

Public Authority for Civil Aviation

Continuing Airworthiness Requirements

CAR-M

Civil Aviation Regulation

Effective Date: 18th February 2020

Approved by: HE Dr. Mohamed bin Nasser Al-Zaabi (CEO)

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PACA AIRWORTHINESS REQUIREMENTS

CAR-M

AMENDMENT RECORD LIST AND DATE OF APPLICABILITY

lssue No	Revision No	Issue Date	Inserted By	Insertion Date	Date of Applicability
lssue 01	Revision 01	01/04/2011			
lssue 02	Revision 02	18/02/2020			18 February 2020

Corrigedum of Amendments

No.	Ref	Description
02	All pages	The complete CAR has been reissued

FOREWORD

- (a) The Civil Aviation Requirements for Civil Aviation Regulation Change Procedures have been issued by the Public Authority for Civil Aviation of Sultanate of Oman (hereinafter referred as PACA) under the provisions of the Civil Aviation Law of the Sultanate of Oman.
- (b) CAR-M prescribes the requirements for
 - (1) The format and structure of CARs;
 - (2) The development of CARs and amendments to CARs until their publication;
 - (3) Establishing transitional periods for compliance with new or amended regulations
- (c) Amendments to the text in CAR-M are issued as a complete amendment of pages contained within. New, amended and corrected text will be enclosed within brackets until a subsequent 'Change' is issued
- (d) The editing practices used in this document are as follows:
 - (1) ' shall' is used to indicate a mandatory requirement and may appear in CARs.
 - (2) 'Should' is used to indicate a recommendation and normally appears in AMCs and GM.
 - (3) 'May' is used to indicate discretion by the Authority, or the industry as appropriate, as appropriate.
 - (4) 'Will' indicates a mandatory requirement and is used to advise of action incumbent on the Authority.
- (e) **Transition Period**: Current permission holders are required to meet the compliancy requirements of CAR-M on or before the 1st June 2020. All new applications will meet the requirements of this revision of CAR-M.

Note: The use of the male gender implies the female gender and vice versa.

GENERAL

The Public Authority for Civil Aviation, PACA, of Sultanate of Oman has issued this CAR-M that prescribes the common technical requirements and administrative procedures for ensuring the continuing airworthiness of aircraft, including any component for installation for the Omani Operator. The issue of a Continuing Airworthiness Management Organisation approval shall be dependent upon the organisation demonstrating compliance with the requirements of the CAR-M, CAR-100 and all other applicable requirements published by the PACA.

- 1. This Regulation establishes common technical requirements and administrative procedures for ensuring the continuing airworthiness of aircraft, including any component for installation thereto, which are:
 - a. registered in the Sultanate of Oman Civil Aircraft Registry; or
 - b. registered in a third country and used by a Omani operator where the PACA has assumed responsibility for the oversight of the continued airworthiness management functions of such an aircraft.
- 2. Paragraph 1 shall not apply to aircraft the regulatory safety oversight of which has been transferred to a third country and which are not used by a Omani operator.
- 3. The provisions of this Regulation related to commercial air transport are applicable to licensed air carriers, air transport operators and commercial activities as defined by CAR-OPS 1.001 and CAR-OPS 3.001. The provisions of this regulation are also applicable to Private Operators certified under CAR-OPS 1 and CAR-OPS 3.

Article 1

Subject matter and scope

This Regulation establishes technical requirements and administrative procedures to ensure:

The continuing airworthiness of aircraft, including any component for installation thereto, which are:

- (i) registered in the Sultanate of Oman, unless its regulatory safety oversight has been delegated to a foreign country and they are not used by an Omani operator; or
- (ii) registered in a foreign country and used by Omani operator, where their regulatory safety oversight has been delegated to the Sultanate of Oman;

Article 2

Maintenance organisation approvals

- (a) Organisations involved in the maintenance of large aircraft or of aircraft used for commercial air transport, and components intended for fitment thereto, should be approved in accordance with the provisions of CAR-145.
- (b) Organisations involved in the maintenance of aircraft and components not listed in point (a), should be approved in accordance with the provisions of Subpart F of CAR-M or CAR-145.
- (c) Maintenance organisation approvals should be issued in accordance with the provisions of Subpart F of this CAR-M or CAR-145.

Article 3

Certifying staff

- Certifying staff should be qualified in accordance with the provisions of CAR-66, except as provided for in M.A.606(h), M.A.607(b), M.A.801(d) and M.A.803 of CAR-M and in 145.A.30(j) and to CAR-145.
- 2. Any aircraft maintenance license and, if any, the technical limitations associated with that license, issued or recognised by the PACA in accordance with the previous requirements and procedures and valid at the time of entry into force of this Regulation, should be deemed to have been issued in accordance with this Regulation.
- 3. Certifying staff holding a license issued in accordance with CAR-66 in a given category/subcategory are deemed to have the privileges described in 66.A.20 of the same corresponding to such a category/sub-category. The basic knowledge requirements corresponding to these new privileges should be deemed as met for the purpose of extending such license to a new category/sub-category.
- 4. Certifying staff holding a license 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 license should be converted following CAR-66 to the ratings defined in point 66.A.45.
- 5. 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 should continue to apply, except for maintenance organisations located outside the Sultanate of Oman where the requirements should be approved by PACA.

Article 4

Oversight capabilities

- (1) The PACA should be the competent authority with the necessary powers and responsibilities for the certification and oversight of persons and organisations subject to this Regulation.
- (2) The PACA should ensure that it has the necessary capability to ensure the oversight of all persons and organisations covered by its oversight programme, including sufficient resources to fulfil the requirements of this Regulation.
- (3) The PACA should ensure that its personnel do not perform oversight activities when there is evidence that this could result directly or indirectly in a conflict of interest, in particular when relating to family or financial interest.
- (4) Personnel authorised by the PACA to carry out certification and/or oversight tasks should be empowered to perform, at least, the following tasks:
 - (a) examine the records, data, procedures, and any other material relevant to the execution of the certification and/or oversight tasks;
 - (b) take copies of, or extracts from such records, data, procedures, and other material;
 - (c) ask for an oral explanation on site;
 - (d) enter relevant premises, operating sites, or means of transport;
 - (e) perform audits, investigations, assessments, inspections, including unannounced inspections; and
 - (f) take or initiate enforcement measures as appropriate.

Article 5 Waiver or exemption

- (1) Waiver or exemption may be issued by the Public Authority for Civil Aviation to any technical requirements contained in this Regulation under this Article, providing that, such a waiver or exemption should only be applicable to that particular technical requirement. When such waiver or exemption is granted, it should be deemed to have been issued under the Civil Aviation legislation and in accordance with the established regulations and ensuing procedures.
- (2) For the purpose of this Article, no waiver or exemption should be granted to any provisions pertaining to offences, violations or acts committed against any mandatory provisions of the Civil Aviation Law and from those that prescribed enforcements and penalties.
- (3) No waiver or exemption should be granted to any provision or requirements of this Regulation that may invalidate any international treaties or bilateral agreements entered into by the Sultanate of Oman.

