret and apply appropriate documentation including structural repair manual, troubleshooting manual, etc.;
- (d) correlate information for the purpose of making decisions in respect of fault diagnosis and rectification to maintenance manual level;
- (e) describe procedures for replacement of components unique to aircraft type.

### 3. Aircraft type training standard

*Regulation (EU) No 1321/2014*

Although aircraft type training includes both theoretical and practical elements, courses can be approved for the theoretical element, the practical element or for a combination of both.

#### 3.1. Theoretical element

*Regulation (EU) No 1321/2014;*

(a) Objective:

On completion of a theoretical training course the student shall be able to demonstrate, to the levels identified in the Appendix III syllabus, the detailed theoretical knowledge of the aircraft's applicable systems, structure, operations, maintenance, repair, and troubleshooting according to approved maintenance data. The student shall be able to demonstrate the use of manuals and approved procedures, including the knowledge of relevant inspections and limitations.

(b) Level of training:

Training levels are those levels defined in point 2 above.

After the first type course for category C certifying staff all subsequent courses need only be to level 1.

During a level 3 theoretical training, level 1 and 2 training material may be used to teach the full scope of the chapter if required. However, during the training the majority of the course material and training time shall be at the higher level.

(c) Duration:

The theoretical training minimum tuition hours are contained in the following table:

Category	Hours
Aeroplanes with a maximum take-off mass above 30000 kg:	
B1.1	150
B1.2	120
B2	100
C	30
Aeroplanes with a maximum take-off mass equal or less than 30000 kg and above 5700 kg:	
B1.1	120
B1.2	100
B2	100
C	25
Aeroplanes with a maximum take-off mass of 5700 kg and below <sup>16</sup>	
B1.1	80
B1.2	60
B2	60
C	15
Helicopters <sup>17</sup>	
B1.3	120
B1.4	100
B2	100
C	25

For the purpose of the table above, a tuition hour means 60 minutes of teaching and exclude any breaks, examination, revision, preparation and aircraft visit.

These hours apply only to theoretical courses for complete aircraft/engine combinations according to the type rating as defined by the Agency.

(d) Justification of course duration:

Training courses carried out in a maintenance training organisation approved in accordance with [Annex IV \(Part-147\)](#) and courses directly approved by the competent authority shall justify their hour duration and the coverage of the full syllabus by a training needs analysis based on:

- the design of the aircraft type, its maintenance needs and the types of operation,
- detailed analysis of applicable chapters — see contents table in point 3.1(e) below,
- detailed competency analysis showing that the objectives as stated in point 3.1(a) above are fully met.

Where the training needs analysis shows that more hours are needed, course lengths shall be longer than the minimum specified in the table.

Similarly, tuition hours of differences courses or other training course combinations (such as combined B1/B2 courses), and in cases of theoretical type training courses below the figures given in point 3.1(c) above, these shall be justified to the competent authority by the training needs analysis as described above.

<sup>16</sup> For non-pressurised piston engine aeroplanes below 2000 kg MTOM the minimum duration can be reduced by 50 %.

<sup>17</sup> For helicopters in group 2 (as defined in point 66.A.42) the minimum duration can be reduced by 30 %.

In addition, the course must describe and justify the following:

- The minimum attendance required to the trainee, in order to meet the objectives of the course.
- The maximum number of hours of training per day, taking into account pedagogical and human factors principles.

If the minimum attendance required is not met, the certificate of recognition shall not be issued. Additional training may be provided by the training organisation in order to meet the minimum attendance time.

(e) Content:

As a minimum, the elements in the Syllabus below that are specific to the aircraft type shall be covered. Additional elements introduced due to type variations, technological changes, etc. shall also be included.

The training syllabus shall be focused on mechanical and electrical aspects for B1 personnel, and electrical and avionic aspects for B2.

Chapters Licence category	Level		Aeroplanes turbine		Aeroplanes piston		Helicopters turbine		Helicopters piston		Avionics B2
	B1	C	B1	C	B1	C	B1	C	B1	C	
<i>Introduction module:</i>											
05 Time limits/maintenance checks	1	1	1	1	1	1	1	1	1	1	1
06 Dimensions/Areas (MTOM, etc.)	1	1	1	1	1	1	1	1	1	1	1
07 Lifting and Shoring	1	1	1	1	1	1	1	1	1	1	1
08 Levelling and weighing	1	1	1	1	1	1	1	1	1	1	1
09 Towing and taxiing	1	1	1	1	1	1	1	1	1	1	1
10 Parking/mooring, Storing and Return to Service	1	1	1	1	1	1	1	1	1	1	1
11 Placards and Markings	1	1	1	1	1	1	1	1	1	1	1
12 Servicing	1	1	1	1	1	1	1	1	1	1	1
20 Standard practices — only type particular	1	1	1	1	1	1	1	1	1	1	1
<i>Helicopters</i>											
18 Vibration and Noise Analysis (Blade tracking)	—	—	—	—	3	1	3	1	—	—	—
60 Standard Practices Rotor	—	—	—	—	3	1	3	1	—	—	—
62 Rotors	—	—	—	—	3	1	3	1	1	1	1
62A Rotors — Monitoring and indicating	—	—	—	—	3	1	3	1	3	1	3
63 Rotor Drives	—	—	—	—	3	1	3	1	1	1	1
63A Rotor Drives — Monitoring and indicating	—	—	—	—	3	1	3	1	3	1	3

Chapters Licence category	Level		Aeroplanes turbine		Aeroplanes piston		Helicopters turbine		Helicopters piston		Avionics
	B1	C	B1	C	B1	C	B1	C	B1	C	B2
64 Tail Rotor	—	—	—	—	3	1	3	1	3	1	1
64A Tail rotor — Monitoring and indicating	—	—	—	—	3	1	3	1	3	1	3
65 Tail Rotor Drive	—	—	—	—	3	1	3	1	3	1	1
65A Tail Rotor Drive — Monitoring and indicating	—	—	—	—	3	1	3	1	3	1	3
66 Folding Blades/Pylon	—	—	—	—	3	1	3	1	3	1	—
67 Rotors Flight Control	—	—	—	—	3	1	3	1	3	1	—
53 Airframe Structure (Helicopter)	—	—	—	—	3	1	3	1	3	1	—
25 Emergency Flotation Equipment	—	—	—	—	3	1	3	1	3	1	1
<i>Airframe structures</i>											
51 Standard practices and structures (damage classification, assessment and repair)	3	1	3	1	—	—	—	—	—	—	1
53 Fuselage	3	1	3	1	—	—	—	—	—	—	1
54 Nacelles/Pylons	3	1	3	1	—	—	—	—	—	—	1
55 Stabilisers	3	1	3	1	—	—	—	—	—	—	1
56 Windows	3	1	3	1	—	—	—	—	—	—	1
57 Wings	3	1	3	1	—	—	—	—	—	—	1
27A Flight Control Surfaces (All)	3	1	3	1	—	—	—	—	—	—	1
52 Doors	3	1	3	1	—	—	—	—	—	—	1
Zonal and Station Identification Systems.	1	1	1	1	1	1	1	1	1	1	1
<i>Airframe systems:</i>											
21 Air Conditioning	3	1	3	1	3	1	3	1	3	1	3
21A Air Supply	3	1	3	1	1	3	3	1	3	1	2
21B Pressurisation	3	1	3	1	3	1	3	1	3	1	3
21C Safety and Warning Devices	3	1	3	1	3	1	3	1	3	1	3
22 Autoflight	2	1	2	1	2	1	2	1	2	1	3
23 Communications	2	1	2	1	2	1	2	1	2	1	3
24 Electrical Power	3	1	3	1	3	1	3	1	3	1	3
25 Equipment and Furnishings	3	1	3	1	3	1	3	1	3	1	1
25A Electronic Equipment including emergency equipment	1	1	1	1	1	1	1	1	1	1	3

Chapters	Level Licence category	Aeroplanes turbine		Aeroplanes piston		Helicopters turbine		Helicopters piston		Avionics
		B1	C	B1	C	B1	C	B1	C	B2
26 Fire Protection		3	1	3	1	3	1	3	1	3
27 Flight Controls		3	1	3	1	3	1	3	1	2
27A Sys. Operation: Electrical/Fly-by-Wire		3	1	—	—	—	—	—	—	3
28 Fuel Systems		3	1	3	1	3	1	3	1	2
28A Fuel Systems — Monitoring and indicating		3	1	3	1	3	1	3	1	3
29 Hydraulic Power		3	1	3	1	3	1	3	1	2
29A Hydraulic Power — Monitoring and indicating		3	1	3	1	3	1	3	1	3
30 Ice and Rain Protection		3	1	3	1	3	1	3	1	3
31 Indicating/Recording Systems		3	1	3	1	3	1	3	1	3
31A Instrument Systems		3	1	3	1	3	1	1	3	3
32 Landing Gear		3	1	3	1	3	1	3	1	2
32A Landing Gear — Monitoring and indicating		3	1	3	1	3	1	3	1	3
33 Lights		3	1	3	1	3	1	3	1	3
34 Navigation		2	1	2	1	2	1	2	1	3
35 Oxygen		3	1	3	1	—	—	—	—	2
36 Pneumatic		3	1	3	1	3	1	3	1	2
36A Pneumatic — Monitoring and indicating		3	1	3	1	3	1	3	1	3
37 Vacuum		3	1	3	1	3	1	3	1	2
38 Water/Waste		3	1	3	1	—	—	—	—	2
41 Water Ballast		3	1	3	1	—	—	—	—	1
42 Integrated modular avionics		2	1	2	1	2	1	2	1	3
44 Cabin Systems		2	1	2	1	2	1	2	1	3
45 On-Board Maintenance System (or covered in 31)		3	1	3	1	3	1	—	—	3
46 Information Systems		2	1	2	1	2	1	2	1	3
50 Cargo and Accessory Compartments		3	1	3	1	3	1	3	1	1
<i>Turbine Engine</i>										
70 Standard Practices — Engines,		3	1	—	—	3	1	—	—	1
70A constructional arrangement and operation (Installation Inlet, Compressors, Combustion Section, Turbine Section,		3	1	—	—	3	1	—	—	1

Chapters Licence category	Level		Aeroplanes turbine		Aeroplanes piston		Helicopters turbine		Helicopters piston		Avionics		
	B1	C	B1	C	B1	C	B1	C	B1	C	B2		
Bearings and Seals, Lubrication Systems).													
70B Engine Performance	3	1	—	—	3	1	—	—	3	1	—	—	1
71 Powerplant	3	1	—	—	3	1	—	—	3	1	—	—	1
72 Engine Turbine/Turbo Prop/Ducted Fan/Unducted fan	3	1	—	—	3	1	—	—	3	1	—	—	1
73 Engine Fuel and Control	3	1	—	—	3	1	—	—	3	1	—	—	1
75 Air	3	1	—	—	3	1	—	—	3	1	—	—	1
76 Engine controls	3	1	—	—	3	1	—	—	3	1	—	—	1
78 Exhaust	3	1	—	—	3	1	—	—	3	1	—	—	1
79 Oil	3	1	—	—	3	1	—	—	3	1	—	—	1
80 Starting	3	1	—	—	3	1	—	—	3	1	—	—	1
82 Water Injections	3	1	—	—	3	1	—	—	3	1	—	—	1
83 Accessory Gear Boxes	3	1	—	—	3	1	—	—	3	1	—	—	1
84 Propulsion Augmentation	3	1	—	—	3	1	—	—	3	1	—	—	1
73A FADEC	3	1	—	—	3	1	—	—	3	1	—	—	3
74 Ignition	3	1	—	—	3	1	—	—	3	1	—	—	3
77 Engine Indicating Systems	3	1	—	—	3	1	—	—	3	1	—	—	3
49 Auxiliary Power Units (APUs)	3	1	—	—	—	—	—	—	—	—	—	—	2
<i>Piston Engine</i>													
70 Standard Practices — Engines	—	—	3	1	—	—	3	1	—	—	3	1	1
70A Constructional arrangement and operation (Installation, Carburettors, Fuel injection systems, Induction, Exhaust and Cooling Systems, Supercharging/Turbochargin, Lubrication Systems).	—	—	3	1	—	—	3	1	—	—	3	1	1
70B Engine Performance	—	—	3	1	—	—	3	1	—	—	3	1	1
71 Powerplant	—	—	3	1	—	—	3	1	—	—	3	1	1
73 Engine Fuel and Control	—	—	3	1	—	—	3	1	—	—	3	1	1
76 Engine Control	—	—	3	1	—	—	3	1	—	—	3	1	1
79 Oil	—	—	3	1	—	—	3	1	—	—	3	1	1
80 Starting	—	—	3	1	—	—	3	1	—	—	3	1	1
81 Turbines	—	—	3	1	—	—	3	1	—	—	3	1	1
82 Water Injections	—	—	3	1	—	—	3	1	—	—	3	1	1
83 Accessory Gear Boxes	—	—	3	1	—	—	3	1	—	—	3	1	1
84 Propulsion Augmentation	—	—	3	1	—	—	3	1	—	—	3	1	1
73A FADEC	—	—	3	1	—	—	3	1	—	—	3	1	3



Chapters Licence category	Level		Aeroplanes turbine		Aeroplanes piston		Helicopters turbine		Helicopters piston		Avionics
	B1	C	B1	C	B1	C	B1	C	B1	C	B2
74 Ignition	—	—	3	1	—	—	3	1	3	1	3
77 Engine Indication Systems	—	—	3	1	—	—	3	1	3	1	3
<i>Propellers</i>											
60A Standard Practices — Propeller	3	1	3	1	—	—	—	—	—	—	1
61 Propellers/Propulsion	3	1	3	1	—	—	—	—	—	—	1
61A Propeller Construction	3	1	3	1	—	—	—	—	—	—	—
61B Propeller Pitch Control	3	1	3	1	—	—	—	—	—	—	—
61C Propeller Synchronising	3	1	3	1	—	—	—	—	—	—	1
61D Propeller Electronic control	2	1	2	1	—	—	—	—	—	—	3
61E Propeller Ice Protection	3	1	3	1	—	—	—	—	—	—	—
61F Propeller Maintenance	3	1	3	1	—	—	—	—	—	—	1

- (f) Multimedia Based Training (MBT) methods may be used to satisfy the theoretical training element either in the classroom or in a virtual controlled environment subject to the acceptance of the competent authority approving the training course.

### 3.2. Practical element

*Regulation (EU) No 1321/2014*

- (a) Objective:

The objective of practical training is to gain the required competence in performing safe maintenance, inspections and routine work according to the maintenance manual and other relevant instructions and tasks as appropriate for the type of aircraft, for example troubleshooting, repairs, adjustments, replacements, rigging and functional checks. It includes the awareness of the use of all technical literature and documentation for the aircraft, the use of specialist/special tooling and test equipment for performing removal and replacement of components and modules unique to type, including any on-wing maintenance activity.

- (b) Content:

At least 50 % of the crossed items in the table below, which are relevant to the particular aircraft type, shall be completed as part of the practical training.

Tasks crossed represent subjects that are important for practical training purposes to ensure that the operation, function, installation and safety significance of key maintenance tasks is adequately addressed; particularly where these cannot be fully explained by theoretical training alone. Although the list details the minimum practical training subjects, other items may be added where applicable to the particular aircraft type.

Tasks to be completed shall be representative of the aircraft and systems both in complexity and in the technical input required to complete that task. While relatively simple tasks may be

included, other more complex tasks shall also be incorporated and undertaken as appropriate to the aircraft type.

Glossary of the table: LOC: Location; FOT: Functional/Operational Test; SGH: Service and Ground Handling; R/I: Removal/Installation; MEL: Minimum Equipment List; TS: TroubleShooting.

Chapters	B1/B2 LOC	B1 FOT	SGH	R/I	MEL	TS	B2 FOT	SGH	R/I	MEL	TS
<i>Introduction module:</i>											
5 Time limits/maintenance checks	X/X	—	—	—	—	—	—	—	—	—	—
6 Dimensions/Areas (MTOM, etc.)	X/X	—	—	—	—	—	—	—	—	—	—
7 Lifting and Shoring	X/X	—	—	—	—	—	—	—	—	—	—
8 Levelling and weighing	X/X	—	X	—	—	—	—	X	—	—	—
9 Towing and taxiing	X/X	—	X	—	—	—	—	X	—	—	—
10 Parking/mooring, Storing and Return to Service	X/X	—	X	—	—	—	—	X	—	—	—
11 Placards and Markings	X/X	—	—	—	—	—	—	—	—	—	—
12 Servicing	X/X	—	X	—	—	—	—	X	—	—	—
20 Standard practices — only type particular	X/X	—	X	—	—	—	—	X	—	—	—
<i>Helicopters:</i>											
18 Vibration and Noise Analysis (Blade tracking)	X/—	—	—	—	—	X	—	—	—	—	—
60 Standard Practices Rotor — only type specific	X/X	—	X	—	—	—	—	X	—	—	—
62 Rotors	X/—	—	X	X	—	X	—	—	—	—	—
62A Rotors — Monitoring and indicating	X/X	X	X	X	X	X	—	—	X	—	X
63 Rotor Drives	X/—	X	—	—	—	X	—	—	—	—	—
63A Rotor Drives — Monitoring and indicating	X/X	X	—	X	X	X	—	—	X	—	X
64 Tail Rotor	X/—	—	X	—	—	X	—	—	—	—	—
64A Tail rotor - Monitoring and indicating	X/X	X	—	X	X	X	—	—	X	—	X

Chapters	B1/B2 LOC	B1 FOT	SGH	R/I	MEL	TS	B2 FOT	SGH	R/I	MEL	TS
65 Tail Rotor Drive	X/—	X	—	—	—	X	—	—	—	—	—
65A Tail Rotor Drive — Monitoring and indicating	X/X	X	—	X	X	X	—	—	X	—	X
66 Folding Blades/Pylon	X/—	X	X	—	—	X	—	—	—	—	—
67 Rotors Flight Control	X/—	X	X	—	X	X	—	—	—	—	—
53 Airframe Structure (Helicopter) Note: covered under Airframe structures											
25 Emergency Flotation Equipment	X/X	X	X	X	X	X	X	X	—	—	—
<i>Airframe structures:</i>											
51 Standard Practices and Structures (damage classification, assessment and repair)											
53 Fuselage	X/—	—	—	—	—	X	—	—	—	—	—
54 Nacelles/Pylons	X/—	—	—	—	—	—	—	—	—	—	—
55 Stabilisers	X/—	—	—	—	—	—	—	—	—	—	—
56 Windows	X/—	—	—	—	—	X	—	—	—	—	—
57 Wings	X/—	—	—	—	—	—	—	—	—	—	—
27A Flight Control Surfaces	X/—	—	—	—	—	X	—	—	—	—	—
52 Doors	X/X	X	X	—	—	—	—	X	—	—	—
<i>Airframe systems:</i>											
21 Air Conditioning	X/X	X	X	—	X	X	X	X	—	X	X
21A Air Supply	X/X	X	—	—	—	—	X	—	—	—	—
21B Pressurisation	X/X	X	—	—	X	X	X	—	—	X	X
21C Safety and warning Devices	X/X	—	X	—	—	—	—	X	—	—	—
22 Autoflight	X/X	—	—	—	X	—	X	X	X	X	X
23 Communications	X/X	—	X	—	X	—	X	X	X	X	X
24 Electrical Power	X/X	X	X	X	X	X	X	X	X	X	X
25 Equipment and Furnishings	X/X	X	X	X	—	—	X	X	X	—	—
25A Electronic Equipment including	X/X	X	X	X	—	—	X	X	X	—	—

Chapters	B1/B2 LOC	B1 FOT	SGH	R/I	MEL	TS	B2 FOT	SGH	R/I	MEL	TS
emergency equipment											
26 Fire Protection	X/X	X	X	X	X	X	X	X	X	X	X
27 Flight Controls	X/X	X	X	X	X	X	X	—	—	—	—
27A Sys. Operation: Electrical/Fly-by-Wire	X/X	X	X	X	X	—	X	—	X	—	X
28 Fuel Systems	X/X	X	X	X	X	X	X	X	—	X	—
28A Fuel Systems — Monitoring and indicating	X/X	X	—	—	—	—	X	—	X	—	X
29 Hydraulic Power	X/X	X	X	X	X	X	X	X	—	X	—
29A Hydraulic Power — Monitoring and indicating	X/X	X	—	X	X	X	X	—	X	X	X
30 Ice and Rain Protection	X/X	X	X	—	X	X	X	X	—	X	X
31 Indicating/Recording Systems	X/X	X	X	X	X	X	X	X	X	X	X
31A Instrument Systems	X/X	X	X	X	X	X	X	X	X	X	X
32 Landing Gear	X/X	X	X	X	X	X	X	X	X	X	—
32A Landing Gear — Monitoring and indicating	X/X	X	—	X	X	X	X	—	X	X	X
33 Lights	X/X	X	X	—	X	—	X	X	X	X	—
34 Navigation	X/X	—	X	—	X	—	X	X	X	X	X
35 Oxygen	X/—	X	X	X	—	—	X	X	—	—	—
36 Pneumatic	X/—	X	—	X	X	X	X	—	X	X	X
36A Pneumatic — Monitoring and indicating	X/X	X	X	X	X	X	X	X	X	X	X
37 Vacuum	X/—	X	—	X	X	X	—	—	—	—	—
38 Water/Waste	X/—	X	X	—	—	—	X	X	—	—	—
41 Water Ballast	X/—	—	—	—	—	—	—	—	—	—	—
42 Integrated modular avionics	X/X	—	—	—	—	—	X	X	X	X	X
44 Cabin Systems	X/X	—	—	—	—	—	X	X	X	X	X
45 On-Board Maintenance System (or covered in 31)	X/X	X	X	X	X	X	X	X	X	X	X
46 Information Systems	X/X	—	—	—	—	—	X	—	X	X	X
50 Cargo and Accessory Compartments	X/X	—	X	—	—	—	—	—	—	—	—

Chapters	B1/B2 LOC	B1 FOT	SGH	R/I	MEL	TS	B2 FOT	SGH	R/I	MEL	TS
<i>Turbine/Piston Engine Module:</i>											
70 Standard Practices — Engines — only type particular	—	—	X	—	—	—	—	X	—	—	—
70A Constructional arrangement and operation (Installation Inlet, Compressors, Combustion Section, Turbine Section, Bearings and Seals, Lubrication Systems)	X/X	—	—	—	—	—	—	—	—	—	—
<i>Turbine engines:</i>											
70B Engine Performance	—	—	—	—	—	X	—	—	—	—	—
71 Power Plant	X/—	X	X	—	—	—	—	X	—	—	—
72 Engine Turbine/Turbo Prop/Ducted Fan/ Unducted fan	X/—	—	—	—	—	—	—	—	—	—	—
73 Engine Fuel and Control	X/X	X	—	—	—	—	—	—	—	—	—
73A FADEC Systems	X/X	X	—	X	X	X	X	—	X	X	X
74 Ignition	X/X	X	—	—	—	—	X	—	—	—	—
75 Air	X/—	—	—	X	—	X	—	—	—	—	—
76 Engine Controls	X/—	X	—	—	—	X	—	—	—	—	—
77 Engine Indicating	X/X	X	—	—	X	X	X	—	—	X	X
78 Exhaust	X/—	X	—	—	X	—	—	—	—	—	—
79 Oil	X/—	—	X	X	—	—	—	—	—	—	—
80 Starting	X/—	X	—	—	X	X	—	—	—	—	—
82 Water Injection	X/—	X	—	—	—	—	—	—	—	—	—
83 Accessory Gearboxes	X/—	—	X	—	—	—	—	—	—	—	—
84 Propulsion Augmentation	X/—	X	—	—	—	—	—	—	—	—	—
<i>Auxiliary Power Units (APUs):</i>											
49 Auxiliary Power Units (APUs)	X/—	X	X	—	—	X	—	—	—	—	—
<i>Piston Engines:</i>											

Chapters	B1/B2 LOC	B1 FOT	SGH	R/I	MEL	TS	B2 FOT	SGH	R/I	MEL	TS
70 Standard Practices — Engines — only type particular	—	—	X	—	—	—	—	X	—	—	—
70A Constructional arrangement and operation (Installation Inlet, Compressors, Combustion Section, Turbine Section, Bearings and Seals, Lubrication Systems)	X/X	—	—	—	—	—	—	—	—	—	—
70B Engine Performance	—	—	—	—	—	X	—	—	—	—	—
71 Power Plant	X/—	X	X	—	—	—	—	X	—	—	—
73 Engine Fuel and Control	X/X	X	—	—	—	—	—	—	—	—	—
73A FADEC Systems	X/X	X	—	X	X	X	X	X	X	X	X
74 Ignition	X/X	X	—	—	—	—	X	—	—	—	—
76 Engine Controls	X/—	X	—	—	—	X	—	—	—	—	—
77 Engine Indicating	X/X	X	—	—	X	X	X	—	—	X	X
78 Exhaust	X/—	X	—	—	X	X	—	—	—	—	—
79 Oil	X/—	—	X	X	—	—	—	—	—	—	—
80 Starting	X/—	X	—	—	X	X	—	—	—	—	—
81 Turbines	X/—	X	X	X	—	X	—	—	—	—	—
82 Water Injection	X/—	X	—	—	—	—	—	—	—	—	—
83 Accessory Gearboxes	X/—	—	X	X	—	—	—	—	—	—	—
84 Propulsion Augmentation	X/—	X	—	—	—	—	—	—	—	—	—
<i>Propellers:</i>											
60A Standard Practices — Propeller	—	—	—	X	—	—	—	—	—	—	—
61 Propellers/ Propulsion	X/X	X	X	—	X	X	—	—	—	—	—
61A Propeller Construction	X/X	—	X	—	—	—	—	—	—	—	—
61B Propeller Pitch Control	X/—	X	—	X	X	X	—	—	—	—	—
61C Propeller Synchronising	X/—	X	—	—	—	X	—	—	—	X	—
61D Propeller Electronic control	X/X	X	X	X	X	X	X	X	X	X	X

Chapters	B1/B2 LOC	B1 FOT	SGH	R/I	MEL	TS	B2 FOT	SGH	R/I	MEL	TS
61E Propeller Ice Protection	X/—	X	—	X	X	X	—	—	—	—	—
61F Propeller Maintenance	X/X	X	X	X	X	X	X	X	X	X	X

#### 4. Type training examination and assessment standard

##### 4.1. Theoretical element examination standard

*Regulation (EU) No 1321/2014*

After the theoretical portion of the aircraft type training has been completed, a written examination shall be performed, which shall comply with the following:

- (a) Format of the examination is of the multi-choice type. Each multi-choice question shall have 3 alternative answers of which only one shall be the correct answer. The total time is based on the total number of questions and the time for answering is based upon a nominal average of 90 seconds per question.
- (b) The incorrect alternatives shall seem equally plausible to anyone ignorant of the subject. All the alternatives shall be clearly related to the question and of similar vocabulary, grammatical construction and length.
- (c) In numerical questions, the incorrect answers shall correspond to procedural errors such as the use of incorrect sense (+ versus -) or incorrect measurement units. They shall not be mere random numbers.
- (d) The level of examination for each chapter<sup>18</sup> shall be the one defined in point 2 'Aircraft type training levels'. However, the use of a limited number of questions at a lower level is acceptable.
- (e) The examination shall be of the closed book type. No reference material is permitted. An exception will be made for the case of examining a B1 or B2 candidate's ability to interpret technical documents.
- (f) The number of questions shall be at least 1 question per hour of instruction. The number of questions for each chapter and level shall be proportionate to:
  - the effective training hours spent teaching at that chapter and level,
  - the learning objectives as given by the training needs analysis.

The competent authority of the Member State will assess the number and the level of the questions when approving the course.

- (g) The minimum examination pass mark is 75 %. When the type training examination is split in several examinations, each examination shall be passed with at least a 75 % mark. In order to be possible to achieve exactly a 75 % pass mark, the number of questions in the examination shall be a multiple of 4.
- (h) Penalty marking (negative points for failed questions) is not to be used.
- (i) End of module phase examinations cannot be used as part of the final examination unless they contain the correct number and level of questions required.

<sup>18</sup> For the purpose of this point 4, a 'chapter' means each one of the rows preceded by a number in the table contained in point 3.1(e).

#### 4.2. Practical element assessment standard

*Regulation (EU) No 1321/2014*

After the practical element of the aircraft type training has been completed, an assessment must be performed, which must comply with the following:

- (a) The assessment shall be performed by designated assessors appropriately qualified.
- (b) The assessment shall evaluate the knowledge and skills of the trainee.

#### 5. Type examination standard

*Regulation (EU) No 1321/2014*

Type examination shall be conducted by training organisations appropriately approved under [Part-147](#) or by the competent authority.

The examination shall be oral, written or practical assessment based, or a combination thereof and it shall comply with the following requirements:

- (a) Oral examination questions shall be open.
- (b) Written examination questions shall be essay type or multi-choice questions.
- (c) Practical assessment shall determine a person's competence to perform a task.
- (d) Examinations shall be on a sample of chapters<sup>19</sup> drawn from point 3 type training/examination syllabus, at the indicated level.
- (e) The incorrect alternatives shall seem equally plausible to anyone ignorant of the subject. All of the alternatives shall be clearly related to the question and of similar vocabulary, grammatical construction and length.
- (f) In numerical questions, the incorrect answers shall correspond to procedural errors such as corrections applied in the wrong sense or incorrect unit conversions: they shall not be mere random numbers.
- (g) The examination shall ensure that the following objectives are met:
  - 1. Properly discuss with confidence the aircraft and its systems.
  - 2. Ensure safe performance of maintenance, inspections and routine work according to the maintenance manual and other relevant instructions and tasks as appropriate for the type of aircraft, for example troubleshooting, repairs, adjustments, replacements, rigging and functional checks such as engine run, etc., if required.
  - 3. Correctly use all technical literature and documentation for the aircraft.
  - 4. Correctly use specialist/special tooling and test equipment, perform removal and replacement of components and modules unique to type, including any on-wing maintenance activity
- (h) The following conditions apply to the examination:
  - 1. The maximum number of consecutive attempts is three. Further sets of three attempts are allowed with a 1 year waiting period between sets. A waiting period of 30 days is required after the first failed attempt within one set, and a waiting period of 60 days is required after the second failed attempt.

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<sup>19</sup> For the purpose of this point 5, a 'chapter' means each one of the rows preceded by a number in the tables contained in points 3.1(e) and 3.2(b).



The applicant shall confirm in writing to the maintenance training organisation or the competent authority to which they apply for an examination, the number and dates of attempts during the last year and the maintenance training organisation or the competent authority where these attempts took place. The maintenance training organisation or the competent authority is responsible for checking the number of attempts within the applicable timeframes.

2. The type examination shall be passed and the required practical experience shall be completed within the 3 years preceding the application for the rating endorsement on the aircraft maintenance licence.
  3. Type examination shall be performed with at least one examiner present. The examiner(s) shall not have been involved in the applicant's training.
- (i) A written and signed report shall be made by the examiner(s) to explain why the candidate has passed or failed.

#### 6. On the Job Training

*Regulation (EU) No 1321/2014*

On the Job Training (OJT) shall be approved by the competent authority who has issued the licence.

It shall be conducted at and under the control of a maintenance organisation appropriately approved for the maintenance of the particular aircraft type and shall be assessed by designated assessors appropriately qualified.

It shall have been started and completed within the 3 years preceding the application for a type rating endorsement.

(a) Objective:

The objective of OJT is to gain the required competence and experience in performing safe maintenance.

(b) Content:

OJT shall cover a cross section of tasks acceptable to the competent authority. The OJT tasks to be completed shall be representative of the aircraft and systems both in complexity and in the technical input required to complete that task. While relatively simple tasks may be included, other more complex maintenance tasks shall also be incorporated and undertaken as appropriate to the aircraft type.

Each task shall be signed off by the student and countersigned by a designated supervisor. The tasks listed shall refer to an actual job card/work sheet, etc.

The final assessment of the completed OJT is mandatory and shall be performed by a designated assessor appropriately qualified.

The following data shall be addressed on the OJT worksheets/logbook:

1. Name of Trainee;
2. Date of Birth;
3. Approved Maintenance Organisation;
4. Location;
5. Name of supervisor(s) and assessor, (including licence number if applicable);
6. Date of task completion;

7. Description of task and job card/work order/tech log, etc.;
8. Aircraft type and aircraft registration;
9. Aircraft rating applied for.

In order to facilitate the verification by the competent authority, demonstration of the OJT shall consist of (i) detailed worksheets/logbook and (ii) a compliance report demonstrating how the OJT meets the requirement of this Part.

## AMC to Appendix III to Part-66 'Aircraft Type Training and Examination Standard. On-the-Job Training'

*ED Decision 2015/029/R*

### **Aircraft Type Training and On-the-Job Training**

The theoretical and practical training providers, as well as the OJT provider, may contract the services of a language translator in the case where training is imparted to students not conversant in the language of the training material. Nevertheless, it remains essential that the students understand all the relevant maintenance documentation.