Article 6 Amendments and revision

- (1) Revision may be made by PACA to the technical requirements and administrative procedures contained in this Regulation resulting from any future International Standard changes in the airworthiness related Annexes in ICAO that PACA may adopt.
- (2) When such revision is made, PACA should ensure that the aeronautical industry should be made aware of such revision in accordance with the regulation making method or process that the PACA may established.
- (3) By derogation from paragraph 1 and 2, the PACA may however, amend, revise, supersede, revoke or cancel this Regulation in part or in whole in accordance with established Regulation and Regulation making process.

Article 7

Definitions and abbreviations

Definitions and abbreviations of terms used in this regulations that are specific to a Section are normally given in that section concerned or, exceptionally, in the associated compliance or guidance material. See also PACA regulation CAR-1 Definitions.

- Other Definition are used for the purpose of this CAR
- (ba) A complex motor powered aircraft means:
 - (1) An aeroplane:
 - (i) Above 5700 Kg MTOM, or
 - (ii) Certificated for more than 19 seated passengers, or
 - (iii) Certificated for operation with at least 2 pilots, or
 - (iv) Equipped with turbojet engine(s) or more than 1 turboprop engine.
 - (2) A helicopter:

- (i) Above 3175 Kg MTOM, or
- (ii) Certificated for more than 9 seated passengers, or
- (iii) Certificated for operation with at least 2 pilots, or
- (3) A tilt rotor aircraft.
- (bb) For the purpose of this CAR Category 1 "Light Aircraft" (LA1) means the following aircrafts
 - i. an aeroplane, sailplane or powered sailplane with a Maximum Take-off Mass (MTOM) less than 1000 kg that is not classified as complex motorpowered aircraft;
 - ii. a balloon with a maximum design lifting gas or hot air volume of not more than 3400 m3 for hot air balloons, 1050 m3 for gas balloons, 300 m3 for tethered gas balloons;
 - iii. an airship designed for not more than two occupants and a maximum design lifting gas or hot air volume of not more than 2500 m3 for hotair airships and 1000 m3 for gas airships.

(bc) For the purpose of this CAR Category 2 "Light Aircraft "(LA2)means the following aircraft

- (i) an aeroplane with a Maximum Take-off Mass (MTOM) of 2 000 kg or less that is not classified as complex motor-powered aircraft;
- (ii) a sailplane or powered sailplane of 2 000 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..

'certifying staff' means personnel responsible for the release of an aircraft or a component after

maintenance;

'component' means any engine, propeller, part or appliance;

'organisation' means a natural person, a legal person or part of a legal person.

'pre-flight inspection' means the inspection carried out before flight to ensure that the aircraft is fit for the intended flight;

'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;

'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; 'commercial specialised operations' means those operations subject to the requirements of in CAR-OPS;

'Limited operations' means the operations of other-than-complex motor-powered aircraft for:

- (a) 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;
- (b) 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 PACA;
- (c) introductory flights, parachute dropping, sailplane towing or aerobatic flights performed either by an approved training organisation having its principal place of business in a Oman, 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 nonmembers of the organisation are involved, such flights represent only a marginal activity of the organisation;

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

Article 8

Continuing airworthiness requirements

- (a) The continuing airworthiness of aircraft and components should be ensured in accordance with the provisions of CAR-M.
- (b) Organisations and personnel involved in the continuing airworthiness of aircraft and components, including maintenance, should comply with the provisions of CAR-M, and where appropriate those specified in Article 2 and Article 3.

Article 9

Training organisation requirements

Organisations involved in the training of personnel referred to in Article 3 should be approved in accordance with CAR-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.

Article 10

Entry into force

This Regulation shall enter into force on the date of issue: 18th February 2020. (See Transition Period paragraph (e) in the Foreward of CAR-M)

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SECTION A – TECHNICAL REQUIREMENTS

SUBPART A — TECHNICAL REQUIREMENTS

CAR-MA.1 GENERAL

For the purpose of this CAR, the Public Authority for Civil Aviation (PACA) should be the authority :

- 1. for the oversight of the continuing airworthiness of individual aircraft and the issue of airworthiness review certificates for aircraft registered in the state.;
- 2. for the oversight of a maintenance organisation as specified in Section A, Subpart F of this CAR-M:
- 3. for the oversight of a continuing airworthiness management organisation as specified in Section A, Subpart G of this CAR-M,
- 4. for the approval of maintenance programmes, if agreed prior to the approval of the maintenance programme:
 - (i) the authority designated by the State where the operator has its principal place of business or is established or residing; or
 - (ii) 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.
 - (iii) if the aircraft is registered in Sultanate of Oman, or
 - (iv) if agreed with the State of registry prior to the approval of the maintenance programme.

CAR-M.A.101 Scope

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

CAR-M.A.201 Responsibilities

- (a) The owner/operator is responsible for the continuing airworthiness of an aircraft and should ensure that no flight takes place unless the aircraft is maintained in an airworthy condition, and;
 - 1. the maintenance on the aircraft including any associated engine, propeller and part, is carried out :
 - i) by a maintenance organization complying with this regulation and CAR-145 that this either approved by this Authority or is approved by another State and is accepted by this Authority; or
 - ii) by a person or organization in accordance with procedures that are authorized by this authority; and
 - iii) there is a maintenance release issued by an approved maintenanace organization by this authority in relation to the maintenance carried out .
 - 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 approved maintenance programme as specified in point M.A.302.
- (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 CAR to the 'owner', the term owner covers the owner or the lessee, as applicable.

- (c) Any person or organisation performing maintenance should be responsible for the tasks performed.
- (d) The pilot-in-command or, in the case of commercial air transport, the operator should 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 CAR-66 certifying staff, or equivalent approved by the authority.
- (e) In the case of licensed air carriers, the operator is responsible for the continuing airworthiness of the aircraft it operates and should:
 - (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 CAR-145 or establish a contract in accordance with M.A.708(c) with such organisation.
- (f) For complex motor-powered aircraft used for commercial specialised operations, or CAT other than those by licensed air carriers, or commercial ATOs, the operator should 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 should 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 CAR-145, or equivalent AMO approved by the authority, 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.
- (g) For complex motor-powered aircraft not included in point (e) or point (f) , the owner should 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 should 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 CAR-M subpart F or CAR-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.
- (h) For other than complex motor-powered aircraft, used for commercial specialised operations, or CAT other than those used by licensed air carriers, or commercial ATOs, the operator should 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 should 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 CAR-M Subpart F or CAR-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.
- (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 should:
 - (1) contract the tasks associated with continuing airworthiness to an approved CAMO though 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 category 2 Light Aircraft LA2 aircraft (LA2), a CAR-145 or CAR-M 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.

- (j) The owner/operator should ensure that any person authorised by the 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 CAR.
- (k) The owner/operator should monitor and assess maintenance and operational experience with respect to continuing airworthiness.
- (I) The owner/operator should ensure that it obtain and assess continuing airworthiness information and recommendations from the organisations responsible for the type design.
- (m) The operator should establish and follow safety management system as per CAR-100.