During the performance of examinations and assessments, the assistance of the translator should be limited to the translation of the questions, but should not provide clarifications or help in relation to those questions.

## AMC to Section 1 of Appendix III to Part-66 'Aircraft Type Training and Examination Standard. On-the-Job Training'

*ED Decision 2015/029/R*

### **Aircraft Type Training**

1. Aircraft type training may be sub-divided in airframe and/or powerplant and/or avionics/electrical systems type training courses.
  - Airframe type training course means a type training course including all relevant aircraft structure and electrical and mechanical systems excluding the powerplant.
  - Powerplant type training course means a type training course on the bare engine, including the build-up to a quick engine change unit.
  - The interface of the engine/airframe systems should be addressed by either airframe or powerplant type training course. *In some cases, such as for general aviation, it may be more appropriate to cover the interface during the airframe course due to the large variety of aircraft that can have the same engine type installed.*
  - Avionics/electrical systems type training course means type training on avionics and electrical systems covered by but not necessarily limited to ATA (Air Transport Association) Chapters 22, 23, 24, 25, 27, 31, 33, 34, 42, 44, 45, 46, 73 and 77 or equivalent.
2. Practical training may be performed either following or integrated with the theoretical elements. However, it should not be performed before theoretical training.
3. The content of the theoretical and practical training should:
  - address the different parts of the aircraft which are representative of the structure, the systems/components installed and the cabin; and

- include training on the use of technical manuals, maintenance procedures and the interface with the operation of the aircraft.

Therefore it should be based on the following elements:

- Type design including relevant type design variants, new technology and techniques;
- Feedback from in-service difficulties, occurrence reporting, etc;
- Significant applicable airworthiness directives and service bulletins;
- Known human factor issues associated with the particular aircraft type;
- Use of common and specific documentation, (when applicable, such as MMEL, AMM, MPD, TSM, SRM, WD, AFM, tool handbook), philosophy of the troubleshooting, etc.;
- Knowledge of the maintenance on-board reporting systems and ETOPS maintenance conditions where applicable;
- Use of special tooling and test equipment and specific maintenance practises including critical safety items and safety precautions;
- Significant and critical tasks/aspects from the MMEL, CDL, Fuel Tank Safety (FTS), airworthiness limitation items (ALI) including Critical Design Configuration Control Limitations (CDCCL), CMR and all ICA documentation such as MRB, MPD, SRM, AMM, etc., when applicable.
- Maintenance actions and procedures to be followed as a consequence of specific certification requirements, such as, but not limited to, RVSM (Reduced Vertical Separation Minimum) and NVIS (Night Vision Imaging Systems);
- Knowledge of relevant inspections and limitations as applicable to the effects of environmental factors or operational procedures such as cold and hot climates, wind, moisture, sand, de-icing / anti-icing, etc.

The type training does not necessarily need to include all possible customer options corresponding to the type rating described in the [Appendix I to AMC to Part-66](#).

4. Limited avionic system training should be included in the category B1 type training as the B1 privileges include work on avionics systems requiring simple tests to prove their serviceability.
5. Electrical systems should be included in both categories of B1 and B2 type training.
6. The theoretical and practical training should be complementary and may be:
  - Integrated or split
  - Supported by the use of training aids, such as trainers, virtual aircraft, aircraft components, synthetic training devices (STD), computer based training devices (CBT), etc.

## **AMC to Paragraphs 1(b), 3.2 and 4.2 of Appendix III to Part-66 'Aircraft Type Training and Examination Standard. On-the-Job Training'**

*ED Decision 2015/029/R*

### **Practical Element of the Aircraft Type Training**

1. The practical training may include instruction in a classroom or in simulators but part of the practical training should be conducted in a real maintenance or manufacturer environment.

2. The tasks should be selected because of their frequency, complexity, variety, safety, criticality, novelty, etc. The selected tasks should cover all the chapters described in the table contained in [paragraph 3.2 of Appendix III to Part-66](#).
3. The duration of the practical training should ensure that the content of training required by [paragraph 3.2 of Appendix III to Part-66](#) is completed.  
Nevertheless, for aeroplanes with a MTOM equal or above 30000kg, the duration for the practical element of a type rating training course should not be less than two weeks unless a shorter duration meeting the objectives of the training and taking into account pedagogical aspects (maximum duration per day) is justified to the competent authority.
4. The organisation providing the practical element of the type training should provide trainees a schedule or plan indicating the list of tasks to be performed under instruction or supervision. A record of the tasks completed should be entered into a logbook which should be designed such that each task or group of tasks may be countersigned by the designated assessor. The logbook format and its use should be clearly defined.
5. In [paragraph 4.2 of Appendix III to Part-66](#), the term ‘designated assessors appropriately qualified’ means that the assessors should demonstrate training and experience on the assessment process being undertaken and be authorised to do so by the organisation.  
Further guidance about the assessment and the designated assessors is provided in [Appendix III to AMC to Part-66](#).
6. The practical element (for powerplant and avionic systems) of the Type Rating Training may be subcontracted by the approved [Part-147](#) organisation under its quality system according to the provisions of [147.A.145\(d\)3](#) and the corresponding Guidance Material.

## AMC to Paragraph 1(c) of Appendix III to Part-66 ‘Aircraft Type Training and Examination Standard. On-the-Job Training’

ED Decision 2015/029/R

### Differences Training

Approved difference training is not required for different variants within the same aircraft type rating (as specified in [Appendix I to AMC to Part-66](#)) for the purpose of type rating endorsement on the aircraft maintenance licence.

However, this does not necessarily mean that no training is required before a certifying staff authorisation can be issued by the maintenance organisation (refer to [AMC 66.A.20\(b\)3](#)).

## AMC to point 3.1(d) of Appendix III to Part-66 ‘Aircraft Type Training and Examination Standard. On-the-Job Training’

ED Decision 2016/011/R

### Training Needs Analysis for the Theoretical Element of the Aircraft Type Training

1. The minimum duration for the theoretical element of the type rating training course, as described in [Appendix III to Part-66](#), has been determined based on:
  - generic categories of aircraft and minimum standard equipment fit
  - the estimated average duration of standard courses imparted in Europe

2. The purpose of the Training Needs Analysis (TNA) is to adapt and justify the duration of the course for a specific aircraft type. This means that the TNA is the main driver for determining the duration of the course, regardless of whether it is above or below the minimum duration described in [Appendix III to Part-66](#).

In the particular case of type training courses approved on the basis of the requirements valid before Regulation (EU) No 1149/2011 was applicable (1 August 2012) and having a duration for the theoretical element equal to or above the minimum duration contained in [paragraph 3.1\(c\) of Appendix III to Part-66](#), it is acceptable that the TNA only covers the differences introduced by Regulation (EU) No 1149/2011 in paragraph 3.1(e) 'Content' and the criteria introduced in paragraph 3.1(d) 'Justification of course duration' related to the minimum attendance and the maximum number of training hours per day. This TNA may result in a change in the duration of the theoretical element.

3. The content and the duration deriving from this TNA may be supported by an analysis from the Type Certificate holder.
4. In order to approve a reduction of such minimum duration, the evaluation done by the competent authority should be performed on a case-by-case basis appropriate to the aircraft type. For example, while it would be exceptional for a theoretical course for a transport category complex motor-powered aircraft such as an A330 or B757 to be below the minimum duration shown, *it would not necessarily be exceptional in the case of a General Aviation (GA) business aircraft such as a Learjet 45 or similar. Typically the TNA for a GA aircraft course would demonstrate that a course of a shorter duration satisfies the requirements.*
5. When developing the TNA the following should be considered:
  - (a) The TNA should include an analysis identifying all the areas and elements where there is a need for training as well as the associated learning objectives, considering the design philosophy of the aircraft type, the operational environment, the type of operations and the operational experience. This analysis should be written in a manner which provides a reasonable understanding of which areas and elements constitute the course in order to meet the learning objectives.
  - (b) As a minimum, the Training Need Analysis (TNA) should take into account all the applicable elements contained in [paragraph 3.1 of Part-66 Appendix III](#) and associated AMCs.
  - (c) The TNA should set-up the course content considering the Appendix III objectives for each level of training and the prescribed topics in the theoretical element table contained in [paragraph 3.1 of Part-66 Appendix III](#).
  - (d) For each chapter described in the theoretical element table contained in [paragraph 3.1 of Part-66 Appendix III](#), the corresponding training time should be recorded.
  - (e) Typical documents to be used in order to identify the areas and elements where there is a need for training typically include, among others, the Aircraft Maintenance Manual, MRB report, CMRs, airworthiness limitations, Troubleshooting Manual, Structural Repair Manual, Illustrated Parts Catalogue, Airworthiness Directives and Service Bulletins.
  - (f) During the analysis of these documents:
    - Consideration should be given to the following typical activities:
      - Activation/reactivation;
      - Removal/Installation;

- 
- Testing;
  - Servicing;
  - Inspection, check and repairs;
  - Troubleshooting / diagnosis.
  - For the purpose of identifying the specific elements constituting the training course, it is acceptable to use a filtering method based on criteria such as:
    - Frequency of the task;
    - Human factor issues associated to the task;
    - Difficulty of the task;
    - Criticality and safety impact of the task;
    - In-service experience;
    - Novel or unusual design features (not covered by [Part-66 Appendix I](#));
    - Similarities with other aircraft types;
    - Special tests and tools/equipment.
  - It is acceptable to follow an approach based on:
    - Tasks or groups of tasks, or
    - Systems or subsystems or components
- (g) The TNA should:
- Identify the learning objectives for each task, group of tasks, system, subsystem or component;
  - Associate the identified tasks to be trained to the regulatory requirements (table in [Paragraph 3.1 of Appendix III to Part-66](#));
  - Organise the training into modules in a logical sequence (adequate combination of chapters as defined in [Appendix III of Part-66](#));
  - Determine the sequence of learning (within a lesson and for the whole syllabus);
  - Identify the scope of information and level of detail with regard the minimum standard to which the topics of the TNA should be taught according to the set-up objectives.
  - Address the following:
    - Description of each system/component including the structure (where applicable);
    - System/component operation taking into account:
      - (a) Complexity of the system (e.g. the need of further break down into subsystems, etc.);
      - (b) Design specifics which may require more detailed presentation or may contribute to maintenance errors;
      - (c) Normal and emergency functioning;

- (d) Troubleshooting;
  - (e) Interpretation of indications and malfunctions;
  - (f) Use of maintenance publications;
  - (g) Identification of special tools and equipment required for servicing and maintaining the aircraft;
  - (h) Maintenance Practices;
  - (i) Routine inspections, functional or operational tests, rigging/adjustment, etc.
- Describe the following:
- The instructional methods and equipment, teaching methods and blending of the teaching methods in order to ensure the effectiveness of the training;
  - The maintenance training documentation/material to be delivered to the student;
  - Facilitated discussions, questioning session, additional practiced-oriented training, etc.;
  - The homework, if developed;
  - The training provider's resources available to the learner.
- (h) It is acceptable to differentiate between issues which have to be led by an instructor and issues which may be delivered through interactive simulation training devices and/or covered by web based elements. Overall time of the course will be allocated accordingly.
- (i) The maximum number of training hours per day for the theoretical element of type training should not be more than 6 hours. A training hour means 60 minutes of tuition excluding any breaks, examination, revision, preparation and aircraft visit. In exceptional cases, the competent authority may allow deviation from this standard when it is properly justified that the proposed number of hours follows pedagogical and human factors principles. These principles are especially important in those cases where:
- Theoretical and practical training are performed at the same time;
  - Training and normal maintenance duty/apprenticeship are performed at the same time.
- (j) The minimum participation time for the trainee in order to meet the objectives of the course should not be less than 90 % of the tuition hours of the theoretical training course. Additional training may be provided by the training organisation in order to meet the minimum participation time. If the minimum participation defined for the course is not met, a certificate of recognition should not be issued.
- (k) The TNA is a living process and should be reviewed/updated based on operation feedback, maintenance occurrences, airworthiness directives, major service bulletins impacting maintenance activities or requiring new competencies for mechanics, alert service bulletins, feedback from trainees or customer satisfaction, evolution of the maintenance documentation such as MRBs, MPDs, MMs, etc. The frequency at which the TNA should be reviewed/updated is left to the discretion of the organisation conducting the course.



NOTE: The examination is not part of the TNA. However, it should be prepared in accordance with the learning objectives described in the TNA.

## AMC to Section 5 of Appendix III to Part-66 'Aircraft Type Training and Examination Standard. On-the-Job Training'

ED Decision 2015/029/R

### Type Examination Standard

This Section 5 'Type Examination Standard' does not apply to the examination performed as part of type training. This Section only applies to those cases where type examination is performed as a substitute for type training.

## AMC to Section 6 of Appendix III to Part-66 'Aircraft Type Training and Examination Standard. On-the-Job Training'

ED Decision 2015/029/R

### On-the-Job Training (OJT)

1. 'A maintenance organisation appropriately approved for the maintenance of the particular aircraft type' means a [Part-145](#) or [M.A. Subpart F](#) approved maintenance organisation holding an A rating for such aircraft.
2. The OJT should include one to one supervision and should involve actual work task performance on aircraft/components, covering line and/or base maintenance tasks.
3. The use of simulators for OJT should not be allowed.
4. The OJT should cover at least 50% of the tasks contained in Appendix II to AMC to Part-66. Some tasks should be selected from each paragraph of the Appendix II list. Tasks should be selected among those applicable to the type of aircraft and licence (sub)category applied for. Other tasks than those in the Appendix II may be considered as a replacement when they are relevant. Typically, in addition to the variety and the complexity, the OJT tasks should be selected because of their frequency, safety, novelty, etc.
5. Up to 50% of the required OJT may be undertaken before the aircraft theoretical type training starts.
6. The organisation providing the on-the-job training should provide trainees a schedule or plan indicating the list of tasks to be performed under supervision. A record of the tasks completed should be entered into a logbook which should be designed such that each task or group of tasks is countersigned by the corresponding supervisor. The logbook format and its use should be clearly defined.
7. Regarding the day-to-day supervision of the OJT programme in the approved maintenance organisation and the role of the supervisor(s), the following should be considered:
  - It is sufficient that the completion of individual OJT tasks is confirmed by the direct supervisor(s), without being necessary the direct evaluation of the assessor.
  - During the day-to-day OJT performance, the supervision aims at overseeing the complete process, including task completion, use of manuals and procedures, observance of safety measures, warnings and recommendations and adequate behaviour in the maintenance environment.



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- The supervisor(s) should personally observe the work being performed to ensure the safe completeness and should be readily available for consultation, if needed during the OJT performance.
  - The supervisor(s) should countersign the tasks and release the maintenance tasks as the trainee is still not qualified to do so.
  - The supervisor(s) should therefore:
    - have certifying staff or support staff privileges relevant to the OJT tasks;
    - be competent for the selected tasks;
    - be safety-orientated;
    - be capable to coach (setting objectives, giving training, performing supervision, evaluating, handling trainee’s reactions and cultural issues, managing objectively and positively debriefing sessions, determining the need for extra training or reorientate the training, reporting, etc.);
    - be designated by the approved maintenance organisation to carry out the supervision.
8. Regarding the assessor, the following should be considered:
- The function of the assessor, as described in [Section 6 of Appendix III to Part-66](#), is to conduct the final assessment of the completed OJT. This assessment should include confirmation of the completion of the required diversity and quantity of OJT and should be based on the supervisor(s) reports and feedback.
  - In [Section 6 of Appendix III to Part-66](#), the term ‘designated assessor appropriately qualified’ means that the assessor should demonstrate training and experience on the assessment process being undertaken and should be authorised to do so by the organisation. Further guidance about the assessment and the designated assessors is provided in [Appendix III to AMC to Part-66](#).
9. The procedures for OJT should be included into the Exposition Manual of the approved maintenance organisation (chapter 3.15, as indicated in [AMC 145.A.70\(a\)](#)).
- However, since these procedures in the Exposition Manual are approved by the competent authority of the maintenance organisation, and providing training is not one of the privileges of a maintenance organisation, they can only be used when the licensing authority is the same as the competent authority of the maintenance organisation. In other cases, it is up to the licensing authority to decide whether it accepts such procedures for the purpose of approving the OJT (refer to [AMC 66.B.115](#)).

## Appendix IV — Experience requirements for extending a Part-66 aircraft maintenance licence

*Regulation (EU) No 1321/2014*

The table below shows the experience requirements for adding a new category or subcategory to an existing [Part-66](#) licence.

The experience shall be practical maintenance experience on operating aircraft in the subcategory relevant to the application.

The experience requirement will be reduced by 50 % if the applicant has completed an approved [Part-147](#) course relevant to the subcategory.

To From	A1	A2	A3	A4	B1.1	B1.2	B1.3	B1.4	B2	B3
A1	—	6 months	6 months	6 months	2 years	6 months	2 years	1 year	2 years	6 months
A2	6 months	—	6 months	6 months	2 years	6 months	2 years	1 year	2 years	6 months
A3	6 months	6 months	—	6 months	2 years	1 year	2 years	6 months	2 years	1 year
A4	6 months	6 months	6 months	—	2 years	1 year	2 years	6 months	2 years	1 year
B1.1	None	6 months	6 months	6 months	—	6 months	6 months	6 months	1 year	6 months
B1.2	6 months	None	6 months	6 months	2 years	—	2 years	6 months	2 years	None
B1.3	6 months	6 months	None	6 months	6 months	6 months	—	6 months	1 year	6 months
B1.4	6 months	6 months	6 months	None	2 years	6 months	2 years	—	2 years	6 months
B2	6 months	6 months	6 months	6 months	1 year	1 year	1 year	1 year	—	1 year
B3	6 months	None	6 months	6 months	2 years	6 months	2 years	1 year	2 years	—

## Appendix V — Application Form — EASA Form 19

Regulation (EU) 2015/1536

1. This Appendix contains an example of the form used for application for the aircraft maintenance licence referred to in [Annex III \(Part-66\)](#).
2. The competent authority of the Member State may modify the [EASA Form 19](#) only to include additional information necessary to support the case where the National requirements permit or require the aircraft maintenance licence issued in accordance with [Annex III \(Part-66\)](#) to be used outside the requirement of [Annex I \(Part-M\)](#) and [Annex II \(Part-145\)](#).

APPLICATION FOR INITIAL/AMENDMENT/RENEWAL OF PART-66 AIRCRAFT MAINTENANCE LICENCE (AML)	EASA FORM 19
<b>APPLICANT'S DETAILS:</b> Name: ..... Address: ..... Nationality: ..... Date and Place of Birth: .....	
<b>PART-66 AML DETAILS (if applicable):</b> ..... Licence No: ..... Date of Issue: .....	
<b>EMPLOYER'S DETAILS:</b> Name: ..... Address: ..... Maintenance Organisation Approval Reference: ..... Tel. .... Fax: .....	
<b>APPLICATION FOR: (Tick relevant boxes)</b> Initial AML <input type="checkbox"/> Amendment of AML <input type="checkbox"/> Renewal of AML <input type="checkbox"/> Rating                      A                      B1                      B2                      B3                      C Aeroplane Turbine <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Aeroplane Piston <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Helicopter Turbine <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Helicopter Piston <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Avionics <input type="checkbox"/> Piston engine non-pressurised aeroplanes of MTOM of 2t and below <input type="checkbox"/> <input type="checkbox"/> Complex motor-powered aircraft <input type="checkbox"/> Aircraft other than complex motor-powered aircraft <input type="checkbox"/> Type endorsements/Rating endorsement/Limitation removal (if applicable): .....	
I wish to apply for initial/amendment/renewal of <a href="#">Part-66</a> AML as indicated and confirm that the information contained in this form was correct at the time of application.  I herewith confirm that: 1. I am not holding any Part-66 AML issued in another Member State,	

2. I have not applied for any Part-66 AML in another Member State and
3. I never had a Part-66 AML issued in another Member State which was revoked or suspended in any other Member State.

I also understand that any incorrect information could disqualify me from holding a [Part-66](#) AML.

Signed: ..... Name: ..... Date: .....

I wish to claim the following credits (if applicable):

.....  
.....  
.....

Experience credit for [Part-147](#) training

.....  
.....  
.....

Examination credit for equivalent exam certificates

.....  
.....  
.....

Please enclose all relevant certificates

Recommendation (if applicable): It is hereby certified that the applicant has met the relevant maintenance knowledge and experience requirements of [Part-66](#) and it is recommended that the competent authority grants or endorses the Part-66 AML.

Signed: ..... Name: .....

Position: ..... Date: .....

## Appendix VI — Aircraft Maintenance Licence referred to in Annex III (Part-66): EASA Form 26

*Regulation (EU) 2015/1536*

1. An example of the aircraft maintenance licence referred to in [Annex III \(Part-66\)](#) can be found on the following pages.
2. The document shall be printed in the standardised form shown but may be reduced in size to accommodate its computer generation if desired. When the size is reduced care should be exercised to ensure sufficient space is available in those places where official seals/stamps are required. Computer generated documents need not have all the boxes incorporated when any such box remains blank so long as the document can clearly be recognised as an aircraft maintenance licence issued in accordance with [Annex III \(Part-66\)](#).
3. The document may be printed in the English or the official language of the Member State concerned, except that if the official language of the Member State concerned is used, a second English copy shall be attached for any licence holder that works outside that Member State to ensure understanding for the purpose of mutual recognition.
4. Each licence holder shall have a unique licence number based upon a National identifier and an alpha-numeric designator.
5. The document may have the pages in any order and need not have some or any divider lines as long as the information contained is positioned such that each page layout can clearly be identified with the format of the example of the aircraft maintenance licence contained herein.
6. The document may be prepared (i) by the competent authority of the Member State or (ii) by any maintenance organisation approved in accordance with [Annex II \(Part-145\)](#) if the competent authority agrees so and subject to a procedure developed as part of the maintenance organisation exposition referred to in point [145.A.70](#) of [Annex II \(Part-145\)](#), except that in all cases the competent authority of the Member State will issue the document.
7. The preparation of any change to an existing aircraft maintenance licence may be carried out (i) by the competent authority of the Member State or (ii) any maintenance organisation approved in accordance with [Annex II \(Part-145\)](#) if the competent authority agrees so and subject to a procedure developed as part of the maintenance organisation exposition referred to in point [145.A.70](#) of [Annex II \(Part-145\)](#), except that in all cases the competent authority of the Member State will change the document.
8. The aircraft maintenance licence once issued is required to be kept by the person to whom it applies in good condition and who shall remain accountable for ensuring that no unauthorised entries are made.
9. Failure to comply with point 8 may invalidate the document and could lead to the holder not being permitted to hold any certification privilege and may result in prosecution under national law.
10. The aircraft maintenance licence delivered in accordance with [Annex III \(Part-66\)](#) is recognised in all Member States and it is not necessary to exchange the document when working in another Member State.
11. The annex to [EASA Form 26](#) is optional and may only be used to include national privileges, where such privileges are covered by the national regulation outside the scope of [Annex III \(Part-66\)](#).

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12. For information the actual [Annex III \(Part-66\)](#) aircraft maintenance licence issued by the competent authority of the Member State may have the pages in a different order and may not have the divider lines.
  13. With regard to the aircraft type rating page the competent authority of the Member State may choose not to issue this page until the first aircraft type rating needs to be endorsed and will need to issue more than one aircraft type rating page when there are a number to be listed.
  14. Notwithstanding 13, each page issued will be in this format and contain the specified information for that page.
  15. The licence shall clearly indicate that the limitations are exclusions from the certification privileges. If there are no limitations applicable, the LIMITATIONS page will be issued stating 'No limitations'.
  16. Where a pre-printed format is used, any category, subcategory or type rating box which does not contain a rating entry shall be marked to show that the rating is not held.
  17. Example of Aircraft Maintenance Licence referred to in [Annex III \(Part-66\)](#)

I.  
EUROPEAN UNION (\*)  
[STATE]  
[AUTHORITY NAME & LOGO]

II.  
[Part-66](#)  
AIRCRAFT MAINTENANCE  
LICENCE

III.  
Licence No. [MEMBER STATE CODE].66.[XXXX]

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IVa. Full name of holder:

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IVb. Date and place of birth:

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V. Address of holder:

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VI. Nationality of holder:

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VII. Signature of holder:

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III. Licence No:

VIII. CONDITIONS:

This licence shall be signed by the holder and be accompanied by an identity document containing a photograph of the licence holder.

Endorsement of any categories on the page(s) entitled [Part-66 CATEGORIES](#) only, does not permit the holder to issue a certificate of release to service for an aircraft.

This licence when endorsed with an aircraft rating meets the intent of ICAO annex 1.

The privileges of the holder of this licence are prescribed by Regulation (EU) No 1321/2014 and in particular its [Annex III \(Part-66\)](#).

This licence remains valid until the date specified on the limitation page unless previously suspended or revoked.

The privileges of this licence may not be exercised unless in the preceding 2-year period the holder has had either 6 months of maintenance experience in accordance with the privileges granted by the licence, or met the provision for the issue of the appropriate privileges.

III. Licence No:

IX. <a href="#">Part-66</a> CATEGORIES					
VALIDITY:	A	B1	B2	B3	C
Aeroplanes Turbine			n/a	n/a	n/a
Aeroplanes Piston			n/a	n/a	n/a
Helicopters Turbine			n/a	n/a	n/a
Helicopters Piston			n/a	n/a	n/a
Avionics	n/a	n/a		n/a	n/a
Complex motor-powered aircraft	n/a	n/a	n/a	n/a	
Aircraft other than complex motor-powered aircraft	n/a	n/a	n/a	n/a	
Piston-engine non-pressurised aeroplanes of 2 000 kg MTOM and below	n/a	n/a	n/a		n/a

X. Signature of issuing officer & date: .....

XI. Seal or stamp of issuing Authority:

III. Licence No:

XII. PART-66 AIRCRAFT TYPE RATINGS		
Aircraft Rating	Category	Stamp & Date
III. Licence No:		

XIII. PART-66 LIMITATIONS
Valid until:
III. Licence No:

Annex to EASA FORM 26
XIV. NATIONAL PRIVILEGES outside the scope of <a href="#">Part-66</a> , in accordance with [National Legislation] (Valid only in [Member State])
Official Stamp & Date
III. Licence No:

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## APPENDICES TO AMC<sub>s</sub> TO ANNEX III (PART-66)

### Appendix I — Aircraft Type Ratings for Part-66 Aircraft Maintenance Licences

ED Decision 2015/029/R

The following aircraft type ratings should be used to ensure a common standard throughout the Member States.

The inclusion of an aircraft type in the licence does not indicate that the aircraft type has been granted a type certificate under the Regulation (EC) No 216/2008 and its Implementing Rules; this list is only intended for maintenance purposes.

In order to keep this list current and the type ratings consistent, such information should be first passed on to the Agency using the Rulemaking Enquiry form (<http://easa.europa.eu/webgate/rulemaking-enquiry/>) in case a Member State needs to issue a type rating that is not included in this list.

#### Notes on when the licences should be modified:

When a modification is introduced by this Decision to an aircraft type rating or to an engine designation in the rating which affect licences already issued, the ratings on the Aircraft Maintenance Licences (AMLs) may be modified at the next renewal or when the licence is reissued, unless there is an urgent reason to modify the licence.

#### Notes on aircraft modified by Supplemental Type Certificate (STC):

- This Appendix I intends to include the type ratings of aircraft resulting from STCs for installation of another engine. These STCs are those approved by the Agency and those approved by the Member States before 2003 and grandfathered by the Agency. Other STCs than those for engines are not considered.
  - Example: The STC from Jet Aviation Basel approved by the LBA for replacement of GE CF 700 by Honeywell TFE731 on Fan Jet Falcon Series E results in a new rating called Fan Jet Falcon E (Honeywell TFE731).
- However, the ratings from STCs for installation of an engine:
  - on part of the original airframe models, or
  - from the same manufacturer, but of a type very similar to the original one,have not been added because they would have resulted in an already existing rating.

#### Examples:

- The STC from SILVERHAWK CONVERSIONS approved by EASA for installation of PT6A-135A on Beech C90, C90A and E90 would result in the Beech C90/C90A/E90 (PWC PT6) rating, but this is not listed because it is already included in the original Beech 90 Series (PWC PT6) rating.
- The STC from Air-Service Wildgruber GmbH approved by LBA for replacement of PWC PT6A-20 by PWC PT6A-27 would result in the De Havilland DHC-6-100 (PWC PT6) rating, but this is not listed because it is already included in the De Havilland DHC-6 (PWC PT6) rating in the table.

- At the time of publication of this Decision, the Agency has not received all the information concerning STCs that have been previously approved by the Member States. As a result, not all STCs are considered by this publication.
- When the STC concerns the installation of an engine that falls under a different subcategory, e.g. replacement of a piston engine by a turbo-prop (a turbine engine), then the new type rating needs to be listed in the new subcategory.
- In case a type rating resulting from an STC has not been yet defined by the Agency, the latter shall be contacted by the competent authority to agree on a new type rating to be used.

In the following tables:

- The column ‘TC Holder’ includes the TC holder as defined in the Type Certificate Data Sheets (TCDS) (EASA, FAA or other) or the Specific Airworthiness Specifications (SAS).
- The column ‘STC Holder’ includes the STC holder as defined in the Supplemental Type Certificate Data Sheets (STCDS) (EASA, FAA or other).
- Some TC holders’ designations have been corrected to add the information: ‘Aircraft with an SAS’, this means that the aircraft listed under this TC holder designation is considered an ‘orphan aircraft’.
- In Group 3, a third column has been added which is called ‘Type of structure’ and which intends to assist the competent authorities in identifying the experience required for this type with a view on removing existing limitations on the licence.
- Wooden structure covered with fabric is considered to fall under wooden structure. For aeroplanes with a combination of structures, e.g. metal tubing fuselage and wooden wings, both experiences ‘metal tube covered with fabric’ and ‘wooden structure’ are required.
- In Group 3, a fourth column has been added which is called ‘MTOM’ and which intends to assist the competent authorities in identifying the aeroplanes types where the Maximum Take-Off Mass (MTOM) is:
  - above 2T and is subject to a B1.2 licence, or
  - 2T and below and is subject to a B1.2 or B3 licence.