GM to M.A.201 Responsibilities

Quick summary table

		Complex motor-powered aircraft		Other-than-complex motor-powered aircraft		
Select your type of operation and your category of 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	САТ	Air carriers licensed in accordance with Regulation CAR OPS	Yes, a CAMO is required and it shall be part of the AOC (M.A.201(e))	Yes, maintenance by a CAR-145 organisation is required (M.A.201(e))	Yes, a CAMO is required and it shall be part of the AOC (M.A.201(e))	Yes, maintenance by a CAR-145 organisation is required (M.A.201(e))
		CAT other than air carriers licensed in accordance with Regulation CAR OPS	Yes, a CAMO is required (M.A.201(f))	Yes, maintenance by a CAR-145 organisation is required (M.A.201(f))	Yes, a CAMO is required (M.A.201(h))	Yes, maintenance by a Subpart F or by a CAR-145 organisation is required (M.A.201(h))
	Commercial operations other than CAT	Commercial specialised operations	Yes, a CAMO is required (M.A.201(f))	Yes, maintenance by a CAR organisation is required (M.A.201(f))	Yes, a CAMO is required (M.A.201(h))	Yes, maintenance by a Subpart F or by a CAR-145 organisation is required (M.A.201(h))

		Complex motor-powered aircraft		Other-than-complex motor-powered		
				aircraft		
Select your type of operation and your category of 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 training organisations (ATOs)	Yes, a CAMO is required (M.A.201(f))	Yes, maintenance by a CAR-145 organisation is required (M.A.201(f))	Yes, a CAMO is required (M.A.201(h))	Yes, maintenance by a Subpart F or by a CAR-145 organisation is required (M.A.201(h))
Other than commercial operations including limited operations		Yes, a CAMO is required (M.A.201(g))	Yes, maintenance by a CAR-145 organisation is required (M.A.201(g))	No, a CAMO is not required (M.A.201(i))	No, maintenance by a Subpart F or CAR-145 organisation is not required (M.A.201(i))	

GM to M.A.201(e) Responsibilities

The performance of ground de-icing and anti-icing activities does not require a CAR-145 maintenance organisation approval. Nevertheless, inspections required to detect and, when necessary, remove deicing 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

- 1. An air carrier licensed in accordance with Regulation CAR-OPS 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. CAR-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 CAR OPS. 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 to M.A.201(f) Commercial ATO

'Commercial ATO' refers to 'training organisation(s)', as meant in PACA regulation , which operate aircraft for commercial purposes in order to provide CAR-FCL training courses.

GM to M.A.201(i), & M.A.302(h) Responsibilities

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 to 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 LA2 aircraft not involved in commercial operations)
Development and	Performed by the	Contracted to a CAMO	Contracted to a CAR -145;
processing of the	owner	(whether it is done through	Or MAA Subport F
approval of the		continuing airworthiness	maintenance organisation
nogramme		management of the aircraft	(see M.A.201(i)(3))
programme		or through a limited	
		contract for the	
		development and	
		processing of the maintenance programme)	
		maintenance programmer	
Approval/Declaration	Direct approval by the	Direct approval by the	Direct approval by the
of the maintenance	PACA; or	PACA; or	PACA; or
programme	Declaration by the	Indirect approval by the	Declaration by the owner
	owner (only for LA1	contracted CAMO; or	(only for LA1 aircraft not
	aircraft not involved in	Declaration by the owner	involved in commercial
		involved in commercial	M = 302(h)
	M.A.302(h))	operations, see M.A.302(h))	1011/1.302(11))

Maintenance programme content and airworthiness review (for all aircraft)

The following table provides a summary of the provisions contained in M.A.302 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 LA1 aircraft not
		involved in commercial
		operations)
Basic information used for the	Maintenance data from the	'Minimum Inspection Programme'
maintenance programme	Design Approval Holder	(see M.A.302(h)2 and M.A.302(i))
	(complying with M.A.302(d) and	(not applicable to airships)
	(e))	
Customisation to a particular	Complying with M.A.302(e); or	Using the template in AMC
aircraft registration	Using the template in AMC	M.A.302(e)
	M.A.302(e) (only for other-than-	
	complex motor-powered aircraft)	
Approval/Declaration of the	Direct approval by PACA; or	Direct approval by PACA; or
maintenance programme	Indirect approval by contracted	Indirect approval by contracted
	CAMO or Declaration by the	CAMO Or Declaration by the
	owner (see M.A.302(h)) (only for	owner (see M.A.302(h)) (only for
	LA1 aircraft not involved in	LA1 aircraft not involved in
	commercial operations, see	commercial operations, see
	M.A.302(h))	M.A.302(h))
Performance of Airworthiness	РАСА	PACA
Review and issue of		
Airworthiness Review Certificate		

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

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

The limited contract for the development and, when applicable, processing of the approval of the aircraft maintenance programme shall cover the responsibilities related to CAR-M.A.302(d), CAR-M.A.302(e) and CAR-M.A.302(g).

In the case of LA1 aircraft not involved in commercial operations, the limited contract between the owner and the CAMO/maintenance organisation shall cover the following aspects:

- (1) Whether the maintenance programme will be based on the 'Minimum Inspection Programme' described in CAR-M.A.302(i);
- (2) 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 CAR-M.A.302(h)3.
- (3) Whether the maintenance programme is going to be approved by the Public Authority for Civil Aviation or the owner is going to issue a declaration for the maintenance programme.
- (4) In the case of approval by the competent authority, whether indirect approval by the CAMO is permitted or not.
- (5) 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.

CAR-M.A.202 Occurrence reporting

- (a) Any person or organisation responsible in accordance with CAR-M.A.201 shall report to the state of registry, Authority, the organisation responsible for the type design or supplemental type design and, if applicable, the 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 PACA 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 seventy-two (72) hours of the person or organisation identifying the condition to which the report relates.

AMC M.A.202(a) Occurrence reporting

Accountable persons or organisations shall 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 shall 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

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

Each report shall 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

CAR-M.A.301 Continuing airworthiness tasks

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

- 1. the accomplishment of pre-flight inspections;
- 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 (CDL) list as applicable to the aircraft type;
- 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, the analysis of the effectiveness of the M.A.302 approved aircraft 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 Authority;
 - (iv) measures mandated by the 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, the establishment of an embodiment policy;
- 8. maintenance check flights when necessary.

AMC M.A.301(1) Continuing Airworthiness tasks

- (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 shall 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 shall 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 preflight inspection. The related pre-flight inspection instructions shall 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 commercial air transport, the operator/CAMO shall 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 shall be demonstrated to the Authority that preflight inspection personnel have received appropriate training for the relevant pre-flight inspection tasks. The training standard for personnel performing the pre-flight inspection shall be described in the operator's continuing airworthiness management exposition.

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

- (1) The operator shall 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 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 shall be considered. Whenever possible, deferred defect rectification shall 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 CAR OPS-regulation and of complex motor-powered aircraft, a system of assessment shall 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 shall 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. When deferring or carrying forward a defect the cumulative effect of a number of deferred or carried forward defects occurring on the same aircraft and any restrictions contained in the MEL shall be considered. Whenever possible, deferred defects shall be made known to the pilot/flight crew prior to their arrival at the aircraft.

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

The operator (Owner) or CAMO as applicable shall 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 prescribed in the operators CAME and agreed by PACA.

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

The CAMO managing the continuing airworthiness of the aircraft shall 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

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 Authority 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

The CAMO managing the continuing airworthiness of the aircraft shall 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, and competent Authorities.

CAR-M.A.302 Aircraft Maintenance Programme

- (a) Maintenance of each aircraft should be organised in accordance with an aircraft maintenance programme.
- (b) The aircraft maintenance programme and any subsequent amendments should be approved by the PACA.

The CAMO/operator should provide, for the use and guidance of maintenance and operational persoonel concerned, a maintenance programme, approved by the state of registry. The design and application of the operator's maintenance programme should observe Human Factors Principles.

- Note 1: Guidance material on the application of Human Factors Principles can be found in the Cabin Crew Safety Training Manual (DOC10002).
- Note 2: Guidance material on the application of Human Factors principles can be found in the Human Factors Training Manual (Doc 9683).
- (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 CAR-M or when there is a limited contract between the owner and this organisation in accordance with CAR-M.A.201(i)(3), minor changes of the aircraft maintenance programme and its amendments may be approved through an indirect approval procedure..
 - (i) In that case, the indirect approval procedure should be established by the continuing airworthiness management organisation as part of the Continuing Airworthiness Management Exposition and should be approved by PACA.
 - (ii) The continuing airworthiness management organisation shall not use the indirect approval procedure when this organisation is not under the oversight of the State of Registry, unless an agreement exists in accordance with CAR-M.1, subparagraph 4(ii), transferring the responsibility for the approval of the aircraft maintenance programme to the Authority responsible for the continuing airworthiness management organisation.
- (d) The aircraft maintenance programme must establish compliance with:
 - (i) instructions issued or accepted by PACA;
 - (ii) instructions for continuing airworthiness:
 - A. issued by the holders of the type-certificate, restricted type-certificate, supplemental type-certificate, major repair design approval, TSO authorisation or any other relevant approval issued under Airworthiness and Environmental Certification Regulation (e.g. PACA CAR-21, EASA Part-21, FAA 14 CFR Part 21),
 - (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 PACA 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 PACA CAR-21, EASA Part -21 or FAA 14 CFR Part 21. Copies of all Amendements

to the maintenance programme shall be furnished promptly to all organisations or persons to whom the maintenanace programme has been issued.

- (h) In the case of LA1 aircraft not involved in commercial operations, compliance with paragraphs (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 shalleither:
 - comply with the 'Minimum Inspection Programme', contained in paragraph (i), corresponding to the particular aircraft, or
 - comply with paras (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 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 CMR of the aircraft in accordance with subregulation CAR-M.A.710, or
 - by the CAR-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 Authority and the owner shall amend the maintenance programme as agreed with the Authority.

(i) In the case of LA1 aircraft other than airships, not involved in commercial operations, the 'Minimum Inspection Programme' referred to in para (h) shall comply with the following conditions:

1. It shall contain the following inspection intervals:

- For LA1 aeroplanes and LA1 Touring Motor Gliders (TMG), every annual or 100 h interval, whichever comes first. A tolerance of one (1) month or ten (10) hours may be applied to that interval as long as the next interval is calculated from the date or hours originally scheduled.
- For LA1 sailplanes, LA1 powered sailplanes other than TMG and LA1 balloons, every annual interval. A tolerance of one (1) month may be applied to that interval as long as the next interval is calculated from the date originally scheduled.
- 2. It should contain the following:
 - Servicing tasks as required by the Design Approval Holder's requirements.
 - Inspection of markings.
 - Review of weighing records.
 - Operational test of transponder (if existing).
 - Operational test of the pitot-static system.
 - In the case of LA1 aeroplanes:
 - Operational checks for power and rpm, magnetos, fuel and oil pressure, engine temperatures.
 - For engines equipped with automated engine control, the published runup 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:
 - For LA1 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 LA1 sailplanes and LA1 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 LA1 hot-air balloons:
 - > Envelope
 - > Burner
 - Basket
 - Fuel containers
 - Equipment and instruments
- For LA1 gas balloons:
 - > Envelope
 - Basket
 - Equipment and instruments

Until such time as this Regulation specifies a 'Minimum Inspection Programme' for airships, their maintenance programme should comply with paragraphs (d) and (e).

AMC M.A.302 Aircraft maintenance programme

- **NOTE**: This AMC is not applicable to those LA1 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 shall 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 shall 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 PACA CAR-21, EASA Part 21 or FAA CFR Part 21 shall be incorporated into the aircraft maintenance programme as soon as possible.
- 4. The aircraft maintenance programme shall 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 shall 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 to M.A.302(a) Aircraft Maintenance Programme

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

- 1. An aircraft maintenance programme shall 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 shall also take into account any maintenance data containing information on scheduling for components.
- 2. Instructions issued by the 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 Authority in the following cases:
 - in the absence of specific recommendations of the Type Certificate Holder.
 - 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 shall 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 shall be considered as part of the aircraft maintenance programme.
- 5. Aircraft maintenance programmes for aircraft types subjected to the MRB report process shall 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 shall 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 PACA, except in the case of ALIs (Airworthiness Limitations).
 - 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

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

A	Aircraft Maintenance Programme (for aircraft other than 'complex motor-powered aircraft'							
	Aircraft identification							
1	Registration(s):		Туре:	Serial No (s):			
Basis	for the Mainte	nance Pr	ogramme					
2	This Aircraft N	/ laintena	nce Programme com	plies with (tick one optic	on):			
	M.A.302(b), (c	:), (d), (e)	and (g) 🔲 (Complet	e section 3 below), or				
	M.A.302(h)	l (Only po	ossible for LA1 aircraf	t not used in commercial	operations)			
	For Aircraft M data is used (t	laintenar ick one o	nce Programmes com ption):	plying with M.A.302(h) (see above) the following			
	Design Appro	val Holde	er Maintenance Data	☐ (Complete section 3 b	elow), or			
	Minimum Insp	ection P	rogramme as detailec	in the latest revision of	AMC M.A.302(i) 🔲 , or			
	Other Minimu Appendix A to	um Inspe 5 this Air o	ection Programme co craft Maintenance Pr	mplying with M.A.302(i ogramme).) 🗌 (List the tasks in			
	Design Approval Holder Maintenance Data (not applicable if using Minimum Inspection Programmes)							
3	Equipme	ent manu	facturer and type	Applicable mainten latest	ance data reference (at revision)			
			For aircraft othe	er than balloons				
За	Aircraft (other than balloons)							
3b	Engine (if applicable)							
3c	Propeller (if applicable)							
	For balloons							
3d	Envelope (onl balloons)	y for						
3e	Basket(s) (onl y balloons)	y for						
3f	Burner(s) (onl balloons)	y for						