GROUP 1 AEROPLANES

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GROUP 1 AEROPLANES			
TC holder	Model	Commercial designation	Part-66 Type rating endorsement
328 Support Services	328-100 series		Dornier 328-100 (PWC PW119)
	328-300 series		Dornier 328-300 (PWC PW306)
AIR TRACTOR	AT-802 Series		Air Tractor AT-800 Series (PWC PT6)
AIRBUS (Aircraft with SAS)	SN 601	Corvette	Aerospatiale SN-601 (PWC JT15D)
AIRBUS	A300 B1		Airbus A300 basic model (GE CF6)
	A300 B2-1A		

GROUP 1 AEROPLANES			
TC holder	Model	Commercial designation	Part-66 Type rating endorsement
	A300 B2-1C		
	A300 B2-202		
	A300 B2-203		
	A300 B2K-3C		
	A300 B4-102		
	A300 B4-103		
	A300 B4-203		
	A300 B4-2C		
	A300 C4-203		
	A300 F4-203		
	A300 B2-320		Airbus A300 basic model (PW JT9D)
	A300 B4-120		
	A300 B4-220		
	A300 B4-601		Airbus A300-600 (GE CF6)
	A300 B4-603		
	A300 B4-605 R		
	A300 C4-605 R Variant F		
	A300 F4-605 R		
	A300 B4-622		Airbus A300-600 (PW 4000)
	A300 B4-622 R		
	A300 F4-622 R		
	A300 B4-620		Airbus A300-600 (PW JT9D)
	A300 C4-620		
	A300F4-608ST	Beluga	Airbus A300-600ST (GE CF6)
	A310-203		Airbus A310 (GE CF6)
	A310-203 C		
	A310-221		
	A310-304		
	A310-308		
	A310-324		Airbus A310 (PW 4000)
	A310-325		
	A310-204		Airbus A310 (PW JT9D)
	A310-222		
	A310-322		
	A318-120 series		Airbus A318 (PW 6000)

<b>GROUP 1 AEROPLANES</b>			
<b>TC holder</b>	<b>Model</b>	<b>Commercial designation</b>	<b>Part-66 Type rating endorsement</b>
	A318-110 series		Airbus A318/A319/A320/A321 (CFM56)
	A319-110 series		
	A320-111		
	A320-210 series		
	A321-110 series		
	A321-210 series		
	A319-130 series		Airbus A319/A320/A321 (IAE V2500)
	A320-230 series		
	A321-130 series		
	A321-230 series		
	A319-170	A319 NEO	Airbus A319/A320/A321 (IAE PW1100G)
	A320-270	A320 NEO	
	A321-270	A321 NEO	
	A319-150	A319 NEO	Airbus A319/A320/A321 (CFM LEAP-1A)
	A320-250	A320 NEO	
	A321-250	A321 NEO	
	A330-200 series		Airbus A330 (GE CF6)
	A330-300 series		
	A330-220 series		Airbus A330 (RPW 4000)
	A330-320 series		
	A330-240 series		Airbus A330 (RR RB 211 Trent 700)
	A330-340 series		
	A340-210 series		Airbus A340 (CFM56)
	A340-310 series		
	A340-540 series		Airbus A340 (RR RB 211 Trent 500)
	A340-640 series		
	A350-900 series		Airbus A350 (RR Trent XWB)
	A380-860 series		Airbus A380 (EA GP7200)

<b>GROUP 1 AEROPLANES</b>			
<b>TC holder</b>	<b>Model</b>	<b>Commercial designation</b>	<b>Part-66 Type rating endorsement</b>
	A380-840 series		Airbus A380 (RR RB 211 Trent 900)
<b>Airbus Military Sociedad Limitada (AMSL)</b>	A400M-180		Airbus A400M (EPI TP400)
<b>AIRCRAFT INDUSTRIES</b>	L-410 M/UVP	Turbolet	Let L-410 (Walter M601)
	L-410 UVP-E	Turbolet	
	L-410 UVP-E20	Turbolet	
	L-410 UVP-E20 CARGO	Turbolet	
	L-410 UVP-E9	Turbolet	
	L-410 UVP-E-LW	Turbolet	
	L-410 UVP-LW	Turbolet	
	L-410 UVP-E20	Turbolet	Let L-410 (GE H80)
	L-410 UVP-E20 CARGO	Turbolet	
	L-420		Let L-420 (Walter M601)
<b>ALENIA AERMACCHI</b>	C-27J		Alenia C-27 (Allison/RR AE2100)
<b>ANTONOV</b>	AN-26		Antonov AN26 (Ivchenko AI-24)
	AN-26B		
<b>Antonov Aeronautical Scientific and Technical Complex (Aircraft with SAS)</b>	Antonov An-28		Antonov An-28 (ТВД)
<b>ATR-GIE Avions de Transport Régional</b>	ATR 42-200		ATR 42-200/300 series (PWC PW120)
	ATR 42-300		
	ATR 42-320		
	ATR 42-400		ATR 42-400/500/72-212A (PWC PW120)
	ATR 42-500	42-500	
	ATR 42-500	42-600	
	ATR 72-212 A	72-500	
	ATR 72-212 A	72-600	

<b>GROUP 1 AEROPLANES</b>				
<b>TC holder</b>	<b>Model</b>	<b>Commercial designation</b>	<b>Part-66 Type rating endorsement</b>	
	ATR 72-101		ATR 72-100/200 series (PWC PW120)	
	ATR 72-102			
	ATR 72-201			
	ATR 72-202			
	ATR 72-211			
	ATR 72-212			
<b>BAE SYSTEMS (OPERATIONS) Ltd</b>	BAe ATP		ATP (PWC PW120)	
	AVRO 146-RJ100		BAe 146/AVRO 146-RJ (Honeywell ALF500 Series)	
	AVRO 146-RJ115			
	AVRO 146-RJ70			
	AVRO 146-RJ85			
	BAe 146 Series 100			
	BAe 146 Series 200			
	BAe 146 Series 300			
	HP.137 Jetstream Mk.1	Jetstream 1	HP.137 (Turbomeca Astazou)	
	HP.137 Jetstream Mk.1	Jetstream 2		
	HS 748 Series 2A		HS748 (RRD Dart)	
	HS 748 Series 2B			
	HS.748 Series 1			
	HS.748 Series 2			
	Jetstream 200		Jetstream 200 (Turbomeca Astazou)	
	Jetstream 3100	Jetstream 31	Jetstream 31/32 (Honeywell TPE331)	
	Jetstream 3200	Jetstream 32/32EP		
	Jetstream 4100		Jetstream 41 (Honeywell TPE331)	
	<b>BEECHCRAFT Corporation</b>	65-90	King Air	Beech 90 Series (PWC PT6)
		65-A90		
65-A90-1				

GROUP 1 AEROPLANES			
TC holder	Model	Commercial designation	Part-66 Type rating endorsement
	65-A90-2		
	65-A90-4		
	B90		
	C90		
	C90A		
	C90GT		
	C90GTi		
	E90		
	F90		
	H90		
	200/A200		Beech 200 Series (PWC PT6)
	200C/A200C		
	200CT/A200CT		
	200T		
	B200		
	B200C		
	B200CGT		
	B200CT		
	B200GT		
	B200T		
	390	Premier 1, 1A	Beech 390 (Williams FJ44)
	99		Beech 99/100 Series (PWC PT6)
	100	King Air	
	99A		
	A100	King Air	
	A100A/C	King Air	
	A99	Airliner	
	A99A	Airliner	
	B99	Airliner	
	C99	Airliner	
	B100		

<b>GROUP 1 AEROPLANES</b>			
<b>TC holder</b>	<b>Model</b>	<b>Commercial designation</b>	<b>Part-66 Type rating endorsement</b>
	1900	Airliner	Beech 1900 (PWC PT6)
	1900C	Airliner	
	1900D	Airliner	
	300	Super King Air	Beech 300 Series (PWC PT6)
	300LW	Super King Air	
	B300	Super King Air 350	
	B300C	Super King Air 350 C	
<b>BERIEV Aircraft Company</b>	Be-200ES-E		Beriev 200 (Ivchenko D-436TP)
<b>B-N GROUP Ltd. (Britten-Norman)</b>	BN2T/-2/-2R/-4R/-4S	Turbine Islander	Britten-Norman BN2T Series (RR Corp 250)
<b>BOEING COMPANY (THE)</b>	B707-200		Boeing 707 (PW JT4)
	B707-200B		
	B707-300 Series		
	B707-400 Series		Boeing 707 (RR Conway)
	B707-100	Long Body	Boeing 707/720 (PW JT3D)
	B707-100B	Long Body	
	B707-100B	Short Body	
	B707-300B Series		
	B707-300C Series		
	B720		
	B720B		
	B727 Series		
	B727-100 Series		
	B727-100C Series		
	B727-200 Series		
	B727C Series		
	B737-100		Boeing 737-100/200 (PW JT8D)
	B737-200		



GROUP 1 AEROPLANES			
TC holder	Model	Commercial designation	Part-66 Type rating endorsement
	B737-200C		
	B737-300		Boeing 737-300/400/500 (CFM56)
	B737-400		
	B737-500		
	B737-600		Boeing 737-600/700/800/900 (CFM56)
	B737-700		
	B737-800		
	B737-900		
	B737-900ER		
	B747-100		Boeing 747-100 (PW JT9D)
	B747-200B		Boeing 747-200/300 (GE CF6)
	B747-200C		
	B747-200F		
	B747-300		
	B747-200B		Boeing 747-200/300 (PW JT9D)
	B747-200C		
	B747-200F		
	B747-300		
	B747-200B		Boeing 747-200/300 (RR RB211)
	B747-200C		
	B747-200F		
	B747-300		
	B747-400		Boeing 747-400 (GE CF6)
	B747-400F/SF(BCF)		
	B747-400		Boeing 747-400 (PW 4000)
	B747-400F/SF(BCF)		
	B747-400		Boeing 747-400 (RR RB211)
	B747-400F/SF(BCF)		
	B747-8F	Freighter	Boeing 747-8 (GE GEnx)

GROUP 1 AEROPLANES			
TC holder	Model	Commercial designation	Part-66 Type rating endorsement
	B747-8I	Intercontinental	
	B757-200		Boeing 757-200/300 (PW 2000)
	B757-200PF		
	B757-300		
	B757-200		Boeing 757-200/300 (RR RB211)
	B757-200PF		
	B757-300		
	B767-200		Boeing 767-200/300 (PW 4000)
	B767-300		
	B767-300BCF		
	B767-200		Boeing 767-200/300 (PW JT9D)
	B767-300		
	B767-300BCF		
	B767-200		Boeing 767-200/300/400 (GE CF6)
	B767-300		
	B767-300F		
	B767-300BCF		
	B767-400ER		
	B767-300		Boeing 767-300 (RR RB211)
	B777-200		Boeing 777-200/300 (GE 90)
	B777-200LR		
	B777-300ER		
	B777F	Freighter	
	B777-200		Boeing 777-200/300 (PW 4000)
	B777-300		
	B777-200		Boeing 777-200/300 (RR RB211 Trent 800)
	B777-300		
	B787-8 B787-9	Dreamliner	Boeing 787-8/-9 (GE GEnx)
	B787-8 B787-9	Dreamliner	Boeing 787-8/-9 (RR RB 211 Trent 1000)

GROUP 1 AEROPLANES			
TC holder	Model	Commercial designation	Part-66 Type rating endorsement
BOMBARDIER	BD-100-1A10	Challenger 300 Challenger 350	Bombardier BD-100-1A10 (Honeywell AS907)
	BD-500-1A10	CSeries CS100	Bombardier BD-500 Series (PW PW1500G)
	BD-500-1A11	CSeries CS300	Bombardier BD-500 Series (PW PW1500G)
	BD-700-1A10	Global Express Global 6000	Bombardier BD-700 Series (RRD BR710)
	BD-700-1A11	Global 5000 Global 5000 GVFD	
	CL600-1A11	Challenger 600	Bombardier CL-600-1A11 (Honeywell ALF502)
	CL-600-2A12 (601 Variant)	Challenger 601	Bombardier CL-600-2A12/-2B16 (variant CL 601/601-3A/3R) (GE CF34)
	CL-600-2B16 (601-3A Variant)	Challenger 601-3A	
	CL-600-2B16 (601-3R Variant)	Challenger 601-3R	
	CL-600-2B16 (CL 604 Variant)	Challenger-604 (MSN < 5701)	Bombardier CL-600-2B16 (variant CL 604) (GE CF34)
	CL-600-2B16 (CL 604 Variant)	Challenger-605 (MSN > 5701)	
	CL-600-2B19	Regional Jet Series 100	Bombardier CL-600-2B19 (GE CF34)
	CL-600-2C10	Regional Jet Series 700/701/702	Bombardier CL-600-2C10/-2D15/-2D24/-2E25 (GE CF34)
	CL-600-2D15	Regional Jet Series 705	
	CL-600-2D24	Regional Jet Series 900	
	CL-600-2E25	Regional Jet Series 1000	
	DHC-8-102	DHC-8 Series 100	
	DHC-8-103	DHC-8 Series 100	
	DHC-8-106	DHC-8 Series 100	
	DHC-8-201	DHC-8 Series 200	
DHC-8-202	DHC-8 Series 200		
DHC-8-301	DHC-8 Series 300		
DHC-8-311	DHC-8 Series 300		

GROUP 1 AEROPLANES			
TC holder	Model	Commercial designation	Part-66 Type rating endorsement
	DHC-8-314	DHC-8 Series 300	
	DHC-8-315	DHC-8 Series 300	
	DHC-8-401	DHC-8 Series 400	Bombardier DHC-8-400 (PWC PW150)
	DHC-8-402	DHC-8 Series 400	
	CL-215-1A10		Canadair CL-215 (PW R2800)
	CL-215-6B11 (CL-215T Variant)		Canadair CL-215 (PWC PW120)
	CL-215-6B11 (CL-415 Variant)		Canadair CL-415 (PWC PW123)
CESSNA AIRCRAFT Company	401/402		Cessna 400 Series (Continental)
	404		
	411		
	414		
	421		
	425	Corsair/ Conquest I	Cessna 425 (PWC PT6)
	441		Cessna 441 (Honeywell TPE331)
	500	Citation/ Citation I	Cessna 500/ 501 (PWC JT15D)
	501	Citation I	
	510		Cessna 510 (PWC PW615)
	525	Citation Jet CJ1 Citation M2	Cessna 525/525A (Williams FJ 44)
	525A	Citation Jet CJ2	
	525B	Citation Jet CJ3	Cessna 525B (Williams FJ 44)
	525C	Citation Jet CJ4	Cessna 525C (Williams FJ 44)
	550	Citation II	Cessna 550/551/560 (PWC JT15D)
	560	Citation V	
	560	Citation Ultra	
	S550	Citation S/II	
	551	Citation II	
	550	Citation Bravo	Cessna 550/560 (PWC PW530/535)
	560	Citation Encore	
	560	Citation Encore +	
	560 XL	Citation XLS	Cessna 560XL/XLS (PWC PW545)
560 XL	Citation XLS+		
560 XL	Citation Excel		
650	Citation III, VI	Cessna 650 (Honeywell TFE731)	

<b>GROUP 1 AEROPLANES</b>			
<b>TC holder</b>	<b>Model</b>	<b>Commercial designation</b>	<b>Part-66 Type rating endorsement</b>
	650	Citation VII	
	680	Sovereign Sovereign+	Cessna 680 (PWC PW306)
	750	Citation X	Cessna 750 (RR Corp AE3007C)
<b>DASSAULT AVIATION</b>	Falcon 10		Falcon 10 (Honeywell TFE731)
	Fan Jet Falcon	(Basic) Fan Jet Falcon	Falcon 20 (GE CF700)
	Fan Jet Falcon Series C		
	Fan Jet Falcon Series D		
	Fan Jet Falcon Series E		
	Fan Jet Falcon Series F		
	Fan Jet Falcon Series G		Falcon 200 (Honeywell ATF 3-6)
	Mystère Falcon 200		
	Mystère Falcon 20GF		
	Falcon 2000		Falcon 2000 (CFE 738)
	Falcon 2000EX		Falcon 2000EX (PWC PW308)
	Falcon 2000EX	F2000EX EASy	Falcon 2000EX EASy (PWC PW308)
		F2000DX F2000LX F2000LXS F2000S	
	Mystère Falcon 20-C5		Falcon 20-5 (Honeywell TFE731)
	Mystère Falcon 20-D5		
	Mystère Falcon 20-E5		
	Mystère Falcon 20-F5		
	Mystère Falcon 50		
	Mystère Falcon 50	F50EX	Falcon 50EX (Honeywell TFE731)
	Falcon 7X		Falcon 7X (PWC PW307A)
Mystère Falcon 900		Falcon 900 (Honeywell TFE731)	

<b>GROUP 1 AEROPLANES</b>			
<b>TC holder</b>	<b>Model</b>	<b>Commercial designation</b>	<b>Part-66 Type rating endorsement</b>
	Mystère Falcon 900	F900B	
	Mystère Falcon 900	F900C	Falcon 900C (Honeywell TFE731)
	Falcon 900EX		Falcon 900EX (Honeywell TFE731)
	Falcon 900EX	F900EX EASy	Falcon 900EX EASy (Honeywell TFE731)
	Falcon 900EX	F900DX	
	Falcon 900EX	F900LX	
<b>DORNIER Seastar</b>	Seastar CD2		Dornier Seastar CD2 (PWC PT6)
<b>EADS CASA</b>	C-212-CB	Aviocar	CASA C-212 (Honeywell TPE331)
	C-212-CC	Aviocar	
	C-212-CD	Aviocar	
	C-212-CE	Aviocar	
	C-212-CF	Aviocar	
	C-212-DD	Aviocar	
	C-212-DF	Aviocar	
	C-212-EE	Aviocar	
	C-212-VA	Aviocar	
	C-212-DE	Aviocar	CASA C-212 (PWC PT6)
	C-295		CASA C-295 (PWC PW127)
	CN-235		CASA CN-235 (GE CT7)
	CN-235-100		
	CN-235-200		
	CN-235-300		
<b>ECLIPSE AEROSPACE Inc.</b>	EA500		Eclipse EA500 (PWC PW610)
<b>EMBRAER</b>	EMB-110P1	Bandeirante	Embraer EMB-110 (PWC PT6)
	EMB-110P2	Bandeirante	
	EMB-121A	Xingu I	Embraer EMB-121 (PWC PT6)
	EMB-121A1	Xingu II	
	EMB-120	Brasilia	Embraer EMB-120 (PWC PW110 Series)
	EMB-120ER	Brasilia	
	EMB-120RT	Brasilia	
	EMB-135BJ	Legacy 600 Legacy 650	Embraer EMB-135/145 (RR Corp AE3007A)
	EMB-135ER		
EMB-135LR			

GROUP 1 AEROPLANES			
TC holder	Model	Commercial designation	Part-66 Type rating endorsement
	EMB-145		
	EMB-145EP		
	EMB-145ER		
	EMB-145EU		
	EMB-145LR		
	EMB-145LU		
	EMB-145MK		
	EMB-145MP		
	EMB-500	Phenom 100	Embraer EMB-500 (PWC PW617)
	EMB-505	Phenom 300	Embraer EMB-505 (PWC PW535)
	EMB-545	Legacy 450	Embraer EMB-545/550 (Honeywell AS907)
	EMB-550	Legacy 500	
	ERJ 170-100 LR	ERJ-170	Embraer ERJ-170 Series (GE CF34)
	ERJ 170-100 STD	ERJ-170	
	ERJ 170-200 LR	ERJ-175	
	ERJ 170-200 STD	ERJ-175	
	ERJ 190-100 ECJ	Lineage 1000	Embraer ERJ-190 Series (GE CF34)
	ERJ 190-100 IGW	ERJ-190 AR	
	ERJ 190-100 LR	ERJ-190	
	ERJ 190-100 SR	ERJ-190	
ERJ 190-100 STD	ERJ-190		
ERJ 190-200 IGW	ERJ-195 AR		
ERJ 190-200 LR	ERJ-195		
ERJ 190-200 STD	ERJ-195		
MARYLAND AIR INDUSTRIES (FOKKER-FAIRCHILD)	F-27A to -M		Fokker F27/Fairchild F-27/FH-227 Series (RRD Dart)
	FH-227		
	FH-227B		
	FH-227C		
	FH-227D		
	FH-227E		

<b>GROUP 1 AEROPLANES</b>			
<b>TC holder</b>	<b>Model</b>	<b>Commercial designation</b>	<b>Part-66 Type rating endorsement</b>
<b>FOKKER SERVICES</b>	F27 Mark 100	Friendship	
	F27 Mark 200	Friendship	
	F27 Mark 300	Friendship	
	F27 Mark 400	Friendship	
	F27 Mark 500	Friendship	
	F27 Mark 600	Friendship	
	F27 Mark 700	Friendship	
<b>FOKKER SERVICES</b>	F27 Mark 050	Fokker 50	Fokker 50/60 Series (PWC PW 125/127)
	F27 Mark 0502	Fokker 50	
	F27 Mark 0604	Fokker 60	
	F28 Mark 0070	Fokker 70	Fokker 70/100 (RRD Tay)
	F28 Mark 0100	Fokker 100	
	F28 Mark 1000	Fellowship	Fokker F28 Series (RRD Spey)
	F28 Mark 1000C	Fellowship	
	F28 Mark 2000	Fellowship	
	F28 Mark 3000	Fellowship	
	F28 Mark 3000C	Fellowship	
	F28 Mark 3000R	Fellowship	
	F28 Mark 3000RC	Fellowship	
	F28 Mark 4000	Fellowship	
<b>GOVERNMENT AIRCRAFT FACTORIES (ASTA)</b>	N22/N22A to N22S N24/N24A		Nomad N22/24 Series (RR Corp 250)
<b>GROB Aircraft AG</b>			Grob G 520 Series (Honeywell TPE331)
<b>GULFSTREAM AEROSPACE Corporation</b>	G-1159	Gulfstream II	Gulfstream G-1159 Series (RRD Spey)
	G-1159A	Gulfstream IIB	
	G-1159B	Gulfstream III	
	G-159	Gulfstream I	Gulfstream G-159 (RRD Dart)
	GIV (G300)	Gulfstream G300	Gulfstream G-IV Series (RRD Tay)
	GIV (G400)	Gulfstream G400	
	G-IV/GIV-SP	Gulfstream G-IV/GIV-SP	



<b>GROUP 1 AEROPLANES</b>			
<b>TC holder</b>	<b>Model</b>	<b>Commercial designation</b>	<b>Part-66 Type rating endorsement</b>
	GIV-X (G350)	Gulfstream G350	Gulfstream GIV-X Series (RRD Tay)
	GIV-X (G450)	Gulfstream G450	
	GV	Gulfstream GV	Gulfstream GV basic model (RRD BR710)
	GV-SP (G500)	Gulfstream G500	Gulfstream GV-SP Series (RRD BR710)
	GV-SP (G550)	Gulfstream G550	
	GVI	G650	Gulfstream GVI (RRD BR725)
<b>GULFSTREAM AEROSPACE LP (GALP) c/o Israel Aircraft Industries</b>	1125 Westwind Astra		Gulfstream (IAI) 100/1125/Astra SPX (Honeywell TFE731)
	Astra SPX		
	G100	Gulfstream 100	
	Gulfstream 200/IAI Galaxy	Galaxy 200	Gulfstream (IAI) 200/Galaxy (PWC PW306)
	Gulfstream G150	Gulfstream G150	Gulfstream (IAI) G150 (Honeywell TFE731)
	Gulfstream G280	Gulfstream G280	Gulfstream (IAI) G280 (Honeywell AS907)
<b>HAWKER BEECHCRAFT</b>	400	Beechjet	Beech 400/Mitsubishi MU-300 (PWC JT15)
	400A	Beechjet (Hawker 400XP)	
	400T	Beechjet	
	MU-300	Diamond I/IA	
	MU-300-10	Diamond II	
	BH.125 series 400	'Beechcraft Hawker'	BAe 125 Series (RR Viper)
	BH.125 series 600	'Beechcraft Hawker'	
	DH.125 series 1	'Hawker Siddeley'	
	DH.125 series 3	'Hawker Siddeley'	
	DH.125 series 400	'Hawker Siddeley'	
	HS.125 series 1	'Hawker Siddeley'	

GROUP 1 AEROPLANES				
TC holder	Model	Commercial designation	Part-66 Type rating endorsement	
	HS.125 series 3	'Hawker Siddeley'		
	HS.125 series 400	'Hawker Siddeley'		
	HS.125 series 600	'Hawker Siddeley'		
	HS.125 series F3	'Hawker Siddeley'		
	HS.125 series F400	'Hawker Siddeley'		
	HS.125 series F600	'Hawker Siddeley'		
	BAe.125 series 800			BAe 125 Series 700/800 (Honeywell TFE731)
	BH.125 series 400	'Beechcraft Hawker'		
	BH.125 series 600	'Beechcraft Hawker'		
	DH.125 series 1	'Hawker Siddeley'		
	DH.125 series 3	'Hawker Siddeley'		
	DH.125 series 400	'Hawker Siddeley'		
	Hawker 800			
	HS.125 series 3	'Hawker Siddeley'		
	HS.125 series 600	'Hawker Siddeley'		
	HS.125 series 700	'Hawker Siddeley'		
	HS.125 series F3	'Hawker Siddeley'		
	HS.125 series F400	'Hawker Siddeley'		
	HS.125 series F600	'Hawker Siddeley'		
	BAe.125 series 1000A/B		BAe 125 Series 1000 (PWC PW305)	
	Hawker 1000			
	Hawker 750	Hawker 750	BAe 125 Series 750/800XP/850XP/900XP (Honeywell TFE731)	
	Hawker 800XP	Hawker 800XP		
	Hawker 850XP	Hawker 850XP		

<b>GROUP 1 AEROPLANES</b>			
<b>TC holder</b>	<b>Model</b>	<b>Commercial designation</b>	<b>Part-66 Type rating endorsement</b>
	Hawker 900XP	Hawker 900XP	
	4000	Hawker 4000	Hawker 4000 (PWC PW308)
<b>ISRAEL AIRCRAFT INDUSTRIES</b>	IAI 1121	Jetcommander	IAI 1121/1123 (GE CJ610)
	IAI 1121A	Jetcommander	
	IAI 1121B	Jetcommander	
	IAI 1123	Commodore Jet	
	IAI 1124	Westwind	IAI 1124 (Honeywell TFE731)
	IAI 1124A	Westwind	
<b>JSC Sukhoi Civil Aircraft</b>	RRJ-95B	Superjet 100	RRJ-95 (PowerJet SaM146)
<b>KELOWNA (Convair)</b>	440		Convair 580 (RR Corp 501)
<b>LEARJET</b>	LJ 23		Learjet 23 (GE CJ610)
	24 /24A		Learjet 24/25 (GE CJ610)
	24B/24B-A		
	24C		
	24D/24D-A		
	24E		
	24F/24F-A		
	25		
	25A		
	25B		
	25C		
	25D		
	25F		
	31/31A		Learjet 31 (Honeywell TFE731)
	35/35A		Learjet 35/36 (Honeywell TFE731)
	36/36A		
	55/55B/55C		Learjet 55 (Honeywell TFE731)
	Learjet 60	LJ60 LJ60XR	Learjet 60 (PWC PW305)
	Learjet 40	LJ45 LJ40XR	Learjet Model 45 (Honeywell TFE731)

<b>GROUP 1 AEROPLANES</b>			
<b>TC holder</b>	<b>Model</b>	<b>Commercial designation</b>	<b>Part-66 Type rating endorsement</b>
	Learjet 45	LJ45 LJ 45XR	
	Learjet 70	LJ 70	
	Learjet 75	LJ 75	
<b>LOCKHEED MARTIN Corporation</b>	1329-25	JetStar II	Lockheed 1329 (Honeywell TFE731)
	1329-23D	JetStar	Lockheed 1329 PW (PW JT12)
	Model 188C	Electra	Lockheed 188 (RR Corp 501)
	Model L188A	Electra	
	382G	Hercules	Lockheed 382 (RR Corp 501)
	L-1011-385-1	TriStar	Lockheed L-1011 (RR RB211)
	L-1011-385-1-15	TriStar	
	L-1011-385-3	TriStar	
<b>M7 AEROSPACE</b>	SA-26-T		Fairchild SA26-T (PWC PT6)
	SA26AT		Fairchild SA26 AT (Honeywell TPE331)
	SA226-AT		Fairchild SA226 Series (Honeywell TPE331)
	SA226-T		
	SA226-T(B)		
	SA226-TC		
	SA227-AC	Swearingen Metro	
	SA227-AT		
	SA227-BC	Swearingen Metro	
	SA227-CC		
	SA227-DC		
	SA227-TT		
	SA227-PC	Swearingen Metro	Fairchild SA227 Series (PWC PT6)
	<b>McDONNELL DOUGLAS Corporation BOEING COMPANY</b>	DC-10-10	
DC-10-30			
DC-10-30F			
DC-8 Series 70			DC-8 (CFM56)
DC-8 Series 70F			

GROUP 1 AEROPLANES			
TC holder	Model	Commercial designation	Part-66 Type rating endorsement
	DC-8 Series 50		DC-8 (PW JT3D)
	DC-8 Series 60		
	DC-8 Series 60F		
	DC-8F		
	DC-8 Series 40		DC-8 (RR Conway)
	DC-9-10 Series		DC-9 (PW JT8D)
	DC-9-20 Series		
	DC-9-30 Series		
	DC-9-40 Series		
	DC-9-50 Series		
	717-200		MD 717-200 (RRD BR700-715)
	MD-11		MD-11 (GE CF6)
	MD-11F		
	MD-11		MD-11 (PW 4000)
	DC-9-81 (MD-81) Series	MD-81	MD-80 Series (PW JT8D)
	DC-9-82 (MD-82) Series	MD-82	
	DC-9-83 (MD-83) Series	MD-83	
DC-9-87 (MD-87) Series	MD-87		
MD-88			
MD-90 Series		MD-90 (IAE V2500)	
MITSUBISHI Heavy Industries	MU-2B-26A		Mitsubishi MU-2B (Honeywell TPE331)
	MU-2B-36A		
	MU-2B-40		
	MU-2B-60		
PIAGGIO Aero Industries	P.166 DP1		Piaggio P166 (PWC PT6)
	P180	Avanti	Piaggio P180 Avanti/Avanti II (PWC PT6)
	P180	Avanti II	
PILATUS AIRCRAFT	PC-12		Pilatus PC-12 (PWC PT6)
	PC-12/45		
	PC-12/47		

<b>GROUP 1 AEROPLANES</b>			
<b>TC holder</b>	<b>Model</b>	<b>Commercial designation</b>	<b>Part-66 Type rating endorsement</b>
	PC-12/47E		
<b>PIPER AIRCRAFT</b>	PA31T to T3	Cheyenne	Piper PA-31T Series (PWC PT6)
	PA-42-1000	Cheyenne 400LS	Piper PA-42 (Honeywell TPE-331)
	PA-42	Cheyenne III	Piper PA-42 (PWC PT6)
	PA-42-720	Cheyenne IIIA	
	PA-42-720R		
	PA-46-500TP	Malibu Meridian	Piper PA-46-500TP (PWC PT6)
<b>POLSKIE ZAKLADY LOTNICZE</b>	PZL M28 00		PZL M 28 (PWC PT6)
	PZL M28 02		
	PZL M28 05		
<b>ASI AVIATION</b>	F 406	Caravan II	Reims-Cessna F 406 (PWC PT6)
<b>RJAG Aerospace Services GmbH</b>	DO 28 D-6 Dornier 128-6		Dornier Do 28 Series (PWC PT6)
	228-100 series		Dornier 228 (Honeywell TPE331)
	228-200 series		
<b>SAAB AB, SAAB Aerosystems</b>	340A(SF340A)	Saab-Fairchild 340A	Saab (SF) 340 (GE CT7)
	340B		
	2000		Saab 2000 (RR Corp AE2100)
<b>SABRELINER Corporation</b>	NA-265-65		Sabreliner NA-265 (Honeywell TFE731)
	NA-265-65		Sabreliner NA-265 (PW JT12)
<b>SHORT BROTHERS</b>	SC7 Series 3	Skyvan	Shorts SC7 (Honeywell TPE331)
	SD3-30	Variant 200	Shorts SD3 Series-30/SD3-60 (PWC PT6)
	SD3-60	Variant 200	
	SD3-60 SHERPA	Variant 200	
	SD3-SHERPA	Variant 200	
<b>SOCATA</b>	TBM 700 A		Socata TBM 700 Series (PWC PT6)
	TBM 700 B		
	TBM 700 C1		
	TBM 700 C2		

GROUP 1 AEROPLANES			
TC holder	Model	Commercial designation	Part-66 Type rating endorsement
	TBM 700 N	TBM 850	
		TBM 900	
TUPOLEV PSC	TU 204-120CE		Tupolev TU 204 (RR RB211)
TWIN COMMANDER AIRCRAFT Corporation	681		Twin Commander 680/681/690/695 Series (Honeywell TPE331)
	690		
	695		
	680-T		
	680-V		
	680-W		
	690A		
	690B		
	690C		
	690D		
	695A		
	695B		
VIKING AIR (Bombardier) (De Havilland)	DHC-6-1	Twin Otter	De Havilland DHC-6 (PWC PT6)
	DHC-6-100/110		
	DHC-6-200/210		
	DHC-6-300/310/320		
	DHC-6-400		
	DHC-7-100		
	DHC-7-101		
	DHC-7-102		
	DHC-7-103		
	DHC-7-110		
	DHC-7-111		
	VULCANAIR	AP68TP300	Spartacus
AP68TP600		Viator	
SF600			Vulcanair SF600 (RR Corp 250)
SF600A			

## STCs in AEROPLANES GROUP 1

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GROUP 1 AEROPLANES			
STC holder	Model	Commercial designation	Part-66 Type rating endorsement
GOMOLZIG FLUGZEUG-UND MASCHINENBAU	Dornier Do 28 D-2		Dornier Do 28 (Walter M601)
JET AVIATION AG	Fan Jet Falcon Series E		Falcon 20E (Honeywell TFE731)
NEXTANT AEROSPACE, L.L.C.	Beech 400A		Beech 400A (Williams FJ44)

## GROUP 1 HELICOPTERS

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GROUP 1 HELICOPTERS			
TC holder	Model	Commercial Designation	Part-66 Type rating endorsement
AGUSTAWESTLAND	A109E		Agusta A109 Series (PWC PW206/207)
	A109N		
	A109S		
	AW109SP		
	A109		Agusta A109 Series (RR Corp 250)
	A109A		
	A109AII		
	A109C		
	A109K2		Agusta A109 (Turbomeca Arriel 1)
	A109E		Agusta A109 Series (Turbomeca Arrius 2)
	A109LUH		
	AB139		Agusta AB139/AW139 (PWC PT6)
	AW139		
	EH101-500 Series		Agusta/Westland EH-101 (GE CT7)
	EH101-510 Series		
	EH101-300		
	AW169		AW169 (PWC 210)
AW189		AW189 (GE CT7)	
AB 212		Bell 212/Agusta AB212 (PWC PT6)	
BELL HELICOPTER TEXTRON, INC.	212		
AGUSTA	AB 204 B Series		Agusta AB204, AB205/Bell 204, 205 (Honeywell T53)
	AB 205 A1		
	204B		



GROUP 1 HELICOPTERS			
TC holder	Model	Commercial Designation	Part-66 Type rating endorsement
BELL HELICOPTER TEXTRON, INC.	205A-1		
BELL HELICOPTER TEXTRON, INC	412		Bell 412/Agusta AB412 (PWC PT6)
	412EP		
	412CF		
AGUSTA	AB 412		
	AB 412 EP		
BELL HELICOPTER TEXTRON	214B		Bell 214 (Honeywell T5508)
	214B-1		
	214ST		Bell 214ST(GE CT7)
BELL HELICOPTER CANADA	222		Bell 222 (Honeywell LTS 101)
	222B		
	222U		
	230	230 Executive	Bell 230 (RR Corp 250)
	230	230 Utility	
	230	230 EMS	
	427		Bell 427 (PWC PW207D)
	429		Bell 429 (PWC PW207D)
	430		Bell 430 (RR Corp 250)
ERICKSON AIR-CRANE	EAC S-64F		Erickson S-64 (PW JFTD 12)
AIRBUS HELICOPTERS	SA 330 J		Eurocopter SA 330 (Turbomeca Turmo)
	AS 332 C		Eurocopter AS 332 (Turbomeca Makila 1A/1A1)
	AS 332 L		
	AS 332 C1		
	AS 332 L1		
	AS 332 L2		
	AS 355 E		Eurocopter AS 355 (RR Corp 250)
	AS 355 F		
	AS 355 F1		
	AS 355 F2		
	AS 355 N		Eurocopter AS 355 (Turbomeca Arrius 1)
	AS 355 NP		
	SA 365 N		Eurocopter SA 365 N/N1, AS 365 N2 (Turbomeca Arriel 1)
	SA 365 N1	Dauphin	
	AS 365 N2	Dauphin	

GROUP 1 HELICOPTERS			
TC holder	Model	Commercial Designation	Part-66 Type rating endorsement
	AS 365 N3	Dauphin	Eurocopter AS 365 N3 (Turbomeca Arriel 2C)
	EC 155 B		Eurocopter EC 155 (Turbomeca Arriel 2)
	EC 155 B1		
	EC 175 B		Eurocopter EC 175 (PWC PT6C)
	EC 225 LP		Eurocopter EC 225 (Turbomeca Makila 2A)
	SA 365 C	Dauphin	Eurocopter SA 365 C Series (Turbomeca Arriel 1)
	SA 365 C1	Dauphin	
	SA 365 C2	Dauphin	
	SA 365 C3	Dauphin	
	SA 366 G1	Dauphin	Eurocopter SA 366 G1 Series (Lycoming LTS101)
Philippine Aerospace Development Corp	P-BO 105 C P-BO 105 S		BO 105 series (RR Corp 250)
AIRBUS HELICOPTERS DEUTSCHLAND GmbH	BO 105 A		BO 105 series (RR Corp 250)
	BO 105 C		
	BO 105 D Series		
	BO 105 LS A-1		
	BO 105 LS A-3		
	BO 105 S		
	EC 135 P1		
	EC 135 P2		
	EC 135 P2+		
	EC 135 P3		
	EC 635 P2+		
	EC 635 P3		
	EC 135 T1		Eurocopter EC 135 (Turbomeca Arrius 2B)
	EC 135 T2		
	EC 135 T2+		
	EC 135 T3		
	EC 635 T1		
	EC 635 T2+		
	EC 635 T3		
	MBB-BK 117 A Series		Eurocopter MBB-BK 117 A/B (Honeywell LTS 101)
	MBB-BK 117 B Series		
	MBB-BK 117 C1		Eurocopter MBB-BK 117 C1 (Turbomeca Arriel 1)

GROUP 1 HELICOPTERS			
TC holder	Model	Commercial Designation	Part-66 Type rating endorsement
	MBB-BK 117 C2	EC145	Eurocopter MBB-BK 117 C2 (Turbomeca Arriel 1)
	MBB-BK 117 D2	EC145 T2 H145	Eurocopter MBB-BK 117 D2 (Turbomeca Arriel 2)
KAMAN AEROSPACE CORPORATION	K-1200		Kaman K-1200 (Honeywell T5317)
KAMOV	Ka-32A11BC		Kamov Ka 32 (Klimov)
MD HELICOPTERS, Inc.	MD900		MD Helicopters MD900 (PWC PW206/207)
PZL-ŚWIDNIK	W-3A		PZL-Swidnik W-3A/W-3AS (Rzeszow PZL-10W)
	W-3AS		
AGUSTA	AS61N		Agusta AS61N/Sikorsky S-61N (GE CT58)
	AS61NI		
SIKORSKY AIRCRAFT	S-61N		
	S-61NM		
	S-58 BT to JT		Sikorsky S-58 (PWC PT6T)
	S-76A		Sikorsky S-76A (RR Corp 250)
	S-76A	S-76A+	Sikorsky S-76 (Turbomeca Arriel 1)
	S-76A	S-76A++	
	S-76B	S-76B	Sikorsky S-76B (PWC PT6)
	S-76C		Sikorsky S-76C (Turbomeca Arriel 1)
	S-76C	S-76C+	Sikorsky S-76C (Turbomeca Arriel 2)
	S-76C	S-76C++	
	S-76D		Sikorsky S-76D (PW210S)
	S-92A		Sikorsky S-92A (GE CT7-8)

### STCs in HELICOPTERS GROUP 1

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GROUP 1 HELICOPTERS			
STC holder	Model	Commercial Designation	Part-66 Type rating endorsement
Heli-Air Inc.	Bell 222		Bell 222 (RR Corp 250)

SUBGROUP 2a: SINGLE TURBO-PROPELLER ENGINE AEROPLANES (Other than those in Group 1)

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SUBGROUP 2a: SINGLE TURBO-PROPELLER ENGINE AEROPLANES (Other than those in Group 1)	
TC holder	Part-66 Type rating endorsement
AERO VODOCHODY	Aero Ae-270 (PWC PT6)
AIR TRACTOR	Air Tractor AT-302 (Lycoming LTP-101)
	Air Tractor AT-400/500/600 Series (PWC PT6)
ALENIA AERMACCHI	Aermacchi SF260 (RR Corp 250)
ALLIED AG CAT Productions	Grumman G-164 (PWC PT6)
CESSNA AIRCRAFT Company	Cessna (Soloy) 206/207 (RR Corp 250)
	Cessna 208 Series (PWC PT6)
	Cessna 210 (RR Corp 250)
EADS PZL 'WARSZAWA-OKECIE'	EADS PZL PZL-106 BT (Walter M601)
	EADS PZL PZL-106 BTU (PWC PT6)
EXTRA Flugzeugproduktions- und Vertriebs-GmbH	Extra EA-400-500 (RR Corp 250)
GROB Aircraft AG	Grob G 120TP (RR Corp 250)
MAULE AEROSPACE TECHNOLOGY	Maule MX-7 (RR Corp 250)
PACIFIC AEROSPACE Corporation	PAC 750XL (PWC PT6)
PILATUS AIRCRAFT	Pilatus PC-6 Series (Turbomeca Astazou)
	Pilatus PC-6 (PWC PT6)
	Pilatus PC-6 Series (Honeywell TPE 331)
THRUSH AIRCRAFT	Ayres S2R Series (PWC PT6)
VIKING AIR (Bombardier) (De Havilland)	De Havilland DHC-2 (PWC PT6)
ZLIN AIRCRAFT	Zlin Z-37 T Series (Walter M601)

STCs in AEROPLANES SUBGROUP 2a

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SUBGROUP 2a: SINGLE TURBO-PROPELLER ENGINE AEROPLANES (Other than those in Group 1)	
STC holder	Part-66 Type rating endorsement
AERO TWIN, Inc. / SUPERVAN SYSTEMS, LTD.	Cessna 208/208B (Honeywell TPE331)
JETPROP, LLC.	Piper PA-46 Pressurised (PWC PT6)
SOLOY, LLC	Cessna 206 (RR Corp 250)

SUBGROUP 2a:		SINGLE TURBO-PROPELLER ENGINE AEROPLANES (Other than those in Group 1)
STC holder	Part-66 Type rating endorsement	
SOLOY, LLC	Cessna 207 (RR Corp 250)	
WEST PACIFIC AIR, LLC	Beech 36TC (PWC PT6)	

SUBGROUP 2b: SINGLE TURBINE ENGINE HELICOPTERS (Other than those in Group 1)

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SUBGROUP 2b: SINGLE TURBINE ENGINE HELICOPTERS (Other than those in Group 1)			
TC holder	Model	Commercial Designation	Part-66 Type rating endorsement
AGUSTA	A119	Koala	Agusta A119/ Agusta AW119MkII (PWC PT6)
	AW119 MkII	Koala	
BELL HELICOPTER CANADA	407		Bell 407 (RR Corp 250)
AGUSTA	AB 206A		Agusta AB206/Bell 206 (RR Corp 250)
	AB 206B		
BELL HELICOPTER TEXTRON CANADA LIMITED	206 Series from A to L		
THE ENSTROM HELICOPTER CORPORATION	480/480B		Enstrom 480 (RR Corp 250)
AIRBUS HELICOPTERS	AS 350 B	Écureuil	Eurocopter AS 350 (Turbomeca Arriel 1)
	AS 350 B1		
	AS 350 B2		
	AS 350 BA		
	AS 350 BB		
	AS 350 B3		Eurocopter AS 350 (Turbomeca Arriel 2)
	AS 350 D		Eurocopter AS 350 (Honeywell LTS 101)
	EC 120 B	Colibri	Eurocopter EC 120 (Turbomeca Arrius 2F)
	EC 130 B4 EC 130 T2		Eurocopter EC 130 (Turbomeca Arriel 2)
	SA 315 B	Lama	Eurocopter SA 315B (Turbomeca Artouste)
	SA 3180 SA 318 B SA 318 C	Alouette-Astazou	Eurocopter SA 318 (Turbomeca Astazou)
	SA 319 B	Alouette III	Eurocopter SA 319 (Turbomeca Astazou XIV)

<b>SUBGROUP 2b: SINGLE TURBINE ENGINE HELICOPTERS (Other than those in Group 1)</b>			
<b>TC holder</b>	<b>Model</b>	<b>Commercial Designation</b>	<b>Part-66 Type rating endorsement</b>
	SA 341 G	Gazelle	Eurocopter SA 341 (Turbomeca Astazou)
	SA 342 J	Gazelle	Eurocopter SA 342 J (Turbomeca Astazou XIV)
	SE 3160	Alouette III	Eurocopter SA 316 B/SA 316 C (Turbomeca Artouste)
	SA 316 B		
	SA 316 C		
MD HELICOPTERS INC. (MDHI)	369 H series		MD Helicopters 369 Series/SEI NH-500D (RR Corp 250)
	369 D, E and FF		
Mecaer Aviation Group	NH-500D		
MD HELICOPTERS INC. (MDHI)	500N		MD Helicopters 500N/600N AMD500N (RR Corp 250)
	600N		
Mecaer Aviation Group	AMD-500N		
PZL-ŚWIDNIK	SW-4		PZL SW-4 (RR Corp 250)
ROBINSON HELICOPTER COMPANY	R66		Robinson R66 (RR Corp 250)
SCHWEIZER AIRCRAFT CORPORATION	269D		Schweizer 269D (RR Corp 250)

**SUBGROUP 2c: SINGLE PISTON-ENGINE HELICOPTERS (Other than those in Group 1)**
*ED Decision 2015/029/R*

<b>SUBGROUP 2c: SINGLE PISTON-ENGINE HELICOPTERS (Other than those in Group 1)</b>			
<b>TC holder</b>	<b>Model</b>	<b>Commercial Designation</b>	<b>Part-66 Type rating endorsement</b>
ANTARES INTERNATIONAL (Aircraft with SAS)	SH-4		Silvercraft SH-4 (Franklin)
BRANTLY INTERNATIONAL, INC.	B-2		Brantly B2 (Lycoming)
HELICOPTÈRES GUIMBAL	G2	Cabri	Cabri G2 (Lycoming)
THE ENSTROM HELICOPTER CORPORATION	F-28 series		Enstrom F-28/280 (Lycoming)
	280 series		
Mecaer Aviation Group	NH 300C	Model 300C	Schweizer/Breda Nardi 269/300 (Lycoming)
SCHWEIZER AIRCRAFT CORPORATION	269A	Model 300C	
	269B	Model 300C	
	269C	Model 300C	
	269C-1	Model 300C	

SUBGROUP 2c: SINGLE PISTON-ENGINE HELICOPTERS (Other than those in Group 1)			
TC holder	Model	Commercial Designation	Part-66 Type rating endorsement
ROBINSON HELICOPTER COMPANY	R22		Robinson R22/R44 Series (Lycoming)
	R22 ALPHA		
	R22 BETA		
	R22 MARINER		
	R44		
	R44 II		
SIKORSKY AIRCRAFT	S-58 A to J		Sikorsky S-58 (Wright Cyclone)

GROUP 3: PISTON-ENGINE AEROPLANES (Other than those in Group 1)

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GROUP 3: PISTON-ENGINE AEROPLANES (Other than those in Group 1)			MTOM	
TC holder	Part-66 Type rating endorsement	Type of structure	2T and BELOW	ABOVE 2T
AD Holdings, Inc	Thorp T-211 (Continental)	Metal	X	
	Thorp T-211 (Jabiru)	Metal	X	
AERO Sp.z.o.o	Aero AT-3 (Rotax)	Metal	X	
AERODIF (Dyn'aviation)	CAP 10 (Lycoming)	Wood	X	
	CAP 20/21 (Lycoming)	Wood	X	
	CAP 230 Series (Lycoming)	Composite + Wood	X	
AEROSTAR AIRCRAFT Corporation	Piper PA-60/61 Series (Lycoming)	Metal		X
	Piper PA-60/61 Pressurised (Lycoming)	Metal + Pressurised		X
AIR TRACTOR	Air Tractor AT-250/300 (PW R985)	Metal		X
	Air Tractor AT-301/401/501 (PW R1340)	Metal		X
	Air Tractor AT-401 (PZL-3S)	Metal		X
Air Transport Group Holdings, Inc	Lake C/LA Series (Lycoming)	Metal	X	
AIRCRAFT Design and Certification	(WD) D4 Fascination (Rotax)	Composite	X	
	Lightwing AC4 (Rotax)	Composite	X	
AIRCRAFT INDUSTRIES	Let L 200 (LOM)	Metal	X	
	Let Z-37 Series (LOM)	Metal tubing fabric	X	
ALENIA AERMACCHI	Aermacchi F260 Series (Lycoming)	Metal	X	
	SIAI-Marchetti S.205 (Franklin)	Metal	X	
	SIAI-Marchetti S.205/S.208 (Lycoming)	Metal	X	

GROUP 3: PISTON-ENGINE AEROPLANES (Other than those in Group 1)			MTOM	
TC holder	Part-66 Type rating endorsement	Type of structure	2T and BELOW	ABOVE 2T
ALEXANDRIA Aircraft LLC	Bellanca 14-19 Series (Continental)	Wood + Metal tubing fabric	X	
	Bellanca 17-30 (Continental)	Wood + Metal tubing fabric	X	
	Bellanca 17-31 Series (Lycoming)	Wood + Metal tubing fabric	X	
ALLIED AG CAT Productions	Grumman G-164 (Continental)	Metal	X	
	Grumman G-164 (Jacobs)	Metal	X	
	Grumman G-164 (PW R Series)	Metal	X	
ALPHA AVIATION	Robin HR 200/ R 2000 series (Lycoming)	Metal	X	
AMERICAN CHAMPION Aircraft Corp.	Champion 7 (Superior)	Wood + Metal tubing fabric	X	
	Champion 7 (Lycoming)	Wood + Metal tubing fabric	X	
	Champion 7 (Continental)	Wood + Metal tubing fabric	X	
	Champion 8 Series (Lycoming)	Wood + Metal tubing fabric	X	
AQUILA Aviation by Excellence AG	Aquila AT01 (Rotax)	Composite	X	
AUGUSTAIR	VARGA 2150/2180 (Lycoming)	Metal	X	
BEECHCRAFT Corporation	Beech 19 Series (Lycoming)	Metal	X	
	Beech 23 Series (Lycoming)	Metal	X	
	Beech 24 Series (Lycoming)	Metal	X	
	Beech 33 Series (Continental)	Metal	X	
	Beech 35 Series (Continental)	Metal	X	
	Beech 36 Series (Continental)	Metal	X	
	Beech 50 Series (Lycoming)	Metal		X
	Beech 55 Series (Continental)	Metal		X
	Beech 56 Series (Lycoming)	Metal		X
	Beech 58 Series (Continental)	Metal		X
	Beech 58P (Continental)	Metal + Pressurised		X
	Beech 58TC (Continental)	Metal		X



GROUP 3: PISTON-ENGINE AEROPLANES (Other than those in Group 1)			MTOM	
			2T and BELOW	ABOVE 2T
TC holder	Part-66 Type rating endorsement	Type of structure		
	Beech 60 Series (Lycoming)	Metal		X
	Beech 65-80 Series (Lycoming)	Metal		X
	Beech 76 (Lycoming)	Metal	X	
	Beech 77 (Lycoming)	Metal	X	
	Beech 95 Series (Lycoming)	Metal	X	
	Beech 95 Series (Continental)	Metal		X
	Beech A23 (Continental)	Metal	X	
<b>BERIEV</b>	Beriev Be-103 (Continental)	Metal		X
<b>B-N GROUP Ltd. (Britten-Norman)</b>	Britten-Norman BN.2A Mark III (Lycoming)	Metal		X
	Britten-Norman BN2A Series (Lycoming)	Metal		X
	Britten-Norman BN2B Series (Lycoming)	Metal		X
<b>CEAPR</b>	Robin ATL/ATL S (JPX 4T60)	Wood + Composite	X	
	Robin ATL L (Limbach L2000)	Wood + Composite	X	
	Robin DR 200 series (Potez)	Wood	X	
	Robin DR 220 series (Continental)	Wood	X	
	Robin DR 221 series (Lycoming)	Wood	X	
	Robin DR 250 series (Lycoming)	Wood	X	
	Robin DR 253 series (Lycoming)	Wood	X	
	Robin DR 300 series (Lycoming)	Wood	X	
	Robin DR 400 series (Lycoming)	Wood	X	
	Robin DR 400 Series (Technify)	Wood	X	
	Robin DR 400RP (Porsche)	Wood	X	
	Robin HR 100 series (Continental)	Metal	X	
	Robin HR 100 series (Lycoming)	Metal	X	
	Robin R 1180 series (Lycoming)	Metal	X	
	Robin R 3000 series (Lycoming)	Metal	X	
<b>CESSNA AIRCRAFT Company</b>	Cessna 175 Series (Continental)	Metal	X	
	Cessna 177 Series (Lycoming)	Metal	X	
	Cessna 180 Series (Continental)	Metal	X	
	Cessna 185 Series (Continental)	Metal	X	
	Cessna 188 (Continental)	Metal	X	
	Cessna 206 Series (Continental)	Metal	X	
	Cessna 206 Series (Lycoming)	Metal	X	
	Cessna 207 Series (Continental)	Metal	X	

GROUP 3: PISTON-ENGINE AEROPLANES (Other than those in Group 1)			MTOM	
			Type of structure	2T and BELOW
TC holder	Part-66 Type rating endorsement	Type of structure	2T and BELOW	ABOVE 2T
	Cessna 210 Series (Continental)	Metal	X	
	Cessna P210 (Continental)	Metal + Pressurised	X	
	Cessna 310/320 Series (Continental)	Metal		X
	Cessna 321 (Continental)	Metal	X	
	Cessna 335 (Continental)	Metal + Pressurised		X
	Cessna 336 (Continental)	Metal	X	
	Cessna 340 (Continental)	Metal + Pressurised		X
	Cessna T303 (Continental)	Metal		X
	Cessna/Reims-Cessna 150/F150 Series (Continental)	Metal	X	
	Cessna/Reims-Cessna 152/F152 Series (Lycoming)	Metal	X	
	Cessna/Reims-Cessna 172/F172 Series (Continental)	Metal	X	
	Cessna/Reims-Cessna 172/F172 Series (Lycoming)	Metal	X	
	Cessna/Reims-Cessna 182/F182 Series (Continental)	Metal	X	
	Cessna/Reims-Cessna 182/F182 Series (Lycoming)	Metal	X	
	Cessna/Reims-Cessna 337 Series (Continental) (not pressurised)	Metal		X
	Cessna/Reims-Cessna 337 Series (Continental) (pressurised)	Metal + Pressurised		X
	Cessna C300/C350/C400 (Continental)	Composite	X	
	<b>CIRRUS Design Corporation</b>	Cirrus SR20/SR22/SR22T Series (Continental)	Composite	X
<b>COMMANDER PREMIER AIRCRAFT CO.</b>	Commander 112 (Lycoming)	Metal	X	
	Commander 114 (Lycoming)	Metal	X	
<b>Czech Sport Aircraft a.s.</b>	Czech Sport PS-28 (Rotax)	Metal	X	
<b>DE HAVILLAND Support (Aircraft with SAS)</b>	Beagle B.121 series 1 (Continental)	Metal	X	
	Beagle B.121 series 2/3 (Lycoming)	Metal	X	
<b>DECOURT (Aircraft with SAS)</b>	Decourt DMS 884 (Franklin)	Wood	X	
<b>DIAMOND AIRCRAFT Industries</b>	Diamond DA20 (Continental)	Composite	X	
	Diamond DA20/DV20 (Rotax)	Composite	X	
	Diamond DA40 (Austro Engine)	Composite	X	
	Diamond DA40 (Lycoming)	Composite	X	

GROUP 3: PISTON-ENGINE AEROPLANES (Other than those in Group 1)			MTOM	
			2T and BELOW	ABOVE 2T
TC holder	Part-66 Type rating endorsement	Type of structure		
	Diamond DA40 D (Technify)	Composite	X	
	Diamond DA42 Series (Austro Engine)	Composite	X	
	Diamond DA42 Series (Technify)	Composite	X	
	Diamond DA62 (Austro Engine)	Composite	X	
<b>DYNAC AEROSPACE Corporation</b>	Aerocommander 100 (Lycoming)	Metal	X	
<b>EADS Deutschland Military Air Syst</b>	Bölkow BO 208 (Continental)	Metal	X	
	Bölkow BO 209 (Lycoming)	Metal	X	
	Bölkow BO 207 (Lycoming)	Wood	X	
<b>EADS PZL 'WARSZAWA-OKECIE'</b>	SIAT 223 (Lycoming)	Metal	X	
	PZL-104 Wilga (Lycoming)	Metal	X	
	PZL-104 Wilga Series (PZL)	Metal	X	
	PZL-104A Wilga (Ivchenko)	Metal	X	
	PZL-110 Koliber (Franklin)	Metal	X	
	PZL-Koliber 150 Series (Lycoming)	Metal	X	
	PZL-Koliber 160 (Lycoming)	Metal	X	
<b>EADS PZL 'WARSZAWA-OKECIE' (Aircraft with SAS)</b>	PZL-106 Series (PZL)	Metal		X
<b>E.I.S Aircraft GmbH</b>	RS 180 (Lycoming)	Wood	X	
<b>EVEKTOR</b>	Evektor EV-97 VLA (Rotax)	Metal	X	
	SportStar RTC (Rotax)	Metal	X	
<b>EXTRA Flugzeugproduktions- und Vertriebs-GmbH</b>	Extra EA-200/300 Series (Lycoming)	Composite	X	
	Extra EA-400 (Continental)	Composite + Pressurised	X	
<b>FFA ALTENRHEIN</b>	AS202 Series (Lycoming)	Metal	X	
<b>FFT GYROFLUG (Aircraft with SAS)</b>	SC01 Series (Lycoming)	Composite	X	
<b>Flight Design GmbH</b>	CTLS-ELA (Rotax)	Composite	X	
<b>FLS AEROSPACE (Aircraft with SAS)</b>	Club Sprint/Sprint 160 (Lycoming)	Metal	X	
	OA7 Optica Series (Lycoming)	Metal	X	
<b>Fournier, René</b>	RF 47 (Limbach)	Wood	X	
	RF 6B (Continental)	Wood	X	
	RF 6B (Lycoming)	Wood	X	
<b>FUJI Heavy Industries</b>	Fuji FA-200 Series (Lycoming)	Metal	X	
<b>GA8 Airvan Pty Ltd</b>	Gippsland GA8 (Lycoming)	Metal	X	
<b>GARDAN (Aircraft with SAS)</b>	Gardan GY 80 (Lycoming)	Metal	X	

GROUP 3: PISTON-ENGINE AEROPLANES (Other than those in Group 1)			MTOM	
			2T and BELOW	ABOVE 2T
TC holder	Part-66 Type rating endorsement	Type of structure		
GENERAL AVIA Costruzioni Aeronautiche (Aircraft with SAS)	General Avia F.22 (Lycoming)	Metal	X	
	General Avia F20 Series (Continental)	Metal		X
Bernd Hager/Anatoli Stobbe GbR	Ruschmeyer R90-230RG (Lycoming)	Composite	X	
GROB Aircraft AG	Grob G115/120 Series (Lycoming)	Composite	X	
Hoffmann GmbH & Co. KG	H 40 (Lycoming)	Composite	X	
Magnaghi Aeronautica S.p.A. (INIZIATIVE INDUSTRIALI ITALIANE)	III Sky Arrow 650/710 (Rotax)	Composite	X	
INSTYTUT LOTNICTWA	Instytut Lotnictwa I-23 Manager (Lycoming)	Composite	X	
INTERCEPTOR AIRCRAFT Corporation	Aerocommander 200 (Continental)	Metal	X	
ISSOIRE AVIATION	Issoire APM 20/30 (Rotax)	Composite	X	
	Issoire APM 40 (Continental)	Composite	X	
LAVIA ARGENTINA S.A. (LAVIASA)	Piper PA-25 Series (Lycoming)	Metal tubing fabric	X	
LIBERTY AEROSPACE Incorporated	Liberty XL-2 (Continental)	Composite	X	
MAULE AEROSPACE TECHNOLOGY	Maule M4 (Continental)	Metal tubing fabric	X	
	Maule M4 (Franklin)	Metal tubing fabric	X	
	Maule M4 (Lycoming)	Metal tubing fabric	X	
	Maule M5 (Continental)	Metal tubing fabric	X	
	Maule M5 (Franklin)	Metal tubing fabric	X	
	Maule M5 (Lycoming)	Metal tubing fabric	X	
	Maule M6 (Lycoming)	Metal tubing fabric	X	
	Maule M7 Series (Lycoming)	Metal tubing fabric	X	
	Maule MX-7 (Lycoming)	Metal tubing fabric	X	
MOONEY AIRPLANE Company	Mooney M18L (Continental)	Metal + Wood	X	
	Mooney M20 (Continental)	Metal	X	
	Mooney M20/M20A (Lycoming)	Metal + Wood	X	
	Mooney M20B to M20S/M22 (Lycoming)	Metal	X	
NIPPER	Nipper T-66 (Stark)	Wood +	X	

GROUP 3: PISTON-ENGINE AEROPLANES (Other than those in Group 1)			MTOM		
			2T and BELOW	ABOVE 2T	
TC holder	Part-66 Type rating endorsement	Type of structure			
		Metal tubing fabric			
OMA SUD SPA Sky Technologies	SKYCAR (Lycoming)	Metal	X		
PIAGGIO Aero Industries	Piaggio P166 (Lycoming)	Metal		X	
PILATUS AIRCRAFT	Pilatus PC-6 Series (Lycoming)	Metal		X	
PIPER AIRCRAFT	Piper PA-23 Aztec (Lycoming)	Metal	X		
	Piper PA-24 Series (Lycoming)	Metal	X		
	Piper PA-28 Series (Continental)	Metal	X		
	Piper PA-28 Series (Lycoming)	Metal	X		
	Piper PA-28 Series (Thielert)	Metal			
	Piper PA-30 Series (Lycoming)	Metal	X		
	Piper PA-31 Series (Lycoming)	Metal		X	
	Piper PA-31P (Lycoming)	Metal + Pressurised			X
	Piper PA-32 Series (Lycoming)	Metal	X		
	Piper PA-34 Series (Continental)	Metal	X		
	Piper PA-34 Series (Lycoming)	Metal	X		
	Piper PA-36 Series (Continental)	Metal	X		
	Piper PA-36 Series (Lycoming)	Metal	X		
	Piper PA-38 Series (Lycoming)	Metal	X		
	Piper PA-39/40 Series (Lycoming)	Metal	X		
	Piper PA-44 Series (Lycoming)	Metal	X		
	Piper PA-46 Pressurised (Continental)	Metal + Pressurised	X		
	Piper PA-46 Pressurised (Lycoming)	Metal + Pressurised	X		
	Piper PA-46 Series (Lycoming)	Metal	X		
Polskie Zakłady Lotnicze Sp. z o. o.	PZL M 18 (PZL)	Metal		X	
	PZL M 26 (Lycoming)	Metal	X		
Polskie Zakłady Lotnicze Sp. z o. o. (Aircraft with SAS)	PZL-M20 (PZL)	Metal		X	
REVO, Inc	REVO C/LA-4 Series (Lycoming)	Metal	X		
RUAG AEROSPACE Services GmbH	Do 28 Series (Lycoming)	Metal		X	
S.C.Constructii Aeronautice S.A	IAR-46 (Rotax)	Metal	X		
SCHEIBE Flugzeugbau	SF 23 Series (Continental)	Wood + Metal tubing fabric	X		

GROUP 3: PISTON-ENGINE AEROPLANES (Other than those in Group 1)			MTOM	
			2T and BELOW	ABOVE 2T
TC holder	Part-66 Type rating endorsement	Type of structure		
SCHEIBE Flugzeugbau (Aircraft with SAS)	SF 23 Series (Lycoming)	Wood + Metal tubing fabric	X	
SEASTAR CORP	TSC Series (Lycoming)	Composite	X	
SKY INTERNATIONAL	Aviat Husky A (Lycoming)	Metal	X	
	Pitts S-1 Series (Lycoming)	Wood + Metal tubing fabric	X	
	Pitts S-2 Series (Lycoming)	Wood + Metal tubing fabric	X	
Skyfox Aviation Ltd	CA25 Series (Rotax)	Wood + Metal tubing fabric	X	
SLINGSBY Aviation	Slingsby T67A (Lycoming)	Wood	X	
	Slingsby T67B/T67C/T67M Series (Lycoming)	Composite	X	
SOCATA	Grumman GA-7 (Lycoming)	Metal	X	
	SOCATA MS 881 (Potez)	Metal	X	
	SOCATA MS 884/894/PZL Koliber (Franklin)	Metal	X	
	SOCATA Rallye Series (Continental)	Metal	X	
	SOCATA Rallye Series (Lycoming)	Metal	X	
	SOCATA TB Series (Lycoming)	Metal	X	
SOCATA (Aircraft with SAS)	SOCATA ST10 (Lycoming)	Metal	X	
Sportavia Putzer (Aircraft with SAS)	Sportavia Putzer RS180 (Lycoming)	Wood + Composite	X	
STOL AIRCRAFT Corporation	Republic UC-1 (Lycoming)	Metal	X	
STEMME AG	Stemme ASP S15 (Rotax)	Composite	X	
SUKHOI	Sukhoi Su-29/31 (MGA)	Composite	X	
SUKHOI (Aircraft with SAS)	Sukhoi SU-29 (Vedeneyev)	Composite	X	
	Sukhoi SU-31 (Vedeneyev)	Composite	X	
Symphony Aircraft Industries Inc	Symphony OMF-100-160 (Lycoming)	Metal	X	
TAYLORCRAFT 2000	Taylorcraft 19 Series (Continental)	Wood + Metal tubing fabric	X	
	Taylorcraft F21/F22 Series (Lycoming)	Wood + Metal tubing fabric	X	
TECNAM Costruzioni Aeronautiche	Tecnam P2006T (Rotax)	Metal	X	
	Tecnam P92 (Rotax)	Metal	X	

GROUP 3: PISTON-ENGINE AEROPLANES (Other than those in Group 1)			MTOM	
TC holder	Part-66 Type rating endorsement	Type of structure	2T and BELOW	ABOVE 2T
	Tecnam P2002 (Rotax)	Metal	X	
	Tecnam P2008 (Rotax)	Composite + Metal	X	
	Tecnam P2010 (Lycoming)	Composite + Metal	X	
THRUSH Aircraft	Ayres S2R (PW R-985)	Metal tubing fabric	X	
TRUE FLIGHT Holdings	Grumman/American AA-1 Series (Lycoming)	Metal	X	
	Grumman/American AA-5 Series (Lycoming)	Metal	X	
TWIN COMMANDER AIRCRAFT Corporation	Commander 500 Series/680 Series (Lycoming)	Metal		X
	Commander 680P (Lycoming)	Metal + Pressurised		X
	Commander 685 (Continental)	Metal + Pressurised		X
	Rockwell 700 (Lycoming)	Metal + Pressurised		X
	Commander 720 (Lycoming)	Metal + Pressurised		X
VULCANAIR	Partenavia P.64 (Lycoming)	Metal	X	
	Partenavia P.66 (Lycoming)	Metal	X	
	Vulcanair P.68 Series (Lycoming)	Metal	X	
WACO Aircraft Company	Waco YMF (Jacobs)	Wood + Metal tubing fabric	X	
WACO Classic Aircraft Corp	Waco 2T Series (Lycoming)	Wood + Metal tubing fabric	X	
WASSMER (Aircraft with SAS)	CERVA CE43 (Lycoming)	Metal	X	
	CERVA CE44 (Continental)	Metal	X	
	WA4/21 Series (Lycoming)	Wood + Metal tubing fabric	X	
	WA40 Series (Lycoming)	Wood + Metal tubing fabric	X	
	WA41 (Lycoming)	Wood + Metal tubing fabric	X	
XtremeAir GmbH	XtremeAir XA42 (Lycoming)	Composite	X	
YAKOVLEV (Aircraft with SAS)	Yakovlev YAK-18T (Vedeneyev)	Metal	X	
ZAKŁADY LOTNICZE	EM-11 (Lycoming)	Composite	X	

GROUP 3: PISTON-ENGINE AEROPLANES (Other than those in Group 1)			MTOM	
TC holder	Part-66 Type rating endorsement	Type of structure	2T and BELOW	ABOVE 2T
ZENAIR LTD	Zenair CH2000 (Lycoming)	Metal	X	
ZLIN AIRCRAFT (MORAVAN AVIATION)	Zlin Z-143 L (Lycoming)	Metal	X	
	Zlin Z-242 L (Lycoming)	Metal	X	
	Zlin Z-26 Series (Walter Minor/AVIA)	Metal	X	
	Zlin Z-42 Series (LOM)	Metal	X	
	Zlin Z-43 Series (LOM)	Metal	X	
	Zlin Z-50 Series (LOM)	Metal	X	
	Zlin Z-50L Series (Lycoming)	Metal	X	
	Zlin Z-526 L (Lycoming)	Metal	X	

**STCs in AEROPLANES GROUP 3**
*ED Decision 2015/029/R*

GROUP 3: PISTON-ENGINE AEROPLANES (Other than those in Group 1)			MTOM:	
STC holder	Part-66 Type rating endorsement	Type of structure	2T and BELOW	ABOVE 2T
BARBARA AND ROPERT WILLIAMS	Cessna 150 Series (Lycoming)	Metal	X	
HOFFMANN GmbH & Co. KG	Cessna 150/A150/F150/FA150 (Rotax)	Metal	X	
LTB SAMMET GmbH	Cessna 150 (Rotax)	Metal	X	
PORSCHE AG	Cessna 182Q/F182Q (Porsche)	Metal	X	
SMA ENGINES INC.	Cessna 182Q/182R (SMA)	Metal	X	
SPERL TECHNIK & ENTWICKLUNGEN	Cessna 150/A150/F150/FA150 (Rotax)	Metal	X	
TECHNIFY MOTORS GmbH	Robin DR 400 (Technify)	Wood	X	
	Cessna 172/F172 (Technify)	Metal	X	
	Piper PA-28-140/150/151/160/161/180/181 (Technify)	Metal	X	
	Cirrus SR22 (Technify)	Composite	X	
	Cessna 206 (Technify)	Metal	X	



## Appendix II — Aircraft Type Practical Experience and On-the-Job Training - List of Tasks

ED Decision 2015/029/R

### **Time limits/Maintenance checks**

- 100 hour check (general aviation aircraft).
- 'B' or 'C' check (transport category aircraft).
- Assist carrying out a scheduled maintenance check i.a.w. AMM.
- Review Aircraft maintenance log for correct completion.
- Review records for compliance with Airworthiness Directives.
- Review records for compliance with component life limits.
- Procedure for inspection following heavy landing.
- Procedure for inspection following lightning strike.