Aircraft Maintenance Programme (for aircraft other than 'complex motor-powered aircraft'				
Aircraft identification				
3g	Fuel cylinders (only for balloons)			

Addit Progra	ional maintenance requirements not covered above (applicable to all Airo ammes, regardless of whether they are based on Design Approval Holder Inspection Programmes)	craft Mainte Data or Mir	enance nimum
4	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)	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.)		
	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).		
5	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		
Pilot-	owner maintenance (only for privately operated non-complex motor-pov 730 kg MTOM and below, sailplanes, powered-sailplanes and ball	vered aircra oons)	ft of 2
6	Does the Pilot-owner perform Pilot-owner maintenance (ref. CAR-M, M.A.803)? If yes, enter the name of the pilot-owner(s) or the alternative procedure described in AMC M.A.803 point 3: Pilot-owner name: Licence Number: Signature: Date:	Yes	No
	If yes, list in Appendix B to this Aircraft Maintenance Programme the deviations to the list of Pilot-owner maintenance tasks contained in the		

	AMC to Appendix VIII to CAR-M (tasks which are not performed by the Pilot-owner and additional tasks performed)						
R	Record of periodic reviews of the Aircraft Maintenance Programme (in accordance with M.A.302(g) or M.A.302(h)5. as applicable)						
7	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)			s to the will be	Date signature	and	
		Revision control	of the Aircraft Maintenance Prog	gramme			
8	Rev. No	Content of revisior				nd Jre	
	Approval/[Declaration of the M	aintenance Programme (select th	ne approp	riate option)	
9	Declaration by owner: Approval by contracted CAMO (only under 'indirect approval procedure' approved by the PACA which is responsible for the Aircraft Maintenance Programme):						
	'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 Signature/Name/Date:		Approval Reference No of the CAMO: Signature/Name/Date:	PACA: Signatur	e/Name/Da	te:	
	Certification statement						
10	'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'						
	Signed by the person/organisation responsible for the continuing airworthiness of the aircraft according to M.A.201:						

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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	
Maintenance related to specific	equipment and modifications		
Maintenance related to repairs i	implemented in the aircraft		
Maintenance related to life-limit	ted components		
Maintenance related to Mandatory Continuing Airworthiness Instructions (ALIs, CMRs, specific requirements in the TCDS, etc.)			

Task Description		References		Interval		
Maintenance related to repetitive Airworthiness Directives						
Maintenance rela compass, transpon	ited to spea ider, etc.)	cific o	perational/airspace	direc	tives/require	ments (altimeter,
Maintenance relat	ed to the type	e of op	eration or operation	al appı	ovals	
Task Description	Recommen interva	ided I	Indicate: 'Adopted', or 'Not adopted', or 'Adopted with deviations'	Al insp (if ad de	ternative ection/task lopted with eviations)	Amended interval (if adopted with deviations)
Maintenance record the applicable mai accomplish the tas	Maintenance recommendations contained in Service Bulletins, Service Letters, etc. 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.					
Task Description (F	Pilot-owner m	ainten	ance)			
Pilot-owner maint performed by the P	Pilot-owner maintenance tasks contained in AMC to Appendix VIII to CAR-M which are not performed by the Pilot-owner				-M which are not	
Pilot-owner maintenance tasks performed by the Pilot-owner additional to those contained in AMC to Appendix VIII to CAR-M						

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

- 1. Reliability programmes shall 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.
- 2. 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.
- 3. The purpose of a reliability programme is to ensure that the aircraft maintenance programme tasks are effective and their periodicity is adequate.
- 4. 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
- 5. A reliability programme provides an appropriate means of monitoring the effectiveness of the maintenance programme.
- 6. It is the responsibility of the operator to report any exceedance in the alert level of the removal/failure rates of components as a result of the reliability monitoring to the authority
- 7. Appendix I to AMC M.A.302 and M.B.301(d) gives further guidance.

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

- NOTE: This AMC is applicable to those LA1 aircraft not involved in commercial operations for which the owner has elected to apply the provisions of M.A.302(h).
 - 1. The aircraft shall 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 shall 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 PACA CAR-21, EASA Part -21 and FAA CFR 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 shall 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 shall 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 to M.A.302(h) Aircraft maintenance programme

Responsibilities associated to maintenance programmes developed in accordance with CAR-M.A.302(h):

- If the owner has contracted an organisation in accordance with CAR-M.A.201(i)(1) or CAR-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 CAR-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 CAR-M.A.302(h)3.

If the maintenance programme is going to be approved by the Authority, PACA 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 CAR-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 CAR-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 PACA, the owner needs to provide to PACA 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 PACA, 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 CAR-M.B.303. Nevertheless, the maintenance programme will be subject to periodic reviews at the occasion of the

airworthiness review and the Public Authority for Civil Aviation shall be notified in case of discrepancies linked to deficiencies in the content of the maintenance programme, as described in CAR-M.A.302(h)5 and CAR-M.A.710. The owner shall amend the maintenance programme accordingly as required by CAR-M.A.302(h)5.

- When the Public Authority for Civil Aviationis notified of deficiencies linked to the content of the declared maintenance programme for a particular aircraft, the Public Authority for Civil Aviation shall 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 Public Authority for Civil Aviation will adapt the ACAM programme accordingly. This notification will also allow that the Public Authority for Civil Aviation agrees on the changes required to the maintenance programme as required by CAR-M.A.302(h)5.
- Although there is no requirement for the owner to send a copy of the declared maintenance programme to the PACA, this does not prevent the Public Authority for Civil Aviation 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 shall 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 Public Authority for Civil Aviationis not responsible for the content of a declared maintenance programme, the Public Authority for Civil Aviation 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

This AMC contains an acceptable 'Minimum Inspection Programme' for the following categories of LA1 aircraft not involved in commercial operations:

- LA1 aeroplanes;
- LA1 sailplanes and LA1 powered sailplanes; and
- LA1 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 CAR-M.A.302(i).

The 'Minimum Inspection Programmes' defined in this AMC already comply with the requirements established in CAR-M.A.302(i) and may be used in order to define the basic information for the maintenance programme as required by CAR-M.A.302(h)2. However, the maintenance programme must be customised as required by CAR-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 CAR-M.A.302(i)1 for the annual inspection may result in an expired ARC.

Minimum Inspection Programme for LA1 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 shall be included for every instance where a check is performed for improper installation/operation.