### **Dimensions/Areas**

- Locate component(s) by zone/station number.
- Perform symmetry check.

### **Lifting and Shoring**

- Assist in:
  - Jack aircraft nose or tail wheel.
  - Jack complete aircraft.
  - Sling or trestle major component.

### **Levelling/Weighing**

- Level aircraft.
- Weigh aircraft.
- Prepare weight and balance amendment.
- Check aircraft against equipment list.

### **Towing and Taxiing**

- Prepare for aircraft towing.
- Tow aircraft.
- Be part of aircraft towing team.

### **Parking and mooring**

- Tie down aircraft.
- Park, secure and cover aircraft.
- Position aircraft in dock.
- Secure rotor blades.

### **Placards and Markings**

- Check aircraft for correct placards.
- Check aircraft for correct markings.

### **Servicing**

- Refuel aircraft.
- Defuel aircraft.
- Carry out tank to tank fuel transfer.
- Check/adjust tire pressures.
- Check/replenish oil level.
- Check/replenish hydraulic fluid level.
- Check/replenish accumulator pressure.
- Charge pneumatic system.
- Grease aircraft.
- Connect ground power.
- Service toilet/water system
- Perform pre-flight/daily check.

### **Vibration and Noise Analysis**

- Analyse helicopter vibration problem.
- Analyse noise spectrum.
- Analyse engine vibration.

### **Air Conditioning**

- Replace combustion heater.
- Replace flow control valve.
- Replace outflow valve.
- Replace safety valve.
- Replace vapour cycle unit.
- Replace air cycle unit.
- Replace cabin blower.
- Replace heat exchanger.
- Replace pressurisation controller.
- Clean outflow valves.
- Deactivate/reactivate cargo isolation valve.
- Deactivate/reactivate avionics ventilation components.
- Check operation of air conditioning/heating system.

Check operation of pressurisation system.

Troubleshoot faulty system.

#### **Auto flight**

Install servos.

Rig bridle cables Replace controller.

Replace amplifier.

Replacement of the auto flight system LRUs in case of fly-by-wire aircraft.

Check operation of auto-pilot.

Check operation of auto-throttle/auto-thrust.

Check operation of yaw damper.

Check and adjust servo clutch.

Perform autopilot gain adjustments.

Perform mach trim functional check.

Troubleshoot faulty system.

Check autoland system.

Check flight management systems.

Check stability augmentation system.

#### **Communications**

Replace VHF com unit.

Replace HF com unit.

Replace existing antenna.

Replace static discharge wicks.

Check operation of radios.

Perform antenna VSWR check.

Perform Selcal operational check.

Perform operational check of passenger address system.

Functionally check audio integrating system.

Repair co-axial cable.

Troubleshoot faulty system.

#### **Electrical Power**

Charge lead/acid battery.

Charge Ni-Cad battery.

Check battery capacity.

Deep-cycle Ni-Cad battery.

Replace integrated drive/generator/alternator.

Replace switches.  
Replace circuit breakers.  
Adjust voltage regulator.  
Change voltage regulator.  
Amend electrical load analysis report.  
Repair/replace electrical feeder cable.  
Troubleshoot faulty system.  
Perform functional check of integrated drive/generator/alternator.  
Perform functional check of voltage regulator.  
Perform functional check of emergency generation system.

#### **Equipment/Furnishings**

Replace carpets  
Replace crew seats.  
Replace passenger seats.  
Check inertia reels.  
Check seats/belts for security.  
Check emergency equipment.  
Check ELT for compliance with regulations.  
Repair toilet waste container.  
Remove and install ceiling and sidewall panels.  
Repair upholstery.  
Change cabin configuration.  
Replace cargo loading system actuator.  
Test cargo loading system.  
Replace escape slides/ropes.

#### **Fire protection**

Check fire bottle contents.  
Check/test operation of fire/smoke detection and warning system.  
Check cabin fire extinguisher contents.  
Check lavatory smoke detector system.  
Check cargo panel sealing.  
Install new fire bottle.  
Replace fire bottle squib.  
Troubleshoot faulty system.  
Inspect engine fire wire detection systems.

### **Flight Controls**

Inspect primary flight controls and related components i.a.w. AMM.

Extending/retracting flaps & slats.

Replace horizontal stabiliser.

Replace spoiler/lift damper.

Replace elevator.

Deactivation/reactivation of aileron servo control.

Replace aileron.

Replace rudder.

Replace trim tabs.

Install control cable and fittings.

Replace slats.

Replace flaps.

Replace powered flying control unit.

Replace flat actuator.

Rig primary flight controls.

Adjust trim tab.

Adjust control cable tension.

Check control range and direction of movement.

Check for correct assembly and locking.

Troubleshoot faulty system.

Functional test of primary flight controls.

Functional test of flap system.

Operational test of the side stick assembly.

Operational test of the THS.

THS system wear check.

### **Fuel**

Water drain system (operation).

Replace booster pump.

Replace fuel selector.

Replace fuel tank cells.

Replace/test fuel control valves.

Replace magnetic fuel level indicators.

Replace water drain valve.

Check/calculate fuel contents manually.

Check filters.  
Flow check system.  
Check calibration of fuel quantity gauges.  
Check operation feed/selectors.  
Check operation of fuel dump/jettison system.  
Fuel transfer between tanks.  
Pressure defuel.  
Pressure refuel (manual control).  
Deactivation/reactivation of the fuel valves (transfer defuel, X-feed, refuel).  
Troubleshoot faulty system.

#### **Hydraulics**

Replace engine driven pump.  
Check/replace case drain filter.  
Replace standby pump.  
Replace hydraulic motor pump/generator.  
Replace accumulator.  
Check operation of shut off valve.  
Check filters/clog indicators.  
Check indicating systems.  
Perform functional checks.  
Pressurisation/depressurisation of the hydraulic system.  
Power Transfer Unit (PTU) operation.  
Replacement of PTU.  
Troubleshoot faulty system.

#### **Ice and rain protection**

Replace pump.  
Replace timer.  
Inspect repair propeller deice boot.  
Test propeller de-icing system.  
Inspect/test wing leading edge de-icer boot.  
Replace anti-ice/deice valve.  
Install wiper motor.  
Check operation of systems.  
Operational test of the pitot-probe ice protection.  
Operational test of the TAT ice protection.

Operational test of the wing ice protection system.

Assistance to the operational test of the engine air-intake ice protection (with engines operating).

Troubleshoot faulty system.

#### **Indicating/recording systems**

Replace flight data recorder.

Replace cockpit voice recorder.

Replace clock.

Replace master caution unit.

Replace FDR.

Perform FDR data retrieval.

Troubleshoot faulty system.

Implement ESDS procedures.

Inspect for HIRF requirements.

Start/stop EIS procedure.

Bite test of the CFDIU.

Ground scanning of the central warning system.

#### **Landing Gear**

Build up wheel.

Replace main wheel.

Replace nose wheel.

Replace steering actuator.

Replace truck tilt actuator.

Replace gear retraction actuator.

Replace uplock/downlock assembly.

Replace shimmy damper.

Rig nose wheel steering.

Functional test of the nose wheel steering system.

Replace shock strut seals.

Replace brake unit.

Replace brake control valve.

Bleed brakes.

Replace brake fan.

Test anti-skid unit.

Test gear retraction.

Change bungees.

Adjust micro switches/sensors.  
Charge struts with oil and air.  
Troubleshoot faulty system.  
Test auto-brake system.  
Replace rotorcraft skids.  
Replace rotorcraft skid shoes.  
Pack and check floats.  
Flotation equipment.  
Check/test emergency blowdown (emergency landing gear extension).  
Operational test of the landing gear doors.

#### **Lights**

Repair/replace rotating beacon.  
Repair/replace landing lights.  
Repair/replace navigation lights.  
Repair/replace interior lights.  
Replace ice inspection lights.  
Repair/replace logo lights.  
Repair/replace emergency lighting system.  
Perform emergency lighting system checks.  
Troubleshoot faulty system

#### **Navigation**

Calibrate magnetic direction indicator.  
Replace airspeed indicator.  
Replace altimeter.  
Replace air data computer.  
Replace VOR unit.  
Replace ADI.  
Replace HSI.  
Check pitot static system for leaks.  
Check operation of directional gyro.  
Functional check weather radar.  
Functional check doppler.  
Functional check TCAS.  
Functional check DME.  
Functional check ATC Transponder



Functional check flight director system.  
Functional check inertial nav system.  
Complete quadrantal error correction of ADF system.  
Update flight management system database.  
Check calibration of pitot static instruments.  
Check calibration of pressure altitude reporting system.  
Troubleshoot faulty system.  
Check marker systems.  
Compass replacement direct/indirect.  
Check Satcom.  
Check GPS.  
Test AVM.

#### **Oxygen**

Inspect on board oxygen equipment.  
Purge and recharge oxygen system.  
Replace regulator.  
Replace oxygen generator.  
Test crew oxygen system.  
Perform auto oxygen system deployment check.  
Troubleshoot faulty system.

#### **Pneumatic systems**

Replace filter.  
Replace air shut off valve.  
Replace pressure regulating valve.  
Replace compressor.  
Recharge dessicator.  
Adjust regulator.  
Check for leaks.  
Troubleshoot faulty system.

#### **Vacuum systems**

Inspect the vacuum system i.a.w. AMM.  
Replace vacuum pump.  
Check/replace filters.  
Adjust regulator.  
Troubleshoot faulty system.

#### **Water/Waste**

Replace water pump.  
Replace tap.  
Replace toilet pump.  
Perform water heater functional check.  
Troubleshoot faulty system.  
Inspect waste bin flap closure.

#### **Central Maintenance System**

Retrieve data from CMU.  
Replace CMU.  
Perform Bite check.  
Troubleshoot faulty system.

#### **Airborne Auxiliary power**

Install APU.  
Inspect hot section.  
Troubleshoot faulty system.

#### **Structures**

Assessment of damage.  
Sheet metal repair.  
Fibre glass repair.  
Wooden repair.  
Fabric repair.  
Recover fabric control surface.  
Treat corrosion.  
Apply protective treatment.

#### **Doors**

Inspect passenger door i.a.w. AMM.  
Rig/adjust locking mechanism.  
Adjust air stair system.  
Check operation of emergency exits.  
Test door warning system.  
Troubleshoot faulty system.  
Remove and install passenger door i.a.w. AMM.  
Remove and install emergency exit i.a.w. AMM.  
Inspect cargo door i.a.w. AMM.

**Windows**

Replace windshield.  
Replace direct vision window.  
Replace cabin window.  
Repair transparency.

**Wings**

Skin repair.  
Recover fabric wing.  
Replace tip.  
Replace rib.  
Replace integral fuel tank panel.  
Check incidence/rig.

**Propeller**

Assemble prop after transportation.  
Replace propeller.  
Replace governor.  
Adjust governor.  
Perform static functional checks.  
Check operation during ground run.  
Check track.  
Check setting of micro switches.  
Assessment of blade damage i.a.w. AMM.  
Dynamically balance prop.  
Troubleshoot faulty system.

**Main Rotors**

Install rotor assembly.  
Replace blades.  
Replace damper assembly.  
Check track.  
Check static balance.  
Check dynamic balance.  
Troubleshoot.

**Rotor Drive**

Replace mast.  
Replace drive coupling.

Replace clutch/freewheel unit  
Replace drive belt.  
Install main gearbox.  
Overhaul main gearbox.  
Check gearbox chip detectors.

#### **Tail Rotors**

Install rotor assembly.  
Replace blades.  
Troubleshoot.

#### **Tail Rotor Drive**

Replace bevel gearbox.  
Replace universal joints.  
Overhaul bevel gearbox.  
Install drive assembly.  
Check chip detectors.  
Check/install bearings and hangers.  
Check/service/assemble flexible couplings.  
Check alignment of drive shafts.  
Install and rig drive shafts.

#### **Rotorcraft flight controls**

Install swash plate.  
Install mixing box.  
Adjust pitch links.  
Rig collective system.  
Rig cyclic system.  
Rig anti-torque system.  
Check controls for assembly and locking.  
Check controls for operation and sense.  
Troubleshoot faulty system.

#### **Power Plant**

Build up ECU.  
Replace engine.  
Repair cooling baffles.  
Repair cowling.  
Adjust cowl flaps.

Repair faulty wiring.

Troubleshoot.

Assist in dry motoring check.

Assist in wet motoring check.

Assist in engine start (manual mode).

#### **Piston Engines**

Remove/install reduction gear.

Check crankshaft run-out.

Check tappet clearance.

Check compression.

Extract broken stud.

Install helicoil.

Perform ground run.

Establish/check reference RPM.

Troubleshoot.

#### **Turbine Engines**

Replace module.

Replace fan blade.

Hot section inspection/boroscope check.

Carry out engine/compressor wash.

Carry out engine dry cycle.

Engine ground run.

Establish reference power.

Trend monitoring/gas path analysis.

Troubleshoot.

Fuel and control, piston

Replace engine driven pump.

Adjust AMC.

Adjust ABC.

Install carburettor/injector.

Adjust carburettor/injector.

Clean injector nozzles.

Replace primer line.

Check carburettor float setting.

Troubleshoot faulty system.

**Fuel and control, turbine**

Replace FCU.  
Replace Engine Electronic Control Unit (FADEC).  
Replace Fuel Metering Unit (FADEC).  
Replace engine driven pump.  
Clean/test fuel nozzles.  
Clean/replace filters.  
Adjust FCU.  
Troubleshoot faulty system.  
Functional test of FADEC.

**Ignition systems, piston**

Change magneto.  
Change ignition vibrator.  
Change plugs.  
Test plugs.  
Check H.T. leads.  
Install new leads.  
Check timing.  
Check system bonding.  
Troubleshoot faulty system.

**Ignition systems, turbine**

Perform functional test of the ignition system.  
Check glow plugs/ignitors.  
Check H.T. leads.  
Check ignition unit.  
Replace ignition unit.  
Troubleshoot faulty system.

**Engine Controls**

Rig thrust lever.  
Rig RPM control.  
Rig mixture HP cock lever.  
Rig power lever.  
Check control sync (multi-eng).  
Check controls for correct assembly and locking.  
Check controls for range and direction of movement.

Adjust pedestal micro-switches.

Troubleshoot faulty system.

#### **Engine Indicating**

Replace engine instruments(s).

Replace oil temperature bulb.

Replace thermocouples.

Check calibration.

Troubleshoot faulty system.

#### **Exhaust, piston**

Replace exhaust gasket.

Inspect welded repair.

Pressure check cabin heater muff.

Troubleshoot faulty system.

#### **Exhaust, turbine**

Change jet pipe.

Change shroud assembly.

Install trimmers.

Inspect/replace thrust reverser.

Replace thrust reverser component.

Deactivate/reactivate thrust reverser.

Operational test of the thrust reverser system.

#### **Oil**

Change oil.

Check filter(s).

Adjust pressure relief valve.

Replace oil tank.

Replace oil pump.

Replace oil cooler.

Replace firewall shut off valve.

Perform oil dilution test.

Troubleshoot faulty system.

#### **Starting**

Replace starter.

Replace start relay.

Replace start control valve.

Check cranking speed.

Troubleshoot faulty system.

#### **Turbines, piston engines**

Replace PRT.

Replace turbo-blower.

Replace heat shields.

Replace waste gate.

Adjust density controller.

#### **Engine water injection**

Replace water/methanol pump.

Flow check water/methanol system.

Adjust water/methanol control unit.

Check fluid for quality.

Troubleshoot faulty system

#### **Accessory gear boxes**

Replace gearbox.

Replace drive shaft.

Inspect magnetic chip detector.

#### **APU**

Removal/installation of the APU.

Removal/installation of the inlet guide-vane actuator.

Operational test of the APU emergency shut-down test.

Operational test of the APU.



## Appendix III — Evaluation of the competence: assessment and assessors

*ED Decision 2015/029/R*

This Appendix applies to the competence assessment performed by the designated assessors (and their qualifications).

### 1) What does ‘competence’ mean and areas of focus for assessment

The assessment should aim at measuring the competence by evaluating three major factors associated to the learning objectives:

- Knowledge;
- Skills;
- Attitude;

Generally, knowledge is evaluated by examination. The purpose of this document is not to describe the examination process: this material mainly addresses the evaluation of ‘skills’ and ‘attitude’ after training containing practical elements. Nevertheless, the trainee needs to demonstrate to have sufficient knowledge to perform the required tasks.

‘Attitude’ is indivisible from the ‘skill’ as this greatly contributes to the safe performance of the tasks.

The evaluation of the competence should be based on the learning objectives of the training, in particular:

- the (observable) desired performance. This covers what the trainee is expected to be able to do and how the trainee is expected to behave at the end of the training;
- the (measurable) performance standard that must be attained to confirm the trainee’s level of competence in the form of tolerances, constraints, limits, performance rates or qualitative statements; and
- the conditions under which the trainee will demonstrate competence. Conditions consist of the training methods, the environmental, situational and regulatory factors.

The assessment should focus on the competencies relevant to the aircraft type and its maintenance such as, but not limited to:

- Environment awareness (act safely, apply safety precautions and prevent dangerous situations);
- Systems integration (demonstrate understanding of aircraft systems interaction – identify, describe, explain, plan, execute);
- Knowledge and understanding of areas requiring special emphasis or novelty (areas peculiar to the aircraft type, domains not covered by [Part-66 Appendix I](#), practical training elements that cannot be imparted through simulation devices, etc.);
- Using reports and indications (the ability to read and interpret);
- Aircraft documentation finding and handling (identify the appropriate aircraft documentation, navigate, execute and obey the prescribed maintenance procedures);
- Perform maintenance actions (demonstrate safe handling of aircraft, engines, components and tools);

- Aircraft final/close-up and report (apply close up, initiate appropriate actions/follow-up/records of testing, establish and sign maintenance records/logbooks).

## 2) How to assess

As far as feasible, the objectives of the assessment should be associated with the learning objectives and the passing level; it means that observable criteria should be set in order to measure the performance and should remain as objective as possible.

The general characteristics of effective assessment are: objective, flexible, acceptable, comprehensive, constructive, organised and thoughtful. At the conclusion, the trainee should have no doubt about what he/she did well, what he/she did poorly and how he/she can improve.

The following is a non-exhaustive list of questions that may be posed to assist assessment:

- What are the success factors for the job?
- What are typical characteristics of a correct behaviour for the task?
- What criteria should be observed?
- What level of expertise is expected?
- Is there any standard available?
- What is the pass mark? For example:
  - ‘Go-no go’ situation;
  - How to allocate points? Minimum amount to succeed;
  - ‘Must know or execute’ versus ‘Good to know or execute’ versus ‘Don’t expect the candidate to be an expert’.
- Minimum or maximum time to achieve? Use time effectively and efficiently.
- What if the trainee fails? How many times is the trainee allowed to fail?
- When and how should the trainee be prepared for the assessment?
- What proportion of judgment by the instructor out of collaboration with the trainee is needed during the evaluation stage?

The assessment may be:

- diagnostic (prior to a course), formative (re-orientate the course on areas where there is a need to reinforce) or summative (partial or final evaluation);
- performed task-by-task, as a group of tasks or as a final assessment;

One method might be an initial assessment to be performed by the trainee himself, then discussing areas where the perceptions of the trainee’s performance by the assessors differ in order to:

- develop the self-assessment habits;
- make the assessment more acceptable and understandable to both parties.

A ‘box-ticking’ exercise would be pointless. Experience has shown that assessment sheets have largely evolved over time into assessment of groups of ‘skills’ because in practice such things eventually detracted from the training and assessment that it was intended to serve: evaluate

at a point of time, encourage and orientate the training needs, improve safety and ultimately qualify people for their duties.

In addition, many other aspects should be appropriately considered during the assessment process such as stress and environmental conditions, difficulty of the test, history of evaluation (such as tangible progresses or sudden and unexpected poor performance made by the trainee), amount of time necessary to build competence, etc.

All these reasons place more emphasis on the assessor and highlight the function of the organisation's approval.

### **3) Who should assess**

In order to qualify, the assessor should:

- Be proficient and have sufficient experience or knowledge in:
  - human performance and safety culture;
  - the aircraft type (necessary to have the certifying staff privileges in case of CRS issuances);
  - training/coaching/testing skills;
  - instructional tools to use;
- Understand the objective and the content of the practical elements of the training that is being assessed;
- Have interpersonal skills to manage the assessment process (professionalism, sincerity, objectivity and neutrality, analysis skills, sense of judgement, flexibility, capability of evaluating the supervisor's or instructor's reports, handling of trainee's reactions to failing assessment with the cultural environment, being constructive, etc.);
- Be ultimately designated by the organisation to carry out the assessment.

The roles may be combined for:

- the assessor and the instructor for the practical elements of the Type Rating Training; or
- the assessor and the supervisor for the On-the-Job Training.

provided that the objectives associated to each role are clearly understood and that the competence and qualification criteria according to the company's procedures are met for both functions. Whenever possible (depending on the size of the organisation), it is recommended to split the roles (two different persons) in order to avoid any conflicts of interests.

When the functions are not combined, the role of each function should be clearly understood.

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## **ANNEX IV (PART-147)**

### **GENERAL**

#### **147.1**

*Regulation (EU) No 1321/2014*

For the purpose of this Part, the competent authority shall be:

1. for the organisations having their principle place of business located in the territory of a Member State, the authority designated by that Member State;
2. for the organisations having their principle place of business located in a third country, the Agency.

#### **AMC 147.1**

*ED Decision 2015/029/R*

A competent authority may be a ministry, a national aviation authority, or any aviation body designated by the Member State and located within that Member State. A Member State may designate more than one competent authority to cover different areas of responsibility, as long as the designation decision contains a list of the competencies of each authority and there is only one competent authority responsible for each given area.

## SECTION A — TECHNICAL REQUIREMENTS

### SUBPART A — GENERAL

#### 147.A.05 Scope

*Regulation (EU) No 1321/2014*

This section establishes the requirements to be met by organisations seeking approval to conduct training and examination as specified in [Annex III \(Part-66\)](#).

#### 147.A.10 General

*Regulation (EU) No 1321/2014*

A training organisation shall be an organisation or part of an organisation registered as a legal entity.

#### GM to 147.A.10 General

*ED Decision 2015/029/R*

Such an organisation may conduct business from more than one address and may hold more than one Part approval.

#### 147.A.15 Application

*Regulation (EU) No 1321/2014*

- (a) An application for an approval or for the change of an existing approval shall be made on a form and in a manner established by the competent authority.
- (b) An application for an approval or change to an approval shall include the following information:
  1. the registered name and address of the applicant;
  2. the address of the organisation requiring the approval or change to the approval;
  3. the intended scope of approval or change to the scope of approval;
  4. the name and signature of the accountable manager;
  5. the date of application.

#### AMC 147.A.15 Application

*ED Decision 2015/029/R*

The application form should contain the information required in the [EASA Form 12](#).

## SUBPART B — ORGANISATIONAL REQUIREMENTS

### 147.A.100 Facility requirements

*Regulation (EU) No 1321/2014*

- (a) The size and structure of facilities shall ensure protection from the prevailing weather elements and proper operation of all planned training and examination on any particular day.
- (b) Fully enclosed appropriate accommodation separate from other facilities shall be provided for the instruction of theory and the conduct of knowledge examinations.
  - 1. The maximum number of students undergoing knowledge training during any training course shall not exceed 28.
  - 2. The size of accommodation for examination purposes shall be such that no student can read the paperwork or computer screen of any other student from his/her position during examinations.
- (c) The point (b) accommodation environment shall be maintained such that students are able to concentrate on their studies or examination as appropriate, without undue distraction or discomfort.
- (d) In the case of a basic training course, basic training workshops and/or maintenance facilities separate from training classrooms shall be provided for practical instruction appropriate to the planned training course. If, however, the organisation is unable to provide such facilities, arrangements may be made with another organisation to provide such workshops and/or maintenance facilities, in which case a written agreement shall be made with such organisation specifying the conditions of access and use thereof. The competent authority shall require access to any such contracted organisation and the written agreement shall specify this access.
- (e) In the case of an aircraft type/task training course, access shall be provided to appropriate facilities containing examples of aircraft type as specified in point [147.A.115\(d\)](#).
- (f) The maximum number of students undergoing practical training during any training course shall not exceed 15 per supervisor or assessor.
- (g) Office accommodation shall be provided for instructors, knowledge examiners and practical assessors of a standard to ensure that they can prepare for their duties without undue distraction or discomfort.
- (h) Secure storage facilities shall be provided for examination papers and training records. The storage environment shall be such that documents remain in good condition for the retention period as specified in point [147.A.125](#). The storage facilities and office accommodation may be combined, subject to adequate security.
- (i) A library shall be provided containing all technical material appropriate to the scope and level of training undertaken.

### AMC 147.A.100(i) Facility requirements

*ED Decision 2015/029/R*

- 1. For approved basic maintenance training courses this means holding and ensuring reasonable access to copies of all Parts and national aviation legislation, examples of typical aircraft maintenance manuals and service bulletins, Airworthiness Directives, aircraft and component records, release documentation, procedures manuals and aircraft maintenance programmes.

2. Except for the Parts and national aviation regulations, the remainder of the documentation should represent typical examples for both large and small aircraft and cover both aeroplanes and helicopters as appropriate. Avionic documentation should cover a representative range of available equipment. All documentation should be reviewed and updated on a regular basis.

## GM to 147.A.100(i) Facility requirements

*ED Decision 2015/029/R*

Where the organisation has an existing library of regulations, manuals and documentation required by another Part, it is not necessary to duplicate such a facility subject to student access being under controlled supervision.

## 147.A.105 Personnel requirements

*Regulation (EU) No 1321/2014*

- (a) The organisation shall appoint an accountable manager who has corporate authority for ensuring that all training commitments can be financed and carried out to the standard required by this Part.

*Regulation (EU) No 1321/2014*

- (b) A person or group of persons, whose responsibilities include ensuring that the maintenance training organisation is in compliance the requirements of this Part, shall be nominated. Such person(s) must be responsible to the accountable manager. The senior person or one person from the group of persons may also be the accountable manager subject to meeting the requirements for the accountable manager as defined in point (a).

*Regulation (EU) No 1321/2014*

- (c) The maintenance training organisation shall contract sufficient staff to plan/perform knowledge and practical training, conduct knowledge examinations and practical assessments in accordance with the approval.

*Regulation (EU) No 1321/2014*

- (d) By derogation to point (c), when another organisation is used to provide practical training and assessments, such other organisation's staff may be nominated to carry out practical training and assessments.

*Regulation (EU) No 1321/2014*

- (e) Any person may carry out any combination of the roles of instructor, examiner and assessor, subject to compliance with point (f).

*Regulation (EU) No 1321/2014*

- (f) The experience and qualifications of instructors, knowledge examiners and practical assessors shall be established in accordance with criteria published or in accordance with a procedure and to a standard agreed by the competent authority.

*Regulation (EU) No 1321/2014*

- (g) The knowledge examiners and practical assessors shall be specified in the organisation exposition for the acceptance of such staff.

*Regulation (EU) No 1321/2014*

- (h) Instructors and knowledge examiners shall undergo updating training at least every 24 months relevant to current technology, practical skills, human factors and the latest training techniques appropriate to the knowledge being trained or examined.

## AMC 147.A.105 Personnel requirements

*ED Decision 2015/029/R*

1. The larger maintenance training organisation (an organisation with the capacity to provide training for 50 students or more) should appoint a training manager with the responsibility of managing the training organisation on a day-to-day basis. Such person could also be the accountable manager. In addition, the organisation should appoint a quality manager with the responsibility of managing the quality system as specified in paragraph [147.A.130\(b\)](#) and an examination manager with the responsibility of managing the relevant [Part-147 Subpart C](#) or Subpart D examination system. Such person(s) may also be an instructor and/or examiner.
2. The smaller maintenance training organisation (an organisation with the capacity to provide training for less than 50 students) may combine any or all of the sub-paragraph (1) positions subject to the competent authority verifying and being satisfied that all functions can be properly carried out in combination.
3. When the organisation is also approved against other Parts which contain some similar functions then such functions may be combined.

## AMC 147.A.105(b) Personnel requirements

*ED Decision 2015/029/R*

With the exception of the accountable manager, an [EASA Form 4](#) should be completed for each person nominated to hold a position required by [147.A.105\(b\)](#). An example of an [EASA Form 4](#) is included in Appendix II to AMC.

## GM to 147.A.105(c) Personnel requirements

*ED Decision 2015/029/R*

The maintenance training organisation should have a nucleus of permanently employed staff to undertake the minimum amount of maintenance training proposed but may contract, on a part-time basis, instructors for subjects which are only taught on an occasional basis.

## AMC 147.A.105(f) Personnel requirements

*ED Decision 2015/029/R*

Any person currently accepted by the competent authority in accordance with the national aviation regulations in force prior to Part-147 coming into force may continue to be accepted in accordance with [147.A.105\(f\)](#).

Paragraph 3 of [Appendix III to AMC to Part-66](#) provides criteria to establish the qualification of assessors.

## GM to 147.A.105(f) Personnel requirements

*ED Decision 2015/029/R*

It is recommended that potential instructors be trained in instructional techniques.



## GM to 147.A.105(g) Personnel requirements

*ED Decision 2015/029/R*

Examiners should demonstrate a clear understanding of the examination standard required by [Part-66](#) and have a responsible attitude to the conduct of examinations such that the highest integrity is ensured.

## AMC 147.A.105(h) Personnel requirements

*ED Decision 2015/029/R*

Updating training should normally be of 35 hours duration but may be adjusted to the scope of training of the organisation and particular instructor/examiner.

## GM to 147.A.105(h) Personnel requirements

*ED Decision 2015/029/R*

1. Records should show for each instructor/examiner when the updating training was scheduled and when it took place.
2. The updating training may be subdivided during the 24 months into more than one element and may include such activities as attendance at relevant lectures and symposiums.

## 147.A.110 Records of instructors, examiners and assessors

*Regulation (EU) No 1321/2014*

- (a) The organisation shall maintain a record of all instructors, knowledge examiners and practical assessors. These records shall reflect the experience and qualification, training history and any subsequent training undertaken.
- (b) Terms of reference shall be drawn up for all instructors, knowledge examiners and practical assessors.

## AMC 147.A.110 Records of instructors, examiners and assessors

*ED Decision 2015/029/R*

1. The following minimum information relevant to the scope of activity should be kept on record in respect of each instructor, knowledge examiner and practical assessor:
  - (a) Name
  - (b) Date of Birth
  - (c) Personnel Number
  - (d) Experience
  - (e) Qualifications
  - (f) Training history (before entry)
  - (g) Subsequent Training
  - (h) Scope of activity
  - (i) Starting date of employment/contract
  - (j) If appropriate – ending date of employment/contract.

2. The record may be kept in any format but should be under the control of the organisations quality system.
3. Persons authorised to access the system should be maintained at a minimum to ensure that records cannot be altered in an unauthorised manner or that such confidential records become accessible to unauthorised persons.
4. The competent authority is an authorised person when investigating the records system for initial and continued approval or when the competent authority has cause to doubt the competence of a particular person.

## GM to 147.A.110 Records of instructors, examiners and assessors

*ED Decision 2015/029/R*

Instructors, knowledge examiners and practical assessors should be provided with a copy of their terms of reference.

## 147.A.115 Instructional equipment

*Regulation (EU) No 1321/2014*

- (a) Each classroom shall have appropriate presentation equipment of a standard that ensures students can easily read presentation text/drawings/diagrams and figures from any position in the classroom.  
  
Presentation equipment shall include representative synthetic training devices to assist students in their understanding of the particular subject matter where such devices are considered beneficial for such purposes.
- (b) The basic training workshops and/or maintenance facilities as specified in point [147.A.100\(d\)](#) must have all tools and equipment necessary to perform the approved scope of training.
- (c) The basic training workshops and/or maintenance facilities as specified in point [147.A.100\(d\)](#) must have an appropriate selection of aircraft, engines, aircraft parts and avionic equipment.
- (d) The aircraft type training organisation as specified in point [147.A.100\(e\)](#) must have access to the appropriate aircraft type. Synthetic training devices may be used when such synthetic training devices ensure adequate training standards.

## GM to 147.A.115(a) Instructional equipment

*ED Decision 2015/029/R*

1. Synthetic training devices are working models of a particular system or component and include computer simulations.
2. A synthetic training device is considered beneficial for complex systems and fault diagnostic purposes.

## AMC 147.A.115(c) Instructional equipment

*ED Decision 2015/029/R*

1. An appropriate selection of aircraft parts means appropriate in relation to the particular subject module or sub-module of [Part-66](#) being instructed. For example the turbine engine module should require the provision of sufficient parts from different types of turbine engine to show

- what such parts look like, what the critical areas are from a maintenance viewpoint and to enable disassembly/assembly exercises to be completed.
2. Appropriate aircraft, engines, aircraft parts and avionic equipment means appropriate in relation to the particular subject module or sub-module of [Part-66](#) being instructed. For example category B2 avionic training should require amongst other equipment, access to at least one type of installed autopilot and flight director system such that maintenance and system functioning can be observed and therefore more fully understood by the student in the working environment.
  3. 'Access' may be interpreted to mean, in conjunction with the facilities requirement of [147.A.100\(d\)](#), that there may be an agreement with a maintenance organisation approved under [Part-145](#) to access such parts, etc.

### 147.A.120 Maintenance training material

Regulation (EU) No 1321/2014

- (a) Maintenance training course material shall be provided to the student and cover as applicable:
  1. the basic knowledge syllabus specified in [Annex III \(Part-66\)](#) for the relevant aircraft maintenance licence category or subcategory and,
  2. the type course content required by [Annex III \(Part-66\)](#) for the relevant aircraft type and aircraft maintenance licence category or subcategory.
- (b) Students shall have access to examples of maintenance documentation and technical information of the library as specified in point [147.A.100\(i\)](#).

### AMC 147.A.120(a) Maintenance training material

ED Decision 2015/029/R

Training course notes, diagrams and any other instructional material should be accurate. Where an amendment service is not provided, a written warning to this effect should be given.

### 147.A.125 Records

Regulation (EU) No 1321/2014

The organisation shall keep all student training, examination and assessment records for *an unlimited period*.

### 147.A.130 Training procedures and quality system

Regulation (EU) No 1321/2014

- (a) The organisation shall establish procedures acceptable to the competent authority to ensure proper training standards and compliance with all relevant requirements in this Part.
- (b) The organisation shall establish a quality system including:
  1. an independent audit function to monitor training standards, the integrity of knowledge examinations and practical assessments, compliance with and adequacy of the procedures, and
  2. a feedback system of audit findings to the person(s) and ultimately to the accountable manager referred to in point [147.A.105\(a\)](#) to ensure, as necessary, corrective action.

## AMC 147.A.130(b) Training procedures and quality system

*ED Decision 2015/029/R*

1. The independent audit procedure should ensure that all aspects of [Part-147](#) compliance should be checked at least once in every 12 months and may be carried out as one complete single exercise or subdivided over a 12-month period in accordance with a scheduled plan.
2. In a small maintenance training organisation the independent audit function may be contracted to another maintenance training organisation approved under [Part-147](#) or a competent person acceptable to the competent authority. Where the small training organisation chooses to contract the audit function it is conditional on the audit being carried out twice in every 12 month period with one such audit being unannounced.
3. Where the maintenance training organisation is also approved to another Part requiring a quality system, then such quality systems may be combined.
4. When training or examination is carried out under the sub-contract control system:
  - (i) a pre audit procedure should be established whereby the Part-147 approved maintenance training organisation' should audit a prospective sub-contractor to determine whether the services of the sub-contractor meet the intent of Part-147.
  - (ii) a renewal audit of the subcontractor should be performed at least once every 12 months to ensure continuous compliance with the [Part-147](#) standard.
  - (iii) the sub-contract control procedure should record audits of the sub-contractor and to have a corrective action follow-up plan.
5. The independence of the audit system should be established by always ensuring that audits are carried out by personnel not responsible for the function or procedure being checked.

## GM to 147.A.130(b) Training procedures and quality system

*ED Decision 2015/029/R*

1. The primary objective of the quality system is to enable the training organisation to satisfy itself that it can deliver properly trained students and that the organisation remains in compliance with [Part-147](#).
2. The independent audit is a process of routine sample checks of all aspects of the training organisation's ability to carry out all training and examinations to the required standards. It represents an overview of the complete training system and does not replace the need for instructors to ensure that they carry out training to the required standard.
3. A report should be raised each time an audit is carried out describing what was checked and any resulting findings. The report should be sent to the affected department(s) for rectification action giving target rectification dates. Possible rectification dates may be discussed with the affected department(s) before the quality department confirms such dates on the report. The affected department(s) should rectify any findings and inform the quality department of such rectification.
4. A large training organisation (an organisation with the capacity to provide training for 50 students or more) should have a dedicated quality audit group whose sole function is to conduct audits, raise finding reports and follow up to ensure that findings are being rectified. For the small training organisation (an organisation with the capacity to provide training for less than 50 students) it is acceptable to use competent personnel from one section/department not responsible for the function or procedure to check the section/department that is responsible

subject to the overall planning and implementation being under the control of the quality manager.

5. The management control and follow up system should not be contracted to outside persons. The principal function is to ensure that all findings resulting from the independent audit are corrected in a timely manner and to enable the accountable manager to remain properly informed of the state of compliance. Apart from rectification of findings the accountable manager should hold routine meetings to check progress on rectification except that in the large training organisation such meetings may be delegated on a day to day basis to the quality manager as long as the accountable manager meets at least once per year with the senior staff involved to review the overall performance.

## 147.A.135 Examinations

*Regulation (EU) No 1321/2014*

- (a) The examination staff shall ensure the security of all questions.
- (b) Any student found during a knowledge examination to be cheating or in possession of material pertaining to the examination subject other than the examination papers and associated authorised documentation shall be disqualified from taking the examination and may not take any examination for at least 12 months after the date of the incident. The competent authority shall be informed of any such incident together with the details of any enquiry within one calendar month.
- (c) Any examiner found during a knowledge examination to be providing question answers to any student being examined shall be disqualified from acting as an examiner and the examination declared void. The competent authority must be informed of any such occurrence within one calendar month.

## AMC 147.A.135 Examinations

*ED Decision 2015/029/R*

1. Examinations may be computer- or hard-copy-based or a combination of both.
2. The actual questions to be used in a particular examination should be determined by the examiners.

## GM to 147.A.135 Examinations

*ED Decision 2015/029/R*

The competent authority will determine when or if the disqualified examiner may be reinstated.

## 147.A.140 Maintenance training organisation exposition

*Regulation (EU) No 1321/2014*

- (a) The organisation shall provide an exposition for use by the organisation describing the organisation and its procedures and containing the following information:
  1. a statement signed by the accountable manager confirming that the maintenance training organisation exposition and any associated manuals define the maintenance training organisation's compliance with this Part and shall be complied with at all times.
  2. the title(s) and name(s) of the person(s) nominated in accordance with point [147.A.105\(b\)](#).

3. the duties and responsibilities of the person(s) specified in point 2, including matters on which they may deal directly with the competent authority on behalf of the maintenance training organisation.
  4. a maintenance training organisation chart showing associated chains of responsibility of the person(s) specified in point (a)(2).
  5. a list of the training instructors, knowledge examiners and practical assessors.
  6. a general description of the training and examination facilities located at each address specified in the maintenance training organisation's approval certificate, and if appropriate any other location, as required by point [147.A.145\(b\)](#).
  7. a list of the maintenance training courses which form the extent of the approval.
  8. the maintenance training organisation's exposition amendment procedure.
  9. the maintenance training organisation's procedures, as required by point [147.A.130\(a\)](#).
  10. the maintenance training organisation's control procedure, as required by [147.A.145\(c\)](#), when authorised to conduct training, examination and assessments in locations different from those specified in point [147.A.145\(b\)](#).
  11. a list of the locations pursuant to point [147.A.145\(b\)](#).
  12. a list of organisations, if appropriate, as specified in point [147.A.145\(d\)](#).
- (b) The maintenance training organisation's exposition and any subsequent amendments shall be approved by the competent authority.
- (c) Notwithstanding point (b) minor amendments to the exposition may be approved through an exposition procedure (hereinafter called indirect approval).

## AMC 147.A.140 Maintenance training organisation exposition

*ED Decision 2015/029/R*

1. A recommended format of the exposition is included in Appendix I.
2. When the maintenance training organisation is approved in accordance with any other Part which also requires an exposition, the exposition required by the other Part may form the basis of the maintenance training organisation exposition in a combined document, as long as the other exposition contains the information required by [147.A.140](#) and a cross reference index is included based upon Appendix I.
3. When training or examination is carried out under the sub-contract control system the maintenance training organisation exposition should contain a specific procedure on the control of sub-contractors as per Appendix 1 item 2.18 plus a list of sub-contractors as required by [147.A.140\(a\)12](#) and detailed in Appendix I item 1.7.
4. The competent authority may approve a delegated exposition approval system for all changes other than those affecting the approval.

## 147.A.145 Privileges of the maintenance training organisation

*Regulation (EU) No 1321/2014*

- (a) The maintenance training organisation may carry out the following as permitted by and in accordance with the maintenance training organisation exposition:

1. basic training courses to the [Annex III \(Part-66\)](#) syllabus, or part thereof.
  2. aircraft type/task training courses in accordance with [Annex III \(Part-66\)](#).
  3. the examinations on behalf of the competent authority, including the examination of students who did not attend the basic or aircraft type training course at the maintenance training organisation.
  4. the issue of certificates in accordance with Appendix III following successful completion of the approved basic or aircraft type training courses and examinations specified in points (a)(1), (a)(2) and (a)(3), as applicable.
- (b) Training, knowledge examinations and practical assessments may only be carried out at the locations identified in the approval certificate and/or at any location specified in the maintenance training organisation exposition.
- (c) By derogation to point (b), the maintenance training organisation may only conduct training, knowledge examinations and practical assessments in locations different from the point (b) locations in accordance with a control procedure specified in the maintenance training organisation exposition. Such locations need not be listed in the maintenance training organisation exposition.
- (d)
1. The maintenance training organisation may subcontract the conduct of basic theoretical training, type training and related examinations to a non maintenance training organisation only when under the control of the maintenance training organisation quality system.
  2. The subcontracting of basic theoretical training and examination is limited to [Annex III \(Part-66\), Appendix I](#), Modules 1, 2, 3, 4, 5, 6, 8, 9 and 10.
  3. The subcontracting of type training and examination is limited to powerplant and avionic systems.
- (e) An organisation may not be approved to conduct examinations unless approved to conduct the corresponding training.
- (f) By derogation from point (e), an organisation approved to provide basic knowledge training or type training may also be approved to provide type examination in the cases where type training is not required.

### AMC 147.A.145(d) Privileges of the maintenance training organisation

*ED Decision 2015/029/R*

1. When training or examination is carried out under the sub-contract control system it means that for the duration of such training or examination, the [Part-147](#) approval has been temporarily extended to include the sub-contractor. It therefore follows that those parts of the sub-contractor's facilities, personnel and procedures involved with the [Part-147](#) approved maintenance training organisation's students should meet requirements of [Part-147](#) for the duration of that training or examination and it remains the [Part-147](#) organisation's responsibility to ensure such requirements are satisfied.
2. The maintenance training organisation approved under Part-147 is not required to have complete facilities and personnel for training that it needs to sub-contract but it should have its own expertise to determine that the sub-contractor meets the Part-147 standards. Particular attention should be given to ensuring that the training that is delivered also meets the requirements of [Part-66](#) and the aircraft technologies are appropriate.



3. The contract between the maintenance training organisation approved under Part-147 and the sub-contractor should contain:
  - a provision for the Agency and the competent authority to have right of access to the sub-contractor;
  - a provision for the sub-contractor to inform the Part-147 approved maintenance training organisation of any change that may affect its Part-147 approval, before any such change takes place.

## GM 147.A.145(d) Privileges of the maintenance training organisation

ED Decision 2015/029/R

1. The pre audit procedure should focus on establishing compliance with the training and examination standards set out in [Part-147](#) and [Part-66](#).
2. The fundamental reason for allowing a maintenance training organisation approved under [Part-147](#) to sub-contract certain basic theoretical training courses is to permit the approval of maintenance training organisations, which may not have the capacity to conduct training courses on all [Part-66](#) modules.
3. The reason for allowing the subcontracting of training modules 1 to 6 and 8 to 10 only is, most of the related subjects can generally also be taught by training organisations not specialised in aircraft maintenance and the practical training element as specified in [147.A.200](#) does not apply to them. On the contrary, training modules 7 and 11 to 17 are specific to aircraft maintenance and include the practical training element as specified in [147.A.200](#). The intent of the 'limited subcontracting' option as specified in [147.A.145](#) is to grant [Part-147](#) approvals only to those organisations having themselves at least the capacity to teach on aircraft maintenance specific matters.

## GM 147.A.145(d)3 Privileges of the maintenance training organisation

ED Decision 2015/029/R

In the case of type training and examination, the reason for allowing only subcontracting to powerplant and avionic systems is that the related subjects can generally also be imparted by certain organisations specialised in these domains such as the Type Certificate Holder of the powerplant or the OEMs of these avionics systems. In such a case, the type training course should make clear how the interfaces with the airframe are addressed and by whom (the subcontracted organisation or the [Part-147](#) organisation itself).

## AMC 147.A.145(f) Privileges of the maintenance training organisation

ED Decision 2015/029/R

When an organisation approved to provide basic knowledge training or type training is also approved to provide type examination in the cases where type training is not required, appropriate procedures in the MTOE should be developed and approved, including:

- The development and the conduct of the type examination;



- The qualification of the examiners and their currency.

In particular, emphasis should be put when such an examination is not regularly conducted or when the examiners are not normally involved in aircraft or activities with technology corresponding to the aircraft type subject to examination. An example would be the case of an organisation providing basic knowledge training only for the B1.1 license. This organisation should justify how they run type examinations for single piston-engine helicopters in the case of a B1.4 licence.

### 147.A.150 Changes to the maintenance training organisation

*Regulation (EU) No 1321/2014*

- (a) The maintenance training organisation shall notify the competent authority of any proposed changes to the organisation that affect the approval before any such change takes place, in order to enable the competent authority to determine continued compliance with this Part and to amend if necessary the maintenance training organisation approval certificate.
- (b) The competent authority may prescribe the conditions under which the maintenance training organisation may operate during such changes unless the competent authority determines that the maintenance training organisation approval must be suspended.
- (c) Failure to inform the competent authority of such changes may result in suspension or revocation of the maintenance training organisation approval certificate backdated to the actual date of the changes.

### 147.A.155 Continued validity

*Regulation (EU) No 1321/2014*

- (a) An approval shall be issued for an unlimited duration. It shall remain valid subject to:
  - 1. the organisation remaining in compliance with this Part, in accordance with the provisions related to the handling of findings as specified in point [147.B.130](#); and
  - 2. the competent authority being granted access to the organisation to determine continued compliance with this [Annex \(Part-147\)](#); and
  - 3. the certificate not being surrendered or revoked.
- (b) Upon surrender or revocation, the approval shall be returned to the competent authority.

### 147.A.160 Findings

*Regulation (EU) No 1321/2014*

- (a) A level 1 finding is one or more of the following:
  - 1. any significant non-compliance with the examination process which would invalidate the examination(s),
  - 2. failure to give the competent authority access to the organisation's facilities during normal operating hours after two written requests,
  - 3. the lack of an accountable manager,
  - 4. a significant non-compliance with the training process.
- (b) A level 2 finding is any non-compliance with the training process other than level 1 findings.

- (c) After receipt of notification of findings according to point [147.B.130](#), the holder of the maintenance training organisation approval shall define a corrective action plan and demonstrate corrective action to the satisfaction of the competent authority within a period agreed with this authority.

## SUBPART C — APPROVED BASIC TRAINING COURSE

### 147.A.200 The approved basic training course

Regulation (EU) No 1321/2014

- (a) The approved basic training course shall consist of knowledge training, knowledge examination, practical training and a practical assessment.
- (b) The knowledge training element shall cover the subject matter for a category or subcategory aircraft maintenance licence as specified in [Annex III \(Part-66\)](#).
- (c) The knowledge examination element shall cover a representative cross section of subject matter from the point (b) training element.
- (d) The practical training element shall cover the practical use of common tooling/equipment, the disassembly/assembly of a representative selection of aircraft parts and the participation in representative maintenance activities being carried out relevant to the particular [Part-66](#) complete module.
- (e) The practical assessment element shall cover the practical training and determine whether the student is competent at using tools and equipment and working in accordance with maintenance manuals.
- (f) The duration of basic training courses shall be in accordance with Appendix I.
- (g) The duration of conversion courses between (sub)categories shall be determined through an assessment of the basic training syllabus and the related practical training needs.

### AMC 147.A.200(b) The approved basic training course

ED Decision 2015/029/R

Each licence category or subcategory basic training course may be subdivided into modules or sub-modules of knowledge and may be intermixed with the practical training elements subject to the required time elements of [147.A.200\(f\)](#) and [\(g\)](#) being satisfied.

### AMC 147.A.200(d) The approved basic training course

ED Decision 2015/029/R

1. Where the maintenance training organisation approved under [Part-147](#) contracts the practical training element either totally or in part to another organisation in accordance with [147.A.100\(d\)](#), the organisation in question should ensure that the practical training elements are properly carried out.
2. At least 30% of the practical training element should be carried out in an actual maintenance working environment.

### AMC 147.A.200(f) The approved basic training course

ED Decision 2015/029/R

1. In order to follow pedagogical and human factors principles, the maximum number of training hours per day for the theoretical training should not be more than 6 hours. A training hour means 60 minutes of tuition excluding any breaks, examination, revision, preparation and aircraft visit. In exceptional cases, the competent authority may allow deviation from this

standard when it is properly justified that the proposed number of hours follows pedagogical and human factors principles. These principles are especially important in those cases where:

- Theoretical and practical training are performed at the same time;
  - Training and normal maintenance duty/apprenticeship are performed at the same time.
2. The minimum participation time for the trainee to meet the objectives of the course should not be less than 90 % of the tuition hours. Additional training may be provided by the training organisation in order to meet the minimum participation time. If the minimum participation defined for the course is not met, a certificate of recognition should not be issued.

### AMC 147.A.200(g) The approved basic training course

*ED Decision 2015/029/R*

Typical conversion durations are given below:

- (a) The approved basic training course to qualify for conversion from holding a [Part-66](#) aircraft maintenance licence in subcategory A1 to subcategory B1.1 or B2 should not be less than 1600 hours and for conversion from holding a [Part-66](#) aircraft maintenance licence in subcategory A1 to subcategory B1.1 combined with B2 should not be less than 2200 hours. The course should include between 60% and 70% knowledge training.
- (b) The approved basic training course to qualify for conversion from holding a [Part-66](#) aircraft maintenance licence in subcategory B1.1 to B2 or category B2 to B1.1 should not be less than 600 hours, and should include between 80% and 85% knowledge training.
- (c) The approved basic training course to qualify for conversion from holding a [Part-66](#) aircraft maintenance licence in subcategory B1.2 to subcategory B1.1 should not be less than 400 hours, and should include between 50% and 60% knowledge training.
- (d) The approved basic training course to qualify for conversion from holding a [Part-66](#) aircraft maintenance licence in one subcategory A to another subcategory A should not be less than 70 hours, and should include between 30% and 40% knowledge training.

### 147.A.205 Basic knowledge examinations

*Regulation (EU) No 1321/2014*

Basic knowledge examinations shall:

- (a) be in accordance with the standard defined in [Annex III \(Part-66\)](#).
- (b) be conducted without the use of training notes.
- (c) cover a representative cross section of subjects from the particular module of training completed in accordance with [Annex III \(Part-66\)](#).

### AMC 147.A.205 Basic knowledge examinations

*ED Decision 2015/029/R*

The competent authority may accept that the maintenance training organisation approved under [Part-147](#) can conduct examination of students who did not attend an approved basic course at the organisation in question.

## 147.A.210 Basic practical assessment

*Regulation (EU) No 1321/2014*

- (a) Basic practical assessments shall be carried out during the basic maintenance training course by the nominated practical assessors at the completion of each visit period to the practical workshops/maintenance facility.
- (b) The student shall achieve an assessed pass with respect to point [147.A.200\(e\)](#).

### AMC 147.A.210(a) Basic practical assessment

*ED Decision 2015/029/R*

Where the maintenance training organisation approved under [Part-147](#) contracts the practical training element either totally or in part to another organisation in accordance with [147.A.100\(d\)](#) and chooses to nominate practical assessors from the other organisation, the organisation in question should ensure that the basic practical assessments are carried out.

### AMC 147.A.210(b) Basic practical assessment

*ED Decision 2015/029/R*

An assessed pass for each student should be granted when the practical assessor is satisfied that the student meets the criteria of [147.A.200\(e\)](#). This means that the student has demonstrated the capability to use relevant tools/equipment/test equipment as specified by the tool/equipment/test equipment manufacturer and the use of maintenance manuals in that the student can carry out the required inspection/testing without missing any defects, can readily identify the location of components and is capable of correct removal/fitment/adjustment of such components. The student is only required to carry out enough inspection/testing and component removal/fitment/adjustments to prove capability. The student should also show an appreciation of the need to ensure clean working conditions and the observance of safety precautions for the student and the product. In addition, the student should demonstrate a responsible attitude in respect to flight safety and airworthiness of the aircraft.

[Appendix III to AMC to Part-66](#) provides criteria for the competence assessment performed by the designated assessors (and their qualifications).

## SUBPART D — AIRCRAFT TYPE/TASK TRAINING

### 147.A.300 Aircraft type/task training

Regulation (EU) No 1321/2014

A maintenance training organisation shall be approved to carry out [Annex III \(Part-66\)](#) aircraft type and/or task training subject to compliance with the standard specified in point [66.A.45](#).

### AMC 147.A.300 Aircraft type/task training

ED Decision 2015/029/R

Aircraft type training may be sub-divided in airframe and/or powerplant and/or avionics/electrical systems type training courses. A maintenance training organisation approved under [Part-147](#) may be approved to conduct airframe type training only, powerplant type training only, avionics/electrical systems type training only or any combination thereof.

1. Airframe type training course means a type training course including all relevant aircraft structure and electrical and mechanical systems excluding the powerplant.
2. Powerplant type training course means a type training course on the bare engine, including the build-up to a quick engine change unit.
3. The interface of the engine/airframe systems should be addressed by either airframe or powerplant type training. In some cases, such as for general aviation, it may be more appropriate to cover the interface during the airframe course due to the large variety of aircraft that can have the same engine type installed.
4. Avionics/electrical systems type training course means type training on avionics and electrical systems covered by but not necessarily limited to ATA (Air Transport Association) chapters 22, 23, 24, 25, 27, 31, 33, 34, 42, 44, 45, 46, 73 and 77 or equivalent.

### 147.A.305 Aircraft type examinations and task assessments

Regulation (EU) No 1321/2014

A maintenance training organisation approved in accordance with point [147.A.300](#) to conduct aircraft type training shall conduct the aircraft type examinations or aircraft task assessments specified in [Annex III \(Part-66\)](#) subject to compliance with the aircraft type and/or task standard specified in point [66.A.45](#) of [Annex III \(Part-66\)](#).

## SECTION B — PROCEDURES FOR COMPETENT AUTHORITIES

### SUBPART A — GENERAL

#### 147.B.05 Scope

Regulation (EU) No 1321/2014

This section establishes the administrative requirements to be followed by the competent authorities in charge of the application and the enforcement of Section A of this Part.

#### 147.B.10 Competent Authority

Regulation (EU) No 1321/2014

(a) General

The Member State shall designate a competent authority with allocated responsibilities for the issuance, continuation, change, suspension or revocation of certificates under this [Annex \(Part-147\)](#). This competent authority shall establish documented procedures and an organisational structure.

(b) Resources

The competent authority shall be appropriately staffed to carry out the requirements of this Part.

(c) Procedures

The competent authority shall establish procedures detailing how compliance with this [Annex \(Part-147\)](#) is accomplished.

The procedures shall be reviewed and amended to ensure continued compliance.

(d) Qualification and training

All staff involved in approvals related to this Annex must:

1. Be appropriately qualified and have all necessary knowledge, experience and training to perform their allocated tasks.
2. Have received training and continuation training on [Annex III \(Part-66\)](#) and [Annex IV \(Part-147\)](#) where relevant, including its intended meaning and standard.

#### AMC 147.B.10(a) Competent authority

ED Decision 2015/029/R

1. In deciding upon the required organisational structure, the competent authority should review the number of certificates to be issued, the number and size of potential [Part-147](#) approved maintenance training organisations within that Member State, as well as the level of civil aviation activity, number and complexity of aircraft and the size of the Member State's aviation industry.
2. The competent authority should retain effective control of important surveillance functions and not delegate them in such a way that [Part-147](#) organisations, in effect, regulate themselves in airworthiness matters.

3. The set-up of the organisational structure should ensure that the various tasks and obligations of the competent authority are not relying on individuals. That means that a continuing and undisturbed fulfilment of these tasks and obligations of the competent authority should also be guaranteed in case of illness, accident or leave of individual employees.

### **AMC 147.B.10(b) Competent authority**

*ED Decision 2015/029/R*

1. competent authority surveyors should have:
  - 1.1. practical experience and expertise in the application of aviation safety standards and safe operating practices;
  - 1.2. comprehensive knowledge of:
    - (a) relevant parts of implementing rules, certification specifications and guidance material;
    - (b) the competent authority's procedures;
    - (c) the rights and obligations of a surveyor;
    - (d) quality systems;
    - (e) continuing airworthiness management.
  - 1.3. training on auditing techniques.
2. five years relevant work experience to be allowed to work as a surveyor independently. This may include experience gained during training to obtain the 1.5 qualification.
3. a relevant engineering degree or an aircraft maintenance or training qualification with additional education. 'relevant engineering degree' means an engineering degree from aeronautical, mechanical, electrical, electronic, avionic or other studies relevant to the maintenance and continuing airworthiness of aircraft/aircraft components.
  - 3.1. knowledge of a relevant sample of aircraft types
  - 3.2. knowledge of maintenance training standards.
4. In addition to technical competency, surveyors should have a high degree of integrity, be impartial in carrying out their tasks, be tactful, and have a good understanding of human nature.
5. A programme for continuation training should be developed that ensures that the surveyors remain competent to perform their allocated tasks.

### **AMC 147.B.10(c) Competent authority**

*ED Decision 2015/029/R*

The documented procedures should contain the following information:

- (a) The Member State's designation of the competent authority(ies).
- (b) The title(s) and name(s) of the manager(s) of the competent authority and their duties and responsibilities.
- (c) Organisation chart(s) showing associated chains of responsibility of the senior persons.
- (d) A procedure defining the qualifications for staff together with a list of staff authorised to sign certificates.



- (e) A general description of the facilities.
- (f) Procedures specifying how the competent authority(ies) ensure(s) compliance with [Part-147](#).

## 147.B.20 Record-keeping

Regulation (EU) No 1321/2014

- (a) The competent authority shall establish a system of record-keeping that allows adequate traceability of the process to issue, renew, continue, vary, suspend or revoke each approval.
- (b) The records for the oversight of maintenance training organisations shall include as a minimum:
  - 1. the application for an organisation approval.
  - 2. the organisation approval certificate including any changes.
  - 3. a copy of the audit program listing the dates when audits are due and when audits were carried out.
  - 4. continued oversight records including all audit records.
  - 5. copies of all relevant correspondence.
  - 6. details of any exemption and enforcement actions.
  - 7. any report from other competent authorities relating to the oversight of the organisation.
  - 8. organisation exposition and amendments.
- (c) The minimum retention period for the point (b) records shall be four years.

## AMC 147.B.20 Record-keeping

ED Decision 2015/029/R

- 1. The record-keeping system should ensure that all records are accessible whenever needed within a reasonable time. These records should be organized in a consistent way throughout the competent authority (chronological, alphabetical order, etc.).
- 2. All records containing sensitive data regarding applicants or organisations should be stored in a secure manner with controlled access to ensure confidentiality of this kind of data.
- 3. All computer hardware used to ensure data backup should be stored in a different location from that containing the working data in an environment that ensures they remain in good condition. When hardware- or software-changes take place special care should be taken that all necessary data continues to be accessible at least through the full period specified in [147.B.20](#).

## 147.B.25 Exemptions

Regulation (EU) No 1321/2014

- (a) The competent authority may exempt a State education department school from:
  - 1. being an organisation as specified in point [147.A.10](#).
  - 2. having an accountable manager, subject to the limitation that the department appoint a senior person to manage the training organisation and such person has a budget sufficient to operate the organisation to the standard of this [Annex \(Part-147\)](#).

3. having recourse to the independent audit part of a quality system subject to the department operating an independent schools inspectorate to audit the maintenance training organisation at the frequency required by this Part.
- (b) All exemptions granted in accordance with Article 14(4) of Regulation (EC) No 216/2008 shall be recorded and retained by the competent authority.

## SUBPART B — ISSUE OF AN APPROVAL

Regulation (EU) No 1321/2014

This Subpart provides the requirements to issue or vary the maintenance training organisation approval.

### 147.B.110 Procedure for approval and changes to the approval

Regulation (EU) No 1321/2014

- (a) Upon receipt of an application, the competent authority shall:
  1. review the maintenance training organisation exposition; and
  2. verify the organisation's compliance with the requirement of [Annex IV \(Part-147\)](#).
- (b) All findings identified shall be recorded and confirmed in writing to the applicant.
- (c) All findings shall be closed in accordance with point [147.B.130](#) before the approval is issued.
- (d) The reference number shall be included on the approval certificate in a manner specified by the Agency.