LA1 aeroplanes not involved in commercial operations			
System/component/area	Task & Inspection detail		
GENERAL			
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 CAR-NCO rules.		
AIRFRAME			
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.		
CABIN AND COCKPIT			
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.		
LA1 aeroplanes not involved	in commercial operations		
All systems	Inspect for improper installation, poor general condition, apparent and obvious defects, and insecurity of attachment.		
LANDING GEAR			

LA1 aeroplanes not involved in commercial operations			
System/component/area	Task & Inspection detail		
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	Inspect for improper operation.		
mechanism			
Linkages, trusses and	Inspect for undue or excessive wear fatigue and distortion.		
members			
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.		
Brakes	Inspect for improper adjustment and wear. Carry out operational test.		
Floats and skis	Inspect for insecure attachment and apparent defects.		
WING AND CENTRE SECTIO	N		
All components	Inspect all components of the wing and centre section assembly for poor		
	general condition, fabric or skin deterioration, distortion, evidence of failure,		
Connections	Insecurity of attachment.		
Connections	Inspect main connections (e.g. between wings, fuselage, wing tips) for proper		
	In, play within tolerances, wear of corrosion on boits and bushings.		
FLIGHT CONTROLS			
Control circuit/stops	Inspect control rods and cables. Check that the control stops are secure and		
control circuity stops	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.		
EMPENNAGE			
All components and	Inspect all components and systems that make up the complete empennage		
systems	assembly for poor general condition, fabric or skin deterioration, distortion,		
	evidence of failure, insecure attachment, improper component installation,		
	and improper component operation.		
AVIONICS AND ELECTRICS			
Batteries	Inspect for improper installation, improper charge and spillage and corrosion.		
Radio and electronic	.Inspect for improper installation and insecure mounting.		
equipment	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		
Antonnos	Insulation.		
	mspection poor condition, insecure mounting, and improper operation.		
	lin commonial encentions		
Engine section	In commercial operations		
Engine section	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		

LA1 aeroplanes not involved in commercial operations			
System/component/area	Task & Inspection detail		
	there is weak cylinder compression, inspect for improper internal condition		
	and improper internal tolerances.		
Engine mounts	Inspect for cracks, looseness of mounting, and looseness of the engine to		
	mount attachment.		
Flexible vibration	Inspect for poor condition and deterioration.		
dampeners			
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	Inspect for leaks, improper condition, and looseness of connections and		
intercooler	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.		
CLUTCHES AND GEARBOXES			
Filters, screens, and chip	Inspect for metal particles and foreign matter.		
detectors	·····		
Output shaft	Inspect for excessive bearing play and condition.		
PROPELLER			
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	Inspect for improper operation, insecure mounting, and restricted travel.		
mechanism			
Anti-icing devices	Inspect for improper operation and obvious defects.		
MISCELLANEOUS			
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.		
OPERATIONAL CHECKS			
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 LA1 sailplanes and LA1 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 shall be included for every instance where a check is performed for improper installation/operation.

LA1 sailplanes and LA1 powered sailplanes not involved in commercial operations			
System/component/area	Task & Inspection detail		
GENERAL			
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 PACA Regulation.		
AIRFRAME			
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.		
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.		

LA1 sailplanes and LA1 pow	ered sailplanes not involved in commercial operations
System/component/area	Task & Inspection detail
Bonding/vents drains	Check all bonding leads and straps. Check that all vents and drains are clear
	from debris.
CABIN AND COCKPIT	
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	Inspect flight controls rods/cables. Check that control stops are secure and
circuits/stops	make contact. Pay particular attention to wear and security of liners and
	cables in 'S' tubes. Inspect self-connecting control devices.
Instrument panel	Inspect instrument panel and all instruments/equipment. Check instrument
assemblies	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
Family as and at a word in	Other controls: clearly marked but not using any of the above colours.
Equipment stowed in	Check for security and condition. Check validity of any safety equipment.
Centre section	Check the manufacturer's and the NAA's (if required) data plates.
speed/weight/ manoeuvre	check that the placard is correct and legible and accurately reflects the status
Front skid (noso whool and	Increase for avidance of hard /heavy landings. Check skid wear Increase wheel
Front skid/hose wheel and	inspect for evidence of hard/neavy landings. Check skid wear. Inspect wheel,
mounts	tyre, and wheel box. Check tyre pressure.
Main wheel and brake	Check for integrity of hydraulic seals and leaks in nine work. Check life of
assembly	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 renlenish if
	necessary. Check tyre pressure.
	CAUTION: CHECK TYPE OF BRAKE FLUID USED AND OBSERVE SAFETY
	PRECAUTIONS.

LA1 sailplanes and LA1 powered sailplanes not involved in commercial operations	
System/component/area	Task & Inspection detail
Undercarriage suspension	Check springs, bungees, shock absorbers, and attachments. Check for signs of damage. Service strut if applicable.
Undercarriage retract	Check retraction mechanism and controls, warning system if fitted, gas
system and doors	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	Inspect wheel brake control rods/cables. If combined with air brake, ensure
	correct rigging relationship. Check parking brake operation if fitted.
WING AND CENTRE SECTION	
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	Inspect aileron control rods/cables. Check that control stops are secure and
circuit/stops	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
Wings including underside	Check mainplane structure externally and internally as far as possible. Check
registration markings	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	Check and record range of movements and cable tensions, if specified, and
free play, and record on	check free play.
worksheets	
EMPENNAGE	
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/	Inspect rudder control rods/cables. Check that control stops are secure and
stops	make contact. Pay particular attention to wear and security of liners and cables in 'S' tubes.
Elevator control	Inspect elevator control rods/cables. Check that control stops are secure and
circuit/stops	make contact. Inspect self-connecting control devices.
Trimmer control circuit	Inspect trimmer control rods/cables. Check friction/locking device.
Control deflections and	Check and record range of movements and cable tensions, if specified, and
free play, and record on	check free play.
worksheets	
AVIONICS AND ELECTRICS	
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.

LA1 sailplanes and LA1 powered sailplanes not involved in commercial operations	
System/component/area	Task & Inspection detail
Battery security and	Check battery mounting for security and operation of clamp. Check for
corrosion	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	Check radio installation, microphones, speakers and intercom, if fitted. Check
placards	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.
MISCELLANEOUS	
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.
POWERPLANT (when applic	able)
Engine pylons and	Inspect engine and pylon installation. Check engine compartment and fire
mountings	sealing.
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,	Inspect propeller, hub, folding mechanism, brake, pitch change mechanism,
mounting, torquing &	stow sensors.
drive belt	
Doors	Check engine compartment doors, operating cables, rods, and cams.
Safety springs	Check all safety and counterbalance springs.

LA1 sailplanes and LA1 powered sailplanes not involved in commercial operations	
System/component/area	Task & Inspection detail
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.
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 LA1 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 shall be included for every instance where a check is performed for improper installation/operation.

1. Envelope

LA1 hot-air balloons not involved in commercial operations	
System/component/area	Task & Inspection detail
Identification (type/serial	Check for presence and verify type/serial number installed.
number/registration plate)	
Crown ring and line	In place; not corroded; crown line undamaged and has appropriate length
Vertical/horizontal load	Check joints with the crown ring, top of the envelope and wires. All load
tapes	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 shall 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	Check maximum temperature indication (flag/'tell-tale').
Tempilabel	
Control system lines	Inspect for damage wear, security of knots. Check proper length. Check lines
	attachments for damage, wear, security.
Control lines and their	Inspect for damage, wear, security of knots. Check proper length of the lines.
attachments	

LA1 hot-air balloons not involved in commercial operations	
System/component/area	Task & Inspection detail
Envelope pulleys	Inspect for damage, wear, free running, contamination, security of attachment.