### GM to 147.B.110 Procedure for approval and changes to the approval

ED Decision 2015/029/R

1. A meeting should be arranged between the applicant and the Member State who issue [Part-147](#) approvals to determine if the applicant's training activities justify the investigation for issue of [Part-147](#) approval and to ensure that the applicant understands what needs to be done for [Part-147](#) approval. This meeting is not intended to establish compliance but rather to see if the activity is a [Part-147](#) activity.
2. Assuming that the applicant's activities come within the scope of [Part-147](#) approval, instructions should be sent to the competent authority staff requesting that an audit of the applicant be carried out and when satisfied that compliance has been established, a recommendation for the issue of approval should be submitted to the competent authority staff who grant approval unless these are the same staff. The competent authority should determine how and by whom the audit shall be conducted. For example, if the applicant is a large training organisation, it will be necessary to determine whether one large team audit or a short series of small team audits or a long series of single person audits is most appropriate for the particular situation. A further consideration in the case of a combined [Part-145/147](#) organisation is the possibility to combine the audits.
3. Where it is intended that the maintenance training organisation may conduct training and examinations away from the maintenance training organisation address(es) in accordance with [147.A.145\(c\)](#), then a sample audit should be carried out by the competent authority from time to time of the process to ensure that procedures are followed. For practical reasons such sample audits will need to be carried out when training is being conducted away from the maintenance training organisation address(es).
4. The auditing surveyor should ensure that they are always accompanied throughout the audit by a senior member of the organisation making application for [Part-147](#) approval. Normally this should be the proposed quality manager. The reason for being accompanied is to ensure that the organisation is fully aware of any findings during the audit. In any case, the proposed quality

manager/senior member of the organisation should be debriefed at the end of the audit visit on the findings made during the audit.

5. There will be occasions when the auditing surveyor may find situations in the applicant's organisation on which he/she is unsure about compliance. In this case, the organisation should be informed about possible non-compliance at the time of audit and the fact that the situation will be reviewed before a decision is made. The organisation should be informed of the decision within 2 weeks of the audit visit in writing if the decision is a confirmation of non-compliance. If the decision is a finding of being in compliance, a verbal confirmation to the organisation will suffice.
6. A change of name of the maintenance training organisation requires the organisation to submit a new application as a matter of urgency stating that only the name of the organisation has changed including a copy of the organisation exposition with the new name. Upon receipt of the application and the organisation exposition, the competent authority should reissue the approval certificate valid only up to the current expiry date.
7. A name change alone does not require the competent authority to audit the organisation, unless there is evidence that other aspects of the maintenance training organisation have changed.
8. A change of accountable manager requires the maintenance training organisation to submit such fact to the competent authority as a matter of urgency together with the amendment to the accountable manager exposition statement.
9. A change of any of the senior personnel specified in [147.A.105\(b\)](#) requires the maintenance training organisation to submit a [Form 4](#) in respect of the particular person. If satisfied that the qualifications and experience meet the standard required by Part-147, the competent authority should indicate acceptance in writing to the maintenance training organisation.
10. A change in the maintenance training organisation's exposition requires the competent authority to establish that the procedures specified in the exposition are in compliance with Part-147 and then to establish if these are the same procedures intended for use within the training facility.
11. Any change of location of the maintenance training organisation requires the organisation to make a new application to the competent authority together with the submission of an amended exposition. The competent authority should follow the procedure specified in [147.B.110\(a\) and \(b\)](#) in so far as the change affects such procedure before issuing a new Part-147 approval certificate.
12. The complete or partial reorganisation of a training organisation should require the re-audit of those elements that have changed.
13. Any additional basic or aircraft type training courses requires the maintenance training organisation to make a new application to the competent authority together with the submission of an amended exposition. For basic training extensions, an additional sample of new examination questions relevant to the modules associated with the extension being sought will be required to be submitted. The competent authority should follow the procedure of paragraph 11 in so far as the change affects such procedures unless the competent authority is satisfied that the maintenance training organisation has a well-controlled procedure to qualify such change when it is not necessary to conduct the audit elements of the paragraph 11 procedure.

## AMC 147.B.110(a) Procedure for approval and changes to the approval

ED Decision 2015/029/R

1. The audit should be conducted on the basis of checking the facility for compliance, interviewing personnel and sampling any relevant training course for its conduct and standard.
2. The audit report should be made on an [EASA Form 22](#) (see appendix III).

## AMC 147.B.110(b) Procedure for approval and changes to the approval

ED Decision 2015/029/R

The date each finding was rectified should be recorded together with the reference document.

## 147.B.120 Continued validity procedure

Regulation (EU) No 1321/2014

- (a) Each organisation shall be completely audited for compliance with this [Annex \(Part-147\)](#) at periods not exceeding 24 months. This shall include the monitoring of at least one training course and one examination performed by the maintenance training organisation.
- (b) Findings shall be processed in accordance with point [147.B.130](#).

## AMC 147.B.120(a) Continued validity procedure

ED Decision 2015/029/R

1. Audits should be conducted to ensure the continuity of the approval; it is not necessary to sample all basic and type training courses, but the competent authority should sample, as appropriate, one basic and one type training course to establish that training is conducted in an appropriate manner. Nevertheless, the duration of the sampling for each course should not be less than 3 hours. Where no training course is being conducted during the audit, arrangements should be made to return at a later date to sample the conduct of a training course.
2. It is not necessary to sample all examinations associated with a training course but the competent authority should sample, as appropriate, one basic and one type training course examination.

## 147.B.125 Maintenance training organisation approval certificate

Regulation (EU) No 1321/2014

The maintenance training organisation approval certificate format shall be as detailed in Appendix II.

## 147.B.130 Findings

Regulation (EU) No 1321/2014

- (a) Failure to complete the rectification of any level 1 finding within three days of written notification shall entail revocation, suspension or limitation by the competent authority, of the maintenance training organisation approval in whole or in part.

- (b) Action shall be taken by the competent authority to revoke, limit or suspend in whole or part the approval in case of failure to comply within the time scale granted by the competent authority in the case of a level 2 finding.

### **AMC 147.B.130(b) Findings**

*ED Decision 2015/029/R*

1. In the case of a level 2 finding, the competent authority may give up to six-month notice of the need for rectification. Dependent upon the seriousness of the level 2 finding(s) the competent authority may choose a notice period less than six months.
2. When the competent authority chooses to allow six months, the initial notification should be of three-month duration to the quality manager followed by the final three-month notice to the accountable manager.

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## **SUBPART C — REVOCATION, SUSPENSION AND LIMITATION OF THE MAINTENANCE TRAINING ORGANISATION APPROVAL**

### **147.B.200 Revocation, suspension and limitation of the maintenance training organisation approval**

*Regulation (EU) No 1321/2014*

The competent authority shall:

- (a) suspend an approval on reasonable grounds in the case of potential safety threat; or
- (b) suspend, revoke or limit an approval pursuant to [147.B.130](#).

## APPENDICES TO ANNEX IV (PART-147)

### Appendix I — Basic training course duration

*Regulation (EU) No 1321/2014*

The minimum duration of a complete basic training course shall be as follows:

Basic Course	Duration (in hours)	Theoretical training ratio (in %)
A1	800	30 to 35
A2	650	30 to 35
A3	800	30 to 35
A4	800	30 to 35
B1.1	2400	50 to 60
B1.2	2000	50 to 60
B1.3	2400	50 to 60
B1.4	2400	50 to 60
B2	2400	50 to 60
B3	1000	50 to 60



## Appendix II — Maintenance Training Organisation Approval referred to in Annex IV (Part-147) — EASA Form 11

*Regulation (EU) 2015/1088*

Page 1 of 2

[MEMBER STATE (\*)]  
A Member of the European Union (\*\*)

MAINTENANCE TRAINING AND EXAMINATION ORGANISATION  
APPROVAL CERTIFICATE

Reference: [MEMBER STATE CODE\*].147.[XXXX]

Pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council and to Commission Regulation (EU) No 1321/2014 for the time being in force and subject to the condition specified below, the [COMPETENT AUTHORITY OF THE MEMBER STATE (\*)] hereby certifies:

[COMPANY NAME AND ADDRESS]

as a maintenance training organisation in compliance with Section A of Annex IV ([Part-147](#)) of Regulation (EU) No 1321/2014, approved to provide training and conduct examinations listed in the attached approval schedule and issue related certificates of recognition to students using the above references.

CONDITIONS:

1. This approval is limited to that specified in the scope of work section of the approved maintenance training organisation exposition as referred to in Section A of Annex IV ([Part-147](#)), and
2. This approval requires compliance with the procedures specified in the approved maintenance training organisation exposition, and
3. This approval is valid whilst the approved maintenance training organisation remains in compliance with Annex IV ([Part-147](#)) of Regulation (EU) No 1321/2014.
4. Subject to compliance with the foregoing conditions, this approval shall remain valid for an unlimited duration unless the approval has previously been surrendered, superseded, suspended or revoked.

Date of original issue: .....

Date of this revision: .....

Revision No: .....

Signed: .....

For the competent authority: [COMPETENT AUTHORITY OF THE MEMBER STATE (\*)]

EASA Form 11 Issue 4

(\*) Or EASA if EASA is the competent authority

(\*\*) Delete for non-EU Member States or EASA

**MAINTENANCE TRAINING AND EXAMINATION ORGANISATION  
APPROVAL SCHEDULE**

Reference: [MEMBER STATE CODE (\*).147.[XXXX]

Organisation: [COMPANY NAME AND ADDRESS]

CLASS	LICENCE CATEGORY	LIMITATION		
BASIC (**)	B1 (**)	TB1.1 (**)	AEROPLANES TURBINE (**)	
		TB1.2 (**)	AEROPLANES PISTON (**)	
		TB1.3 (**)	HELICOPTERS TURBINE (**)	
		TB1.4 (**)	HELICOPTERS PISTON (**)	
	B2 (**)	TB2 (**)	AVIONICS (**)	
	B3 (**)	TB3 (**)	PISTON-ENGINE NON-PRESSURISED AEROPLANES 2 000 KG MTOM AND BELOW (**)	
	A (**)	TA.1 (**)	AEROPLANES TURBINE (**)	
		TA.2 (**)	AEROPLANES PISTON (**)	
		TA.3 (**)	HELICOPTERS TURBINE (**)	
		TA.4 (**)	HELICOPTERS PISTON (**)	
	TYPE / TASK (**)	C (**)	T4 (**)	[QUOTE AIRCRAFT TYPE] (***)
		B1 (**)	T1 (**)	[QUOTE AIRCRAFT TYPE] (***)
B2 (**)		T2 (**)	[QUOTE AIRCRAFT TYPE] (***)	
A (**)		T3 (**)	[QUOTE AIRCRAFT TYPE] (***)	

This approval schedule is limited to those trainings and examinations specified in the scope of work section of the approved maintenance training organisation exposition,

Maintenance Training Organisation Exposition reference: .....

Date of original issue: .....

Date of last revision approved: ..... Revision No: .....

Signed: .....

For the competent authority:[COMPETENT AUTHORITY OF THE MEMBER STATE (\*)]

EASA Form 11 Issue 4

(\*) Or EASA if EASA is the competent authority.

(\*\*) Delete as appropriate if the organisation is not approved.

(\*\*\*) Complete with the appropriate rating and limitation.

## AMC to Appendix II to Part-147 — Maintenance Training Organisation Approval referred to in Annex IV (Part-147)

*ED Decision 2015/029/R*

The following fields on page 2 'Maintenance Training and Examination Approval Schedule' of the maintenance training and examination organization approval certificate should be completed as follows:

- Date of original issue: It refers to the date of the original issue of the maintenance training organisation exposition
- Date of last revision approved: It refers to the date of the last revision of the maintenance training organisation exposition affecting the content of the certificate. Changes to the maintenance training organisation exposition which do not affect the content of the certificate do not require the reissuance of the certificate.
- Revision No: It refers to the revision No of the last revision of the maintenance training organisation exposition affecting the content of the certificate. Changes to the maintenance training organisation exposition which do not affect the content of the certificate do not require the reissuance of the certificate.

## Appendix III — Certificates of Recognition referred to in Annex IV (Part-147) — EASA Forms 148 and 149

### 1. Basic Training/Examination

*Regulation (EU) 2015/1088*

The [Part-147](#) basic training certificate template detailed below is to be used for recognition of completion of either the basic training, the basic examination or both the basic training and basic training examinations.

The training certificate shall clearly identify each individual module examination by date passed together with the corresponding version of [Appendix I to Annex III \(Part-66\)](#).

**CERTIFICATE OF RECOGNITION**

Reference: [MEMBER STATE CODE (\*)].147.[XXXX].[YYYYY]

The certificate of recognition is issued to:

[NAME]

[DATE and PLACE OF BIRTH]

By:

[COMPANY NAME AND ADDRESS]

Reference: [MEMBER STATE CODE (\*)].147.[XXXX]

a maintenance training organisation approved to provide training and conduct examinations within its approval schedule and in accordance with [Annex IV \(Part-147\)](#) of Regulation (EU) No 1321/2014.

This certificate confirms that the above named person either successfully passed the approved basic training course (\*\*) or the basic examination (\*\*) stated below in compliance with Regulation (EC) No 216/2008 of the European Parliament and of the Council and to Commission Regulation (EU) No 1321/2014 for the time being in force.

[BASIC TRAINING COURSE (\*\*)] or/and [BASIC EXAMINATION (\*\*)]

[LIST OF PART-66 MODULES/DATE OF EXAMINATION PASSED]

Date: .....

Signed: .....

For: [COMPANY NAME]

EASA Form 148 Issue 2

(\*) Or EASA if EASA is the competent authority

(\*\*) Delete as appropriate

**2. Type Training/Examination***Regulation (EU) 2015/1088*

The [Part-147](#) type training certificate template detailed below is to be used for recognition of completion of either the theoretical elements, the practical elements or both the theoretical and practical elements of the type rating training course.

The certificate shall indicate the airframe/engine combination for which the training was imparted.

The appropriate references shall be deleted as applicable and the course type box shall detail whether only the theoretical elements or the practical elements were covered or whether theoretical and practical elements were covered.

The training certificate shall clearly identify if the course is a complete course or a partial course (such as an airframe or powerplant or avionic/electrical course) or a difference course based upon the applicant previous experience, for instance A340 (CFM) course for A320 technicians. If the course is not a complete one, the certificate shall identify whether the interface areas have been covered or not.

**CERTIFICATE OF RECOGNITION**

Reference: [MEMBER STATE CODE (\*)].147.[XXXX].[YYYYY]

The certificate of recognition is issued to:

[NAME]

[DATE and PLACE OF BIRTH]

By:

[COMPANY NAME AND ADDRESS]

Reference: [MEMBER STATE CODE (\*)].147.[XXXX]

a maintenance training organisation approved to provide training and conduct examinations within its approval schedule and in accordance with [Annex IV \(Part-147\)](#) of Regulation (EU) No 1321/2014.

This certificate confirms that the above named person either successfully passed the theoretical (\*\*) and/or practical elements (\*\*) of the approved type training course stated below and the related examinations in compliance with Regulation (EC) No 216/2008 of the European Parliament and of the Council and to Commission Regulation (EU) No 1321/2014 for the time being in force.

[AIRCRAFT TYPE TRAINING COURSE (\*\*)]

[START and END DATES]

[SPECIFY THEORETICAL ELEMENTS OR PRACTICAL ELEMENTS]

and/or

[AIRCRAFT TYPE EXAMINATION (\*\*)]

[END DATE]

Date: .....

Signed: .....

For: [COMPANY NAME]

EASA Form 149 Issue 2

(\*) Or EASA if EASA is the competent authority

(\*\*) Delete as appropriate

## AMC to Appendix III to Part-147 — Certificates of Recognition referred to in Annex IV (Part-147) — EASA Forms 148 and 149

ED Decision 2015/029/R

As stated in [Appendix III to Part-147](#), the [EASA Form 148](#) 'Certificate of Recognition for Basic Training/Examination' may be issued after completion of either basic training, basic examination or both basic training and basic examination.

Some examples of cases where an [EASA Form 148](#) could be issued are the following:

- After successful completion of a full basic course in one licence (sub) category including successful completion of the examinations of all the corresponding modules.
- After successful completion of a full basic course in one licence (sub) category without performing examinations. The examinations may be performed at a different [Part-147](#) organisation (this organisation will issue the corresponding Certificate of Recognition for those examinations) or at the competent authority.
- After successful completion of all module examinations corresponding to a licence (sub) category.
- After successful completion of certain modules/sub-modules/subjects. It must be noted that 'successful completion of a course' (without the module examinations) means successful completion of the theoretical and practical training including the corresponding practical assessment.



## APPENDICES TO AMC<sub>s</sub> TO ANNEX IV (PART-147)

### Appendix I — Maintenance training organisation exposition (MTOE)

ED Decision 2015/029/R

1. The following subject headings form the basis of the MTOE required by [147.A.140](#).
2. Whilst this format is recommended, it is not mandatory to assemble the MTOE in this manner as long as a cross-reference index is included in the MTOE as an Appendix and the Part 1 items remain in Part 1.
3. Part 2, 3 and 4 material may be produced as separate detailed manuals subject to the main exposition containing the Part 2, 3 and 4 fundamental principles and policy on each item. It is then permitted to delegate the approval of these separate manuals to the senior person but this fact and the procedure should be specified in paragraph 1.10.
4. Where an organisation is approved in accordance with any other Part(s) which require an exposition, it is acceptable to combine the exposition requirements by merging the Part 1 items and adding the Parts 2, 3 and 4. When this method is used, it is essential to include the cross reference index of Part 4 item 4.3.

#### PART 1 – MANAGEMENT

- 1.1. Corporate commitment by accountable manager
- 1.2. Management personnel
- 1.3. Duties and responsibilities of management personnel, instructors, knowledge examiners and practical assessor
- 1.4. Management personnel organisation chart
- 1.5. List of instructional and examination staff  
Note: A separate document may be referenced
- 1.6. List of approved addresses
- 1.7. List of sub-contractors as per [147.A.145\(d\)](#)
- 1.8. General description of facilities at paragraph 1.6 addresses
- 1.9. Specific list of courses and type examinations approved by the competent authority
- 1.10. Notification procedures regarding changes to organisation
- 1.11. Exposition and associated manuals amendment procedure

#### PART 2 – TRAINING AND EXAMINATION PROCEDURES

- 2.1. Organisation of courses
- 2.2. Preparation of course material
- 2.3. Preparation of classrooms and equipment
- 2.4. Preparation of workshops/maintenance facilities and equipment
- 2.5. Conduct of theoretical training & practical training (during basic knowledge training and type/task training)
- 2.6. Records of training carried out

- 2.7. Storage of training records
- 2.8. Training at locations not listed in paragraph 1.6
- 2.9. Organisation of examinations
- 2.10. Security and preparation of examination material
- 2.11. Preparation of examination rooms
- 2.12. Conduct of examinations (basic knowledge examinations, type/task training examinations and type examinations)
- 2.13. Conduct of practical assessments (during basic knowledge training and type/task training)
- 2.14. Marking and record of examinations
- 2.15. Storage of examination records
- 2.16. Examinations at locations not listed in paragraph 1.6
- 2.17. Preparation, control & issue of basic training course certificates
- 2.18. Control of sub-contractors

### **PART 3 – TRAINING SYSTEM QUALITY PROCEDURES**

- 3.1. Audit of training
- 3.2. Audit of examinations
- 3.3. Analysis of examination results
- 3.4. Audit and analysis remedial action
- 3.5. Accountable manager annual review
- 3.6. Qualifying the instructors
- 3.7. Qualifying the examiners and the assessors
- 3.8. Records of qualified instructors & examiners

### **PART 4 – APPENDICES**

- 4.1. Example of documents and forms used
- 4.2. Syllabus of each training course
- 4.3. Cross-reference index - if applicable

**Appendix II — EASA Form 4***ED Decision 2015/029/R***[COMPETENT AUTHORITY]**

Details of Management Personnel required to be accepted as specified in Part-.....

1. Name:
2. Position:
3. Qualifications relevant to the item (2) position:
4. Work experience relevant to the item (2) position:

Signature: ..... Date: .....

On completion, please send this form under confidential cover to the competent authority.

Competent authority use only

Name and signature of authorised competent authority staff member accepting this person:

Signature: ..... Date: .....

Name: ..... Office: .....

## Appendix III — EASA Form 22

*ED Decision 2015/029/R***PART-147 APPROVAL RECOMMENDATION REPORT EASA FORM 22****Part 1: General**

Name of organisation:

Approval reference:

Requested approval rating/  
Form 11 dated\*:

Other approvals held (if app.)

Address of facility audited:

Audit period: from \_\_\_\_\_ to :

Date(s) of audit(s):

Audit reference(s):

Persons interviewed:

Competent authority surveyor: \_\_\_\_\_ Signature(s):

Competent authority office: \_\_\_\_\_ Date of EASA Form 22 part 1 completion:

\*delete where applicable

**PART-147 APPROVAL RECOMMENDATION REPORT EASA FORM 22**
**Part 2: [Part-147](#) Compliance Audit Review**

The five columns may be labelled and used as necessary to record the approved training/examinations, facility, including subcontractor's, reviewed. Against each column used of the following [Part-147](#) subparagraphs please either tick (✓) the box if satisfied with compliance or cross (X) the box if not satisfied with compliance and specify the reference of the Part 4 finding next to the box or enter N/A where an item is not applicable, or N/R when applicable but not reviewed.

Para	Subject					
<a href="#">147.A.100</a>	Facility requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.105</a>	Personnel requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.110</a>	Records of instructors, examiners and assessors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.115</a>	Instructional equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.120</a>	Maintenance training material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.125</a>	Records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.130</a>	Training procedures and quality system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.135</a>	Examinations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.145</a>	Privileges of the maintenance training organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.150</a>	Changes to the maintenance training organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.160</a>	Findings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.200</a>	Approved basic training course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.205</a>	Basic knowledge examinations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.210</a>	Basic practical assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.300</a>	Aircraft type/task training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">147.A.305</a>	Aircraft type examinations and task assessments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competent authority surveyor(s):

Signature(s):

Competent authority office:

Date of Form 22 part 2 completion:

**PART-147 APPROVAL RECOMMENDATION REPORT EASA FORM 22**
**Part 3: Compliance with Part-147 maintenance training organisation exposition (MTOE)**

Please either tick (√) the box if satisfied with compliance; or cross (X) if not satisfied with compliance and specify the reference of the Part 4 finding, or enter N/A where an item is not applicable, or N/R when applicable but not reviewed.

**PART 1 MANAGEMENT**

1.1	<input type="checkbox"/>	Corporate commitment by accountable Manager
1.2	<input type="checkbox"/>	Management personnel
1.3	<input type="checkbox"/>	Duties and responsibilities of management personnel, instructors, knowledge examiners and practical assessor
1.4	<input type="checkbox"/>	Management personnel organisation chart
1.5	<input type="checkbox"/>	List of instructional and examination staff
1.6	<input type="checkbox"/>	List of approved addresses
1.7	<input type="checkbox"/>	List of sub-contractors as per <a href="#">147.A.145(d)</a>
1.8	<input type="checkbox"/>	General description of facilities of paragraph 1.6 addresses
1.9	<input type="checkbox"/>	Specific list of courses and type examinations approved by the competent authority
1.10	<input type="checkbox"/>	Notification procedures regarding changes to organisation
1.11	<input type="checkbox"/>	Exposition and associated manuals amendment procedures

**PART 2 TRAINING AND EXAMINATION PROCEDURES**

2.1	<input type="checkbox"/>	Organisation of courses
2.2	<input type="checkbox"/>	Preparation of course material
2.3	<input type="checkbox"/>	Preparation of classrooms and equipment
2.4	<input type="checkbox"/>	Preparation of workshops/maintenance facilities and equipment
2.5	<input type="checkbox"/>	Conduct of theoretical training & practical training (during basic knowledge training and type/task training)
2.6	<input type="checkbox"/>	Records of training carried out
2.7	<input type="checkbox"/>	Storage of training records
2.8	<input type="checkbox"/>	Training at locations not listed in paragraph 1.6
2.9	<input type="checkbox"/>	Organisation of examinations
2.10	<input type="checkbox"/>	Security and preparation of examination material
2.11	<input type="checkbox"/>	Preparation of examination rooms

2.12	<input type="checkbox"/>	Conduct of examinations (basic knowledge examinations, type/task training examinations and type examinations)
2.13	<input type="checkbox"/>	Conduct of practical assessments (during basic knowledge training and type/task training)
2.14	<input type="checkbox"/>	Marking and record of examinations
2.15	<input type="checkbox"/>	Storage of examination records
2.16	<input type="checkbox"/>	Examinations at locations not listed in paragraph 1.6
2.17	<input type="checkbox"/>	Preparation, control & issue of basic training course certificates.
2.18	<input type="checkbox"/>	Control of sub-contractors.
<b>PART 3 TRAINING SYSTEM QUALITY PROCEDURES</b>		
3.1	<input type="checkbox"/>	Audit of training
3.2	<input type="checkbox"/>	Audit of examinations
3.3	<input type="checkbox"/>	Analysis of examination results.
3.4	<input type="checkbox"/>	Audit and analysis remedial action
3.5	<input type="checkbox"/>	Accountable manager annual review
3.6	<input type="checkbox"/>	Qualifying the instructors
3.7	<input type="checkbox"/>	Qualifying the examiners and the assessors
3.8	<input type="checkbox"/>	Records of qualified instructors & examiners.
<b>PART 4 APPENDICES</b>		
4.1	<input type="checkbox"/>	Example of documents and forms used.
4.2	<input type="checkbox"/>	Syllabus of each training course.
4.3	<input type="checkbox"/>	Cross-reference Index - if applicable.
MTOE reference:                      MTOE amendment:		
Competent authority audit staff:    Signature(s):		
Competent authority office:              Date of EASA Form 22 part 3 completion:		

PART-147 APPROVAL RECOMMENDATION REPORT EASA FORM 22					
Part 4: Findings regarding Part-147 compliance status					
Each level 1 and 2 finding should be recorded whether it has been rectified or not and should be identified by a simple cross reference to the Part 2 requirement. All non-rectified findings should be copied in writing to the organisation for the necessary corrective action.					
Part 2 or 3 ref.	Audit reference(s): Findings	L e v e l	Corrective action		Reference
			Date Due	Date Closed	



PART-147 APPROVAL RECOMMENDATION REPORT EASA FORM 22

**Part 5: Part147 approval or continued approval or change recommendation**

Name of organisation:

Approval reference:

Audit reference(s):

Applicable [Part-147](#) amendment status:

The following [Part-147](#) scope of approval is recommended for this organisation:

Or, it is recommended that the [Part-147](#) scope of approval specified in [EASA Form 11](#) referenced  
..... be continued.

Name of recommending competent authority surveyor:

Signature of recommending competent authority surveyor:

Competent authority office:

Date of recommendation:

EASA Form 22 review (quality check) : Date:

## Appendix IV — EASA Form 12

*ED Decision 2015/029/R*

<b>EASA FORM 12</b> <b>Page 1</b>	<b>APPLICATION FOR PART-147</b> <b>INITIAL / CHANGE OF APPROVAL</b>
Registered Name & Address of Applicant:  Trading Name (if different): Addresses Requiring Approval:  Tel No:.....Fax No.....E Mail.....	
Scope of <a href="#">Part-147</a> Approval Relevant to This Initial */ Change of * Application (See other side for training course designators to be used):  Basic Training:  Type Training:  Does the organisation hold approval under Part-21 * / <a href="#">Part-145</a> * / <a href="#">Part-M</a> * * Cross out whichever is not applicable	
Name & Position of Accountable Manager: Signature of Accountable Manager: Date of Application: Please send this form with any required fee to be paid under National Legislation to your National Aviation Authority	Space for official use

## ANNEX VA (PART-T)

### GENERAL

#### T.1 Competent authority

Regulation (EU) 2015/1536

For the purpose of this Part, the competent authority for the oversight of the aircraft and the organisations shall be the authority designated by the Member State that has issued the Air Operator Certificate to the operator.

#### GM T.1 Competent authority

ED Decision 2016/011/R

[Article 1\(b\)](#) and [Article 3\(5\)](#) of Commission Regulation (EU) No 1321/2014, as amended by Commission Regulation (EU) 2015/1536, establish the applicability of [Annex Va \(Part-T\)](#) to aircraft registered in a third country for which their regulatory safety oversight has not been delegated to a Member State when they are dry leased-in by an air carrier licensed in accordance with Regulation (EC) No 1008/2008.

This means that the provisions of [Part-T](#) are not applicable to aircraft registered in a third country for which their regulatory safety oversight has been delegated to a Member State. In such a case, [Article 1\(a\)\(ii\)](#) stipulates that the provisions of [Part-M](#) are applicable.

The conditions for the approval of the dry lease-in are specified in ORO.AOC.110.

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## SECTION A — TECHNICAL REQUIREMENTS

### SUBPART A — GENERAL

#### T.A.101 Scope

*Regulation (EU) 2015/1536*

This section establishes requirements to ensure that continuing airworthiness of aircraft referred to in [Article 1\(b\)](#) is maintained in compliance with the essential requirements of Annex IV to Regulation (EC) No 216/2008

It also specifies the conditions to be met by the persons and organisations responsible for management of the continuing airworthiness and maintenance of such aircraft.

## SUBPART B — CONTINUING AIRWORTHINESS

### T.A.201 Responsibilities

*Regulation (EU) 2015/1536*

1.
  - (a) The operator is responsible for the airworthiness of the aircraft and it shall ensure that it is not operated unless the aircraft has a type certificate issued or validated by the Agency;
  - (b) the aircraft is in an airworthy condition;
  - (c) the aircraft holds a valid certificate of airworthiness issued in accordance with ICAO Annex 8;
  - (d) the maintenance of the aircraft is performed in accordance with a maintenance programme which shall comply with the requirements of the State of Registry and the applicable requirements of ICAO Annex 6.
  - (e) any defect or damage affecting the safe operation of the aircraft is rectified to a standard acceptable to the State of Registry;
  - (f) the aircraft complies with any applicable:
    - (i) airworthiness directive or continued airworthiness requirement issued or adopted by the State of Registry; and
    - (ii) mandatory safety information issued by the Agency, including airworthiness directives;
  - (g) a release to service is issued to the aircraft after maintenance by qualified organisations in compliance with the State of Registry requirements. The signed release to service shall contain, in particular, the basic details of the maintenance carried out.
  - (h) the aircraft is inspected, through a pre-flight inspection, before each flight
  - (i) all modifications and repairs comply with the airworthiness requirements established by the State of Registry
  - (j) the following aircraft records are available until the information contained has been superseded by new information equivalent in scope and detail but not less than 24 months:
    - (1) the total time in service (hours, cycles and calendar time, as appropriate) of the aircraft and all life-limited components;
    - (2) current status of compliance with [T.A.201\(1\)\(f\)](#) requirements;
    - (3) current status of compliance with the maintenance programme;
    - (4) current status of modifications and repairs together with appropriate details and substantiating data to demonstrate that they comply with the requirements established by the State of Registry.
2. The tasks specified in [T.A.201\(1\)](#) shall be controlled by the operator's continuing airworthiness management organisation. For this purpose the organisation shall comply with the additional requirements of [T.A. Subpart G](#)
3. The continuing airworthiness management organisation referred to in (2) shall ensure that the maintenance and release of the aircraft are performed by a maintenance organisation meeting the requirements of Subpart E. For this purpose, when the continuing airworthiness

management organisation does not meet the requirements of subpart E itself, it shall establish a contract with such organisations.

### AMC T.A.201(1)(h) Responsibilities

*ED Decision 2016/011/R*

#### PRE-FLIGHT INSPECTION

Contents of the pre-flight inspection may be found in [AMC M.A.301-1](#).

### GM T.A.201(1)(j) Responsibilities

*ED Decision 2016/011/R*

#### RECORDS

The records should provide all the necessary information to allow the CAMO and the competent authority to clearly establish the airworthy condition of the aircraft during the whole lease period.

### AMC1 T.A.201(3) Responsibilities

*ED Decision 2016/011/R*

#### MAINTENANCE ORGANISATION

1. The CAMO carries the responsibility for the airworthy condition of the aircraft for which it performs the continuing airworthiness management; it should thus be satisfied before the intended flight that all required maintenance has been properly carried out by a maintenance organisation.
2. The CAMO should establish a process to verify that the maintenance organisation complies with the applicable requirements of Subpart E.

### AMC2 T.A.201(3) Responsibilities

*ED Decision 2016/011/R*

#### CONTRACT

1. The contract between the CAMO and the maintenance organisation(s) should specify in detail the responsibilities and the work to be performed by each party.
2. Both the specification of work and the assignment of responsibilities should be clear, unambiguous and sufficiently detailed to ensure that no misunderstanding arises between the parties concerned that could result in a situation where work that has a bearing on the airworthiness or serviceability of aircraft is not or will not be properly performed. [Appendix XI to AMC M.A.708\(c\)](#) gives further details on the contents of the contract.
3. The CAMO should consider checking at the maintenance facilities any aspect of the contracted work to satisfy its responsibility for the airworthiness of the aircraft during the period of the contract.

### AMC3 T.A.201(3) Responsibilities

*ED Decision 2016/011/R*

#### CONTRACT

Normally the contract with the maintenance organisation should be established for the duration of the lease period, which should not be more than 7 months. For unscheduled line maintenance and component maintenance up to engines, the contract may take the form of individual work orders as long as the scope of work and the responsibilities of the CAMO and of the maintenance organisation are properly addressed.

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## SUBPART E — MAINTENANCE ORGANISATION

*Regulation (EU) 2015/1536*

The continuing airworthiness management organisation shall ensure that the aircraft and its components are maintained by organisations complying with the following requirements:

- (1) The organisation holds a maintenance organisation approval issued or acceptable to the State of Registry.
- (2) The scope of approval of the organisation includes the appropriate aircraft and/or component capability.
- (3) The organisation has established an occurrence reporting system which ensures that any identified condition of an aircraft or component which endangers the flight safety is reported to the operator, the competent authority of the operator, the organisation responsible for the type design or supplemental type design and the continuing airworthiness management organisation.
- (4) The organisation has established an organisation's manual providing a description of all the procedures of the organisation.

### GM Subpart E

*ED Decision 2016/011/R*

The CAMO should establish a process to verify that the maintenance organisation complies with the applicable requirements of Subpart E, one of the inputs to this process may be whether the maintenance organisation holds an approval by the State of Registry issued in accordance with the requirements of ICAO Annex 6 Part I Section 8.7.

### AMC Subpart E point (3)

*ED Decision 2016/011/R*

The occurrence-reporting system should describe the procedures followed by the organisation whereby information on faults, malfunctions, defects and other occurrences that cause or might cause adverse effects on the continuing airworthiness of the aircraft are transmitted to the operator, to the organisation responsible for the type design of that aircraft, and to the State of Registry.



## SUBPART G — ADDITIONAL REQUIREMENTS FOR CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATIONS APPROVED PURSUANT TO ANNEX I (PART-M) SUBPART G

### T.A.701 Scope

Regulation (EU) 2015/1536

This Subpart establishes the requirements to be met in addition to the requirements of [Part-M Subpart G](#) by an organisation approved in accordance with [Part-M Subpart G](#) to control the tasks specified in [T.A.201](#).

### T.A.704 Continuing airworthiness management exposition

Regulation (EU) 2015/1536

In addition to the requirements of [M.A.704](#), the exposition shall contain procedures specifying how the continuing airworthiness management organisation ensures compliance with [Part-T](#).

### AMC T.A.704 Continuing airworthiness management exposition (CAME)

ED Decision 2016/011/R

In addition to the contents described in [AMC M.A.704](#), the CAME should provide additional information describing how the CAMO manages the continuing airworthiness of the aircraft under [Part-T](#). Guidance on the specific contents may be found in [Appendix I to AMC T.A.704](#).

### T.A.706 Personnel requirements

Regulation (EU) 2015/1536

In addition to the requirements of [M.A.706](#), the [M.A.706\(c\) and \(d\)](#) personnel shall have adequate knowledge of the applicable third country regulations.

### AMC T.A.706 Personnel requirements

ED Decision 2016/011/R

1. Adequate knowledge may be demonstrated by training or work experience with the applicable third-country regulations or a combination of training and experience.
2. The competence assessment required by [M.A.706\(d\)](#) should include the knowledge necessary for the performance of the activities under [Part-T](#).

### T.A.708 Continuing airworthiness management

Regulation (EU) 2015/1536

Notwithstanding [M.A.708](#), for aircraft managed under the requirements of [Part-T](#) the approved continuing airworthiness management organisation shall:

- (a) ensure that the aircraft is taken to a maintenance organisation whenever necessary;
- (b) ensure that all maintenance is carried out in accordance with the maintenance programme;
- (c) ensure the application of the [T.A.201\(1\)\(f\)](#) mandatory information;

- (d) ensure that all defects discovered during scheduled maintenance or reported are corrected by the maintenance organisation in accordance with the maintenance data acceptable to the State of Registry;
- (e) coordinate scheduled maintenance, the application of the [T.A.201\(1\)\(f\)](#) mandatory information, the replacement of life-limited parts, and component inspection to ensure the work is carried out properly;
- (f) manage and archive the continuing airworthiness records required by [T.A.201\(1\)\(j\)](#);
- (g) ensure that modifications and repairs are approved in accordance with the requirements of the State of Registry.

## GM T.A.708 Continuing airworthiness management

ED Decision 2016/011/R

The CAMO has already approved procedures to perform the management of the aircraft under [Part-M](#). These procedures may be adapted as necessary to satisfy the requirements under [T.A.708](#) or the CAMO may decide to develop different procedures.

## T.A.709 Documentation

Regulation (EU) 2015/1536

Notwithstanding [M.A.709\(a\) and \(b\)](#), for every aircraft managed following the requirements of [Part-T](#) the continuing airworthiness management organisation shall hold and use applicable maintenance data acceptable to the State of Registry.

## AMC T.A.709 Maintenance data

ED Decision 2016/011/R

Applicable maintenance data should include the ICA applicable to the aircraft, the requirements, procedures, standards and mandatory safety information (MSI) issued by the State of Registry, the requirements, procedures, standards and MSI issued by the Agency.

The applicable maintenance data should be in a language acceptable to the competent authority.

## T.A.711 Privileges

Regulation (EU) 2015/1536

A continuing airworthiness management organisation approved in accordance with [Part-M Subpart G](#) may perform the tasks specified in [T.A.708](#) for the aircraft included in its Air Operator Certificate provided that the organisation has established procedures, approved by the competent authority, to ensure compliance with [Part-T](#).

## AMC T.A.711 Privileges

ED Decision 2016/011/R

Under the privilege of [M.A.711\(a\)\(3\)](#), the CAMO may contract the performance of the continuing airworthiness tasks required by [Part-T](#) with another organisation working under the CAMO's quality system and listed on the approval certificate.

## T.A.712 Quality system

Regulation (EU) 2015/1536

In addition to the requirements of [M.A.712](#), the continuing airworthiness management organisation shall ensure that the quality system monitors that all the activities under this Subpart are performed in accordance with the approved procedures.

## T.A.714 Record-keeping

Regulation (EU) 2015/1536

In addition to the requirements of [M.A.714\(a\)](#), the organisation shall keep the records required by [T.A.201\(1\)\(j\)](#).

## T.A.715 Continued validity of approval

Regulation (EU) 2015/1536

In addition to the conditions of [M.A.715\(a\)](#) for an organisation managing the continuing airworthiness pursuant this Subpart, the approval shall remain valid subject to:

- (a) the organisation complying with the applicable requirements of [Part-T](#); and
- (b) the organisation ensuring that any person authorised by the competent authority is granted access to any of its facilities, aircraft or documents related to its activities, including any subcontracted activities, to determine compliance with this Part.

## T.A.716 Findings

Regulation (EU) 2015/1536

After receipt of notification of findings according to [T.B.705](#), the continuing airworthiness management organisation approval shall define a corrective action plan and demonstrate corrective action to the satisfaction of the competent authority within a period agreed with this authority.

## SECTION B — ADDITIONAL PROCEDURES FOR COMPETENT AUTHORITIES

### SUBPART A — GENERAL

#### T.B.101 Scope

Regulation (EU) 2015/1536

This Section establishes the administrative requirements to be followed by the competent authorities in charge of the application and enforcement of [Section A of this Part-T](#).

#### T.B.102 Competent authority

Regulation (EU) 2015/1536

1. General

A Member State shall designate a competent authority with allocated responsibilities as referred to in T.1. This competent authority shall establish documented procedures and an organisational structure.

2. Resources

The number of staff shall be appropriate to carry out the requirements as detailed in this Section

3. Qualification and training

All staff involved in [Part-T](#) activities shall be appropriately qualified and have the appropriate knowledge, experience, initial training and continuation training to perform their allocated tasks.

4. Procedures

The competent authority shall establish procedures detailing how compliance with this Part is accomplished.

#### AMC T.B.102(3) Competent authority

ED Decision 2016/011/R

Staff should have adequate qualifications and should have received adequate training as described in [AMC1 M.B.102](#) and [AMC2 M.B.102](#), and in addition staff should have sufficient knowledge of the applicable third-country airworthiness requirements. Such knowledge may be demonstrated if staff have received training in or have work experience with the applicable third-country airworthiness requirements or a combination of training and work experience.

#### AMC T.B.102(4) Competent authority

ED Decision 2016/011/R

[AMC M.B.102\(d\)](#) may be used by the competent authority to establish the procedures required to comply with [Part-T](#). In addition, the competent authority should establish procedures to ensure adequate coordination with the State of Registry.

## T.B.104 Record-keeping

Regulation (EU) 2015/1536

1. The requirements of [M.B.104\(a\), \(b\) and \(c\)](#) of Annex I shall apply.
2. The minimum records for the oversight of each aircraft shall include, at least, a copy of:
  - a) the aircraft's certificate of airworthiness,
  - b) all relevant correspondence relating to the aircraft,
  - c) reports from any inspection and survey performed to the aircraft,
  - d) details of any exemption and enforcement action(s).
3. All records specified in [T.B.104](#) shall be made available, upon request, to another Member State, the Agency or the State of Registry.
4. The records specified in (2) shall be retained until 4 years after the end of the dry lease-in period.

## AMC T.B.104 Record-keeping

ED Decision 2016/011/R

[AMC M.B.104\(a\)](#) and [AMC M.B.104\(f\)](#) may be used by the competent authority to establish its record-keeping system.

## T.B.105 Mutual exchange of information

Regulation (EU) 2015/1536

The requirements of [M.B.105](#) of Annex I shall apply.

## SUBPART B — ACCOUNTABILITY

### T.B.201 Responsibilities

*Regulation (EU) 2015/1536*

1. The competent authority as specified in T.1 is responsible for conducting inspections and investigations, including aircraft surveys, in order to verify that the requirements of this Part are complied with.
2. The competent authority shall perform inspections and investigations before the approval of the dry lease in agreement in accordance with ARO.OPS.110 (a)(1), to verify that the requirements of [T.A.201](#) are then complied with.
3. The competent authority shall ensure coordination with the State of Registry as necessary to exercise the oversight responsibilities of the aircraft contained in this [Annex Va \(Part-T\)](#).

### T.B.202 Findings

*Regulation (EU) 2015/1536*

1. A level 1 finding is any significant non-compliance with the [Part-T](#) requirements which lowers the safety standard and hazards seriously the flight safety.
2. A level 2 finding is any non-compliance with the [Part-T](#) requirements which could lower the safety standard and possibly hazard the flight safety.
3. When a finding is detected during inspections, investigations, aircraft surveys or by other means, the competent authority shall:
  - a) take measures as necessary, such as the grounding of the aircraft, to prevent the continuation of the non-compliance,
  - b) require corrective actions appropriate to the nature of the finding to be taken.
4. For level 1 findings, the competent authority shall require appropriate corrective action to be taken before further flight and notify the State of Registry.

## SUBPART G — ADDITIONAL REQUIREMENTS FOR CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATIONS APPROVED PURSUANT TO ANNEX I (PART-M) SUBPART G

### T.B.702 Initial approval

Regulation (EU) 2015/1536

In addition to the requirements of [M.B.702](#), when the organisation's continuing airworthiness management exposition contains procedures to manage the continuing airworthiness of aircraft referred to in [Article 1\(b\)](#), the competent authority shall establish that those procedures comply with [Part-T](#) and it shall verify that the organisation complies with the Part-T requirements.

### AMC T.B.702 Initial approval

ED Decision 2016/011/R

1. The audit report [EASA Form 13T](#) should be used to record the audit performance and the findings. [EASA Form 13T](#) may be found in [Appendix II to AMC T.B.702](#).
2. When the organisation is not approved under [Part-M Subpart G](#) for a particular aircraft type, then the organisation should apply for a change under [M.A.713](#) to include that aircraft type in the scope of approval at the same time when it applies for approval under [Part-T Subpart G](#) to manage the continuing airworthiness of aircraft referred to in [T.B.101](#).
3. When the organisation is already approved under [Part-M Subpart G](#) for a particular aircraft type, then the approval to manage the continuing airworthiness of aircraft referred to in [T.B.101](#) should be considered as a change that requires prior approval by the competent authority. The approval by the competent authority should be performed by approving the proposed amendments to the CAME.

### T.B.704 Continuing oversight

Regulation (EU) 2015/1536

In addition to the requirements of [M.B.704](#), a relevant sample of aircraft referred to in [Article 1\(b\)](#) managed by the organisation shall be surveyed in every 24-month period.

### T.B.705 Findings

Regulation (EU) 2015/1536

In addition to the requirements of [M.B.705](#), for organisations managing the continuing airworthiness of aircraft referred to in [Article 1\(b\)](#) the competent authority shall also take actions when during audits, ramp inspections or by other means evidence is found showing non-compliance with the [Part-I](#) requirements.

## APPENDICES TO AMCs AND GM TO ANNEX VA (PART-T)

### Appendix I to AMC T.A.704 — Continuing airworthiness management exposition (CAME)

ED Decision 2016/011/R

The CAME of the CAMO should be amended to take into account the following elements:

1. In Part 0.1, the corporate commitment by the accountable manager stating compliance with [Part-T](#):

#### PART 0 — GENERAL ORGANISATION

##### 0.1 Corporate commitment by the accountable manager

The accountable manager's exposition statement should embrace the intent of the following paragraph, and in fact this statement may be used without amendment. Any amendment to the statement should not alter its intent.

'This exposition defines the organisation and procedures upon which the continuing airworthiness management organisation's approval of Joe Bloggs under [Part-M](#) and [Part-T](#) is based.

These procedures are approved by the undersigned and must be complied with, as applicable, in order to ensure that all the continuing airworthiness activities including maintenance for aircraft managed by Joe Bloggs are carried out on time to an approved standard.

It is accepted that these procedures do not override the necessity of complying with any new or amended regulation published by the Agency or the competent authority from time to time where these new or amended regulations are in conflict with these procedures.

The competent authority will approve this organisation whilst the competent authority is satisfied that the procedures are being followed. It is understood that the competent authority reserves the right to suspend, limit or revoke the Continuing airworthiness management organisation's approval of the organisation, as applicable, if the competent authority has evidence that the procedures are not followed and the standards not upheld.

In the case of air carriers licensed in accordance with Regulation (EC) No 1008/2008, suspension or revocation of the approval of the continuing airworthiness management organisation's approval would invalidate the AOC.'

2. In Part 0.2, point c) 'Scope of work — aircraft managed':

##### 0.2 General information

- c) Scope of work — aircraft managed

This paragraph should specify the scope of work for which the CAMO is approved. This includes aircraft type/series, aircraft registrations, owner/operator, contract references, State of Registry for CAMOs approved under [Part-T](#), etc. The following is given as an example:



Aircraft type/series	Date included in the scope of work	Aircraft maintenance programme or 'generic'/baseline' maintenance programme	Aircraft registration(s)	Owner/operator	CAMO contract reference	Part-T State of Registry

For air carriers licensed in accordance with Regulation (EC) No 1008/2008, reference can be made in this paragraph to the operations specifications or operations manual where the aircraft registration(s) is (are) listed.

Depending on the number of aircraft, this paragraph may be updated as follows:

- 1) the paragraph is revised each time an aircraft is removed from or added to the list;
- 2) the paragraph is revised each time a type of aircraft or a significant number of aircraft is removed from or added to the list. In that case, it should be stated in the paragraph where the current list of aircraft managed is available for consultation.

**3. A new Part 6 is added to include the continuing airworthiness management procedures:**

**PART 6 — CONTINUING AIRWORTHINESS PROCEDURES FOR AIRCRAFT REFERRED TO IN T.A.101**

**6.1 CONTINUING AIRWORTHINESS MANAGEMENT**

**6.1.1 Aircraft continuing airworthiness records system**

- a) Aircraft continuing airworthiness records system and aircraft technical log

This section should describe the system used by the CAMO to manage the aircraft's continuing airworthiness records.

- b) Minimum equipment list (MEL) procedures

This section should describe the specific responsibilities of the CAMO with regard to the issue, update, use and management of the MEL, if applicable to the aircraft.

**6.1.2 Aircraft maintenance programme**

This paragraph should identify the State of Registry requirements for the maintenance programme, and should describe how the procedure established by the CAMO satisfies those requirements. This procedure should address the specific responsibilities of the CAMO with regard to the development, update, approval or acceptance and management of the maintenance programme. The sources for the maintenance programme and the mandatory tasks should be clearly identified.

**6.1.3 Time and continuing airworthiness records, responsibilities, retention and access**

- a) Recording of hours and cycles

The recording of flight hours and cycles is essential for the planning of maintenance tasks. This paragraph should describe how the CAMO has access to the current flight hours and cycles information and how this information is processed in the organisation.

- b) Records

This paragraph should describe in detail the type of documents that are required to be recorded and the recording-period requirements for each document. This can be provided by a table or series of tables that should include the following:

- family of document (if necessary),
- name of document,
- retention period,
- responsible person for retention,
- place of retention.

c) Preservation of records

This paragraph should set out the means to protect the records from fire, floods, etc., as well as the specific procedures in place to guarantee that the records will not be altered during the retention period [especially for the computer records].

d) Transfer of continuing airworthiness records

Transfer-in:

This paragraph should describe the procedure for the acquisition of the necessary continuing airworthiness records by the CAMO before leasing the aircraft and who is responsible for its implementation. The records should include the applicable status of compliance, release to service, approval and substantiating data for modifications and repairs, compliance with mandatory information, etc.

Transfer-out:

This paragraph should describe the procedure for the transfer of records in case of transfer of the aircraft to another organisation. In particular, it should specify which records have to be transferred and who is responsible for the coordination [if necessary] of the transfer.

#### 6.1.4 Accomplishment and control of mandatory safety information (MSI) issued by the State of Registry and the Agency

This paragraph should identify the MSI requirements issued by the State of Registry and the Agency. Additionally, it should demonstrate that the CAMO has a comprehensive system for the management of MSI including airworthiness directives (ADs) issued by the State of Registry and the Agency. It may, for instance, include the following subparagraphs:

a) MSI acquisition

This paragraph should specify the sources for the MSI (State of Registry, manufacturer, type certificate holder, the Agency).

b) MSI decision

This paragraph should describe how and by whom the MSI is analysed. It should also describe the decision-making process in case the MSI of the State of Registry conflicts with the MSI issued by the Agency or any EU airworthiness or operational requirement. This paragraph should also describe what kind of information is provided to the contracted maintenance organisations in order to plan and perform the MSI. This should include, as necessary, a specific procedure for emergency MSI management.

c) MSI control

This paragraph should specify how the organisation manages to ensure that all the applicable MSI is performed and that they are performed on time. This should include a closed-loop system that allows verifying that for each new or revised MSI and for each aircraft:

1. the MSI is not applicable, or
2. if the MSI is applicable:
  - the MSI is not yet performed but the time limit is not overdue,
  - the MSI is performed, and any repetitive inspection is identified and performed.

This may be a continuous process or may be based on scheduled reviews.

6.1.5 Modifications and repairs

This paragraph should describe the State of Registry requirements for modifications and repairs. In particular, the process for the issue and approval of design data for repairs and modifications, the classification of repairs and modifications, and the specific responsibilities of the CAMO with regard to the management and approval of any modification and repair before embodiment.

6.1.6 Defect reports

a) Analysis

This paragraph should describe how the defect reports provided by the contracted maintenance organisations are processed by the CAMO. The analysis of these reports should be taken into account for the maintenance programme evolution and non-mandatory modification policy.

b) Liaison with type certificate holders and regulatory authorities

Where a defect report shows that such defect is likely to occur to other aircraft, a liaison should be established with the type certificate holder and the authority that has issued the type certificate so that they may take all the necessary actions.

c) Deferred defect policy

This paragraph should describe the State of Registry requirements for deferred defects. Defects such as cracks and structural defects are not addressed by the MEL and the configuration deviation list (CDL). However, it may be necessary in certain cases to defer the rectification of a defect. This paragraph should establish the procedure to be followed in order to ensure that the deferment of any defect rectification will not lead to any safety concern. This will include appropriate liaison with the manufacturer and with the State of Registry.

6.1.7 Reliability programmes

If a reliability programme is required, this paragraph should describe appropriately the management of a reliability programme. It should at least address the following:

- extent and scope of the reliability programme,
- specific organisational structure, duties and responsibilities,
- establishment of reliability data,

- analysis of the reliability data,
- corrective action system (maintenance programme amendment),
- scheduled reviews (reliability meetings with the participation of the competent authority).

This paragraph may, where necessary, be subdivided as follows:

- a) airframe,
- b) propulsion,
- c) component.

#### 6.1.8 Pre-flight inspections

This paragraph should show how the scope and definition of pre-flight inspection, that is usually performed by the operating crew, is kept consistent with the scope of the maintenance performed by the contracted maintenance organisation. It should show how the evolution of the pre-flight inspection content and of the maintenance programme is concurrent.

The following paragraphs are self-explanatory. Although these activities are normally not performed by continuing airworthiness personnel, they have been placed here in order to ensure that the related procedures are consistent with the continuing airworthiness activity procedures.

- a) Preparation of aircraft for flight,
- b) Subcontracted ground-handling function,
- c) Security of cargo and baggage loading,
- d) Control of refuelling, quantity/quality,
- e) Control of snow, ice, residues from de-icing or anti-icing operations, dust and sand contamination to an approved standard.

#### 6.1.9 Aircraft weighing

This paragraph should state in which occasion an aircraft has to be weighed taking into account the EU operational requirements and the State of Registry requirements. Weighing may also be required after a major modification. This paragraph should describe who performs the weighing, according to which procedure, who calculates the new weight and balance, and how the result is processed in the organisation.

#### 6.1.10 Check flight procedures

This paragraph should describe the criteria for performing a check flight, taking into account the State of Registry requirements and the applicable instructions for continued airworthiness (ICA).

This paragraph should describe how the check flight procedure is established in order to meet its intended purpose, for instance after a heavy maintenance check, after engine or flight control removal installation, etc., and the release procedures to authorise such a check flight.

## 6.2 CONTRACTED MAINTENANCE

### 6.2.1 Procedures for contracted maintenance

a) Procedures for the development of maintenance contracts

This paragraph should describe the procedures that the organisation follows to develop maintenance contracts. The CAMO processes to implement the different elements described in [Appendix XI to AMC M.A.708\(c\)](#) should be described. In particular, it should cover the responsibilities, tasks and interaction with the contracted maintenance organisation.

This paragraph should also describe, when necessary, the use of work orders for unscheduled line maintenance and component maintenance. The organisation may develop a work order template to ensure that the applicable elements of [Appendix XI to AMC M.A.708\(c\)](#) are considered. Such a template should be included in Part 5.1.

b) Maintenance contractor selection procedure

This paragraph should describe how a maintenance contractor is selected by the CAMO. The selection procedure should describe the verification that the maintenance organisation complies with Subpart E and also that the contractor has the industrial capacity to undertake the required maintenance. The selection procedure should preferably include a contract review process in order to ensure that:

- the contract is comprehensive and it contains no gaps or unclear areas,
- everyone involved in the contract [both at the CAMO and at the maintenance contractor] agrees with the terms of the contract and fully understands their responsibilities,
- the functional responsibilities of all parties are clearly identified.

#### 6.2.2 Audit of aircraft

This paragraph should set out the procedures to perform an audit of an aircraft. It should describe the audit of aircraft before lease and the quality audit of aircraft during the lease period.

a) Audit of aircraft before lease

This audit should include an inspection of the aircraft and its records to ensure that the aircraft is airworthy and it complies with the State of Registry requirements, [Part-T](#) and any EU requirement applicable for the intended operation. This should include checking that all emergency and operational equipment as required by EU operational and airspace rules is available, that all required maintenance and MSI has been performed, that all modifications and repairs comply with the State of Registry requirements and they are recorded, etc.

b) Audit of aircraft during lease

This paragraph should set out the procedure to perform a quality audit of the aircraft during the lease period. This procedure may include:

- compliance with approved procedures,
- contracted maintenance is carried out in accordance with the contract,
- continued compliance with [Part-T](#).

**Appendix II to AMC T.B.702 — EASA Form 13T***ED Decision 2016/011/R*

<b>M.A. SUBPART G and T.A. SUBPART G APPROVAL RECOMMENDATION REPORT</b>		<b>EASA FORM 13T</b>
<b>Part 1: General</b>		
Name of organisation:		
Approval reference:		
Requested approval rating/ <a href="#">EASA Form 14</a> or AOC dated*:		
Other approvals held (if app.)		
Address of facility(ies) audited:		
Audit period: from		
		to
Date(s) of audit(s):		
Audit reference(s):		
Persons interviewed:		
Competent authority surveyor:		Signature(s):
Competent authority office:		Date of EASA Form 13T Part 1 completion:
*delete as appropriate		

M.A. SUBPART G and T.A. SUBPART G APPROVAL RECOMMENDATION REPORT EASA FORM 13T					
Part 2: <a href="#">M.A. Subpart G</a> and <a href="#">T.A. Subpart G</a> Compliance Audit Review					
The five columns may be labelled and used as necessary to record the approval product line or facility, including subcontractor's, reviewed. Against each column used of the following <a href="#">M.A. Subpart G</a> subparagraphs please either tick (✓) the box if satisfied with compliance, or cross (X) the box if not satisfied with compliance and specify the reference of the Part 4 finding next to the box, or enter N/A where an item is not applicable, or N/R when applicable but not reviewed.					
Para	Subject				
<a href="#">M.A.703</a>	Extent of approval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.704</a>	Continuing airworthiness management exposition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">T.A.704</a>	Continuing Airworthiness Management exposition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.705</a>	Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.706</a>	Personnel requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">T.A.706</a>	Personnel requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.707</a>	Airworthiness review staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.708</a>	Continuing airworthiness management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.201</a>	Responsibilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">T.A.201</a>	Responsibilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.202</a>	Occurrence reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.302</a>	Aircraft maintenance programme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.303</a>	Airworthiness directives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.304</a>	Data for modifications and repairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.305</a>	Aircraft continuing airworthiness record system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.306</a>	Aircraft technical log system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.307</a>	Transfer of aircraft continuing airworthiness records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.709</a>	Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">T.A.709</a>	Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<a href="#">M.A.710</a>	Airworthiness review	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.711</a>	Privileges of the organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">T.A.711</a>	Privileges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.712</a>	Quality system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">T.A.712</a>	Quality system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.713</a>	Changes to the approved continuing airworthiness organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.714</a>	Record-keeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">T.A.714</a>	Record-keeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">M.A.716</a>	Findings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<a href="#">T.A.716</a>	Findings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competent authority surveyor(s):		Signature(s):				
Competent authority office:		Date of EASA Form 13T Part 2 completion:				



M.A. SUBPART G and T.A. SUBPART G APPROVAL RECOMMENDATION REPORT		EASA FORM 13T
<b>Part 3: Compliance with <a href="#">M.A. Subpart G</a> and <a href="#">T.A. Subpart G</a> continuing airworthiness management exposition (CAME)</b>		
Please either tick (✓) the box if satisfied with compliance; or cross (X) if not satisfied with compliance and specify the reference of the Part 4 finding; or enter N/A where an item is not applicable; or N/R when applicable but not reviewed.		
<b>PART 0 General organisation</b>		
0.1	<input type="checkbox"/>	Corporate commitment by the accountable manager
0.2	<input type="checkbox"/>	General information
0.3	<input type="checkbox"/>	Management personnel
0.4	<input type="checkbox"/>	Management organisation chart
0.5	<input type="checkbox"/>	Notification procedure to the competent authority regarding changes to the organisation's activities/approval/location/personnel
0.6	<input type="checkbox"/>	Exposition amendment procedures
<b>PART 1 Continuing airworthiness management procedures</b>		
1.1	<input type="checkbox"/>	Aircraft technical log utilisation and MEL application Aircraft continuing airworthiness record system utilisation
1.2	<input type="checkbox"/>	Aircraft maintenance programme – development amendment and approval
1.3	<input type="checkbox"/>	Time and continuing airworthiness records, responsibilities, retention, access
1.4	<input type="checkbox"/>	Accomplishment and control of airworthiness directives
1.5	<input type="checkbox"/>	Analysis of the effectiveness of the maintenance programme(s)
1.6	<input type="checkbox"/>	Non mandatory modification embodiment policy
1.7	<input type="checkbox"/>	Major repair and modification standards
1.8	<input type="checkbox"/>	Defect reports
1.9	<input type="checkbox"/>	Engineering activity
1.10	<input type="checkbox"/>	Reliability programmes
1.11	<input type="checkbox"/>	Pre-flight inspections
1.12	<input type="checkbox"/>	Aircraft weighing
1.13	<input type="checkbox"/>	Check flight procedures
<b>PART 2 Quality system</b>		
2.1	<input type="checkbox"/>	Continuing airworthiness quality policy, plan and audits procedure
2.2	<input type="checkbox"/>	Monitoring of continuing airworthiness management activities
2.3	<input type="checkbox"/>	Monitoring of the effectiveness of the maintenance programme(s)
2.4	<input type="checkbox"/>	Monitoring that all maintenance is carried out by an appropriate maintenance organisation
2.5	<input type="checkbox"/>	Monitoring that all contracted maintenance is carried out in accordance with the contract, including subcontractors used by the maintenance contractor
2.6	<input type="checkbox"/>	Quality audit personnel

**PART 3 Contracted Maintenance**3.1  Procedures for contracted maintenancex3.2  Quality audit of aircraft**PART 4 Airworthiness review procedures**4.1  Airworthiness review staff4.2  Review of aircraft records4.3  Physical survey4.4  Additional procedures for recommendations to the competent authorities for the import of aircraft4.5  Recommendations to competent authorities for the issue of airworthiness review certificates4.6  Issue of airworthiness review certificates4.7  Airworthiness review records, responsibilities, retention and access**PART 4B Permit to fly procedures**4B.1  Conformity with approved flight conditions4B.2  Issue of permit to fly under the CAMO privilege4B.3  Permit to fly authorised signatories4B.4  Interface with the competent authority for the flight4B.5  Permit to fly records, responsibilities, retention and access**PART 5 Appendices**5.1  Sample Documents5.2  List of airworthiness review staff5.3  List of subcontractors as per [M.A.711\(a\)\(3\)](#)5.4  List of contracted maintenance organisations5.5  Copy of contracts for subcontracted work (appendix II to [AMC M.A.711\(a\)\(3\)](#))

**PART 6 CONTINUING AIRWORTHINESS PROCEDURES FOR AIRCRAFT REFERRED TO IN [T.A.101](#)****PART 6.1 CONTINUING AIRWORTHINESS MANAGEMENT**

- |        |                          |   |
|--------|--------------------------|---|
| 6.1.1  | <input type="checkbox"/> | Aircraft continuing airworthiness records system  |
| 6.1.2  | <input type="checkbox"/> | Aircraft maintenance programme  |
| 6.1.3  | <input type="checkbox"/> | Time and continuing airworthiness records, responsibilities, retention and access                           |
| 6.1.4  | <input type="checkbox"/> | Accomplishment and control of mandatory safety information (MSI) issued by the State of Registry and Agency |
| 6.1.5  | <input type="checkbox"/> | Modifications and repairs standards   |
| 6.1.6  | <input type="checkbox"/> | Defect reports  |
| 6.1.7  | <input type="checkbox"/> | Reliability programmes  |
| 6.1.8  | <input type="checkbox"/> | Pre-flight inspections  |
| 6.1.9  | <input type="checkbox"/> | Aircraft weighing   |
| 6.1.10 | <input type="checkbox"/> | Check flight procedures   |

**PART 6.2 CONTRACTED MAINTENANCE**

- |       |                          |                                       |
|-------|--------------------------|---------------------------------------|
| 6.2.1 | <input type="checkbox"/> | Procedures for contracted maintenance |
| 6.2.2 | <input type="checkbox"/> | Audit of aircraft                     |

CAME Reference:                      CAME Amendment:  
Competent authority audit staff:    Signature(s):

Competent authority office:                      Date of EASA Form 13T Part 3 completion:

M.A. SUBPART G and T.A. SUBPART G APPROVAL RECOMMENDATION REPORT		EASA FORM 13T			
<b>Part 4: Findings regarding <a href="#">M.A. Subpart G</a> and <a href="#">T.A. Subpart G</a> compliance status</b> Each level 1 and 2 finding should be recorded whether it has been rectified or not, and should be identified by a simple cross reference to the Part 2 requirement. All non-rectified findings should be copied in writing to the organisation for the necessary corrective action.					
Part 2 or 3 reference	Audit reference(s): Findings	L e v e l	Corrective action		
			Date Due	Date Closed	Reference

M.A. SUBPART G and T.A. SUBPART G APPROVAL RECOMMENDATION REPORT		EASA FORM 13T
<b>Part 5: <a href="#">M.A. Subpart G</a> and <a href="#">T.A. Subpart G</a> approval or continued approval or change recommendation*</b>		
Name of organisation:		
Approval reference:		
Audit reference(s):		
The following <a href="#">M.A. Subpart G</a> scope of approval is recommended for this organisation:		
Or, it is recommended that the <a href="#">M.A. Subpart G</a> scope of approval specified in <a href="#">EASA Form 14</a> referenced ..... be continued.		
Name of recommending competent authority surveyor:		
Signature of recommending competent authority surveyor:		
Competent authority office:		
Date of recommendation:		
EASA Form 13T review (quality check):	Date:	
*delete as appropriate		