2. Burner

System/component/area	Task & Inspection detail
Identification (type/serial	Check for presence and verify type/serial number installed.
number)	
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.
	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	Check for presence and verify type/serial number installed.
number)	
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.

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4. Fuel tanks

System/component/area	Task & Inspection detail
Identification (type/serial	Check for presence.
number)	
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).
	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.

CAR-M.A.303 Airworthiness directives

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

CAR-M.A.304 Data for modifications and repairs

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

- (a) data contained in the requirement of CAN 3-35 and accepted by PACA, or;
- (b) data approved by a EASA and FAA approved design organisation;

AMC M.A.304 Data for modifications and repairs

A person or organisation repairing an aircraft or component shall 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 CAR-21 and finally PACA approval of the particular repair data.

CAR-M.A.305 Aircraft continuing airworthiness record system

- (a) At the completion of any maintenance, the certificate of release to service required by point CAR-M.A.801 or point CAR-145.A.50 shall be entered in the aircraft continuing airworthiness records. Each entry should be made as soon as practicable but in no case more than thirty (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 CAR-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 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, PACA Form 1, EASA Form 1, FAA 8130 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, shall control the records as detailed in this point and present the records to the PACA 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 should 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:
 - 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 thrity-six (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 twelve (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 at least twelve (12) months after the aircraft or component has been permanently withdrawn from service; and
- (5) the current status of airworthiness directives applicable to the aircraft and components, at least twelve (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 twelve (12) months after they have been permanently withdrawn from service.
- (7) The detailed maintenance records to show that all requirements for the signing of maintenance release have been met for a minimum period of one (1) year after the signing of the maintenance release.

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

The current status of AD shall 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 shall 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 shall include the aircraft or engine or component total flight hours or cycles, as appropriate. For repetitive ADs, only the last application shall be recorded in the AD status. The status shall also specify which part of a multipart 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 shall 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

The term 'service life-limited components' embraces:

- (1) components subject to a certified life limit after which the components shall be retired, and
- (2) components subject to a service life limit after which the components shall undergo maintenance to restore their serviceability.

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

- 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;
- (2) 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) shall 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 shall 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 shall 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

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 Public Authority for Civil Aviation 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 shall remain legible throughout the required retention period.

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

Computer systems shall have at least one backup system, which shall be updated at least within twenty-four (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 shall be stored in a safe way with regard to damage, alteration and theft. Computer backup discs, tapes etc., shall 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 shall be submitted to the Public Authority for Civil Aviation for acceptance. The PACA 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

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.

CAR-M.A.306 Aircraft technical log system

- (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 PACA 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 PACA.
- (c) An operator shall ensure that the aircraft technical log is retained for thirty-six (36) months after the date of the last entry.

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

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 shall include the information specified for the example used here which happens to use a 5 section document / computer system:

Section 1: shall 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: shall 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 shall 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: shall 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 shall be made for the commander to date and sign such entries including, where appropriate, the nil defect state for continuity of the record. Provision shall 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 shall readily identify the defect(s) to which it relates or the particular maintenance check as appropriate.

In the case of maintenance performed by a CAR-145 maintenance organisation, it is acceptable to use an alternate abbreviated certificate of release to service consisting of the statement 'CAR-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 shall 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 shall contain all of the foregoing information where appropriate.
- **NOTE 2:** Section 3 shall 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 shall 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: shall contain details of all deferred defects that affect or may affect the safe operation of the aircraft and shall therefore be known to the aircraft commander. Each page of this section shall 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: shall 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

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

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

CAR-M.A.307 Transfer of aircraft continuing airworthiness records

- (a) The owner or operator should 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 should 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 should continue to apply to the new owner, operator or continuing airworthiness management organisation.

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

Where an owner/operator terminates his operation, all retained continuing airworthiness records shall 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 six (6) months. However, the PACA shall 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

CAR-M.A.401 Maintenance date

(a) The person or organisation maintaining an aircraft should 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 PACA,
 - 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 PACA CAR-21, EASA Part 21 or FAA CFR Part 21.
 - 4. any applicable data issued in accordance with point CAR-145.A.45(d).
- (c) The person or organisation maintaining an aircraft should ensure that all applicable maintenance data is current and readily available for use when required. The person or organisation should establish a work card or worksheet system to be used and should 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

- 1. Except as specified in sub-paragraph 2, each person or organisation performing aircraft maintenance shall 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 Public Authority for Civil Aviation 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 shall 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

- 1. Data being made available to personnel maintaining aircraft means that the data shall 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 shall 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 shall 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 shall 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 shall 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.

CAR-M.A.402 Performance of maintenance

Except for maintenance performed by a maintenance organisation approved in accordance with CAR-145, any person or organisation performing maintenance should:

- (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 CAR-M.A.401 maintenance data;
- (d) use the tools, equipment and material specified in the CAR-M.A.401 maintenance data. If necessary, tools and equipment should be controlled and calibrated to an officially recognised standard;
- (e) ensure that maintenance is performed within any environmental limitations specified in the CAR-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

- 1. Maintenance shall 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 shall be to the extent necessary to ensure that the work is performed properly and the supervisor shall be readily available for consultation.
- 2. The person authorised to issue a certificate of release to service shall 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 to M.A.402(a) Performance of maintenance

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 CAR-M.

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

The general maintenance and inspection standards applied to individual maintenance tasks shall 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 shall refer to the relevant aircraft airworthiness standards and procedures published or used as guidance by the PACA. The maintenance standards used shall contain methods, techniques and practices acceptable to the Public Authority for Civil Aviationfor the maintenance of aircraft and its components.

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

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 shall be performed in accordance with the equipment manufacturers' instructions. All tools requiring calibration shall 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 shall use the recommended equipment or apparatuses or equivalent equipment accepted by PACA.

All work shall 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

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

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

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

Facilities shall 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 shall be large enough to accommodate the components that are planned to be maintained.

Protection from inclement weather means the hangar or component workshop structures shall 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

- (a) To minimise the risk of multiple errors and to prevent omissions, the person or organisation performing maintenance shall 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 shall plan different persons to perform identical tasks in different systems. However, when only one person is available, then this person shall perform reinspection of the tasks as described in AMC-2 M.A.402(h).

AMC-1 M.A.402(h) Performance of maintenance

CRITICAL MAINTENANCE TASKS

The following maintenance tasks shall 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.

AMC-2 M.A.402(h) Performance of maintenance

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;
- (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 shall 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 CAR-M Subpart F organisation, then the organisation shall 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 CAR-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 CAR-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 CAR-M Subpart F organisation:
 - (i) the 'independent qualified person' shall hold:
 - (A) a CAR-66 licence in any category; or
 - (B) a valid pilot licence for the aircraft type issued in accordance with Sultanate of Oman regulations;
 - (ii) additionally, the 'authorised person' shall assess the qualifications and experience of the 'independent qualified person' taking into account that the 'independent qualified person' shall have received training and have experience in the particular task. It shall 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 shall independent inspection be performed

Independent inspection shall ensure for example correct assembly, locking and sense of operation. When inspecting control systems that have undergone maintenance, the 'independent qualified person' shall consider the following points independently:

- all those parts of the system that have actually been disconnected or disturbed shall be inspected for correct assembly and locking;
- (2) the system as a whole shall be inspected for full and free movement over the complete range;
- (3) cables shall be tensioned correctly with adequate clearance at secondary stops;
- (4) the operation of the control system as a whole shall 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 shall be checked through the full range of the applicable controls; and
- (6) software that is part of the critical maintenance task shall 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 shall 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 shall 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 to M.A.402(h) Performance of maintenance

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.

CAR-M.A.403 Aircraft defects

(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 CAR-M.A.801(b)1, CAR-M.A.801(b)2, CAR-M.A.801(c), CAR-M.A.801(d) or CAR-145 can decide, using CAR-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 CAR-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

An assessment of both the cause and any potentially hazardous effect of any defect or combination of defects that could affect flight safety shall 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

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

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

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

SUBPART E — COMPONENTS

CAR-M.A.501 Classification and installation

(a) All components shall be classified into the following categories:

- (1) components which are in a satisfactory condition, released on an PACA Form 1 or equivalent, unless otherwise specified in CAR-21, CAR-145 or CAR-M.
- (2) control of unserviceable components which shall be maintained in accordance with this Regulation.
- (3) Components categorised as unsalvageable because they have reached their certified life limit or contain a non-repairable defect.
- (4) Standard parts used on an aircraft, engine, propeller or other aircraft component when specified in the maintenance data and accompanied by evidence of conformity traceable to the applicable standard.
- (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 materials 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.
- (b) Components, standard parts and material shall only be installed on an aircraft or a component when they are in a satisfactory condition, belong to one of the categories listed in point (a) and the applicable maintenance data specifies the particular component, standard part or material.

AMC-1 M.A.501(a)(1) Classification and installation

PACA FORM 1 OR EQUIVALENT

- (a) A document equivalent to a PACA Form 1 may be use:
 - (1) A release document issued by an organisation under the terms of a bilateral agreement signed by PACA;
 - (2) a JAA Form One issued prior to 28 November 2004 by a JAR 145 organisation approved by a JAA Full Member State;
 - (3) In the case of new aircraft components that were released from manufacturing prior to the EASA Part-21 compliance date, the component shall be accompanied by a JAA Form One issued by a JAR 21 organisation approved by a JAA Full Member State and within the JAA mutual recognition system;
 - (4) a release document acceptable to a Public Authority for Civil Aviation according to the provisions of a bilateral agreement between the Public Authority for Civil Aviation and a third country.
 - (5) a release document issued under the conditions described in this CAR;
- (b) Any item in storage without Form 1 (PACA/EASA/FAA) or equivalent cannot be installed on aircraft registered in a Sultanate of Oman unless a PACA Form 1 is issued for such item by an appropriately approved maintenance organisation in accordance with AMC M.A.613(a).

GM to M.A.501(a)(1) Classification and Installation

- (a) The PACA Form 1 identifies the airworthiness status of an aircraft component in relation to the work being certified. Block 12 'Remarks' on the PACA Form 1 in some cases contains vital airworthiness related information (see also CAR-M Appendix II) which may need appropriate and necessary actions.
- (b) The fitment of replacement components shall only take place when the person referred to in CAR-M.A.801 or the CAR-M.A. Subpart F or CAR-145 maintenance organisation is satisfied that such components meet required standards in respect of manufacture or maintenance, as appropriate.
- (c) The person referred to under CAR-M.A.801 or the CAR-M.A. Subpart F or CAR-145 approved maintenance organisation shall 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 shall 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(a)(2) Classification and installation

UNSERVICEABLE COMPONENTS

- (a) The person or organisation that performs maintenance shall ensure the proper identification of any unserviceable components. The unserviceable status of the component shall be clearly declared on a tag together with the component identification data and any information that is useful to define actions that are necessary to be taken. Such information shall state, as applicable, in-service times, maintenance status, preservation status, failures, defects or malfunctions reported or detected, exposure to adverse environmental conditions, and whether the component is installed on an aircraft that was involved in an accident or incident. In this case, means shall be provided to prevent unintentional separation of this tag from the component.
- (b) Unserviceable components shall typically undergo maintenance due to:
 - (1) expiry of the service life limit as defined in the aircraft maintenance programme;
 - (2) non-compliance with the applicable airworthiness directives and other continuing airworthiness requirements mandated by the Authority;
 - (3) absence of the necessary information to determine the airworthiness status or eligibility for installation;
 - (4) evidence of defects or malfunctions;
 - (5) previously being installed on an aircraft that was involved in an incident or accident likely to affect the component's serviceability.

AMC M.A.501(a)(3) Classification and installation

UNSALVAGEABLE COMPONENTS

The following types of components shall 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 whose airworthy condition cannot be restored due to exposure to extreme forces, heat or adverse environmental conditions;
- (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 beretrieved.

AMC-1 M.A.501(a)(4) Classification and Installation

STANDARD PARTS

- (a) Standard parts are parts manufactured in complete compliance with an established industry, Agency, Public Authority for Civil Aviation or other Government specification which includes design, manufacturing, test and acceptance criteria, and uniform identification requirements. The specification shall include all information necessary to produce and verify conformity of the part. It shall 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) To designate a part as a standard part the TC holder may issue a standard parts manual accepted by the Authority of original TC holder or may make reference in the parts catalogue to the specification to be met by the standard part. Documentation accompanying standard parts shall 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 shall be included on the documentation and / or material packaging.
- (c) A PACA Form 1 or equivalent is not normally issued and, therefore, none shall be expected.

AMC-2 M.A.501(a)(4)

Classification and Installation

STANDARD PARTS

- (a) For sailplanes and powered sailplanes, non-required instruments and/or equipment certified under the provision of EASA 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.
- (b) 'Required' in the term 'non-required' as used above means required by the applicable airworthiness code (EASA 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 anticollision systems.

(c) 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).

AMC M.A.501(a)(5) Classification and Installation

MATERIAL

- (a) Consumable material is any material which is only used once, such as lubricants, cements, compounds, paints, chemicals dyes and sealants etc.
- (b) 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.
- (c) Material both raw and consumable shall only be accepted when satisfied that it is to the required specification. To be satisfied, the material and or its packaging shall be marked with the specification and where appropriate the batch number.
- (d) Documentation that accompanying all material shall 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 shall be included on the documentation and/or material packaging.
- (e) The PACA Form 1 or equivalent shall not be issued for such material and therefore, none shall be expected. The material specification is normally identified in the (S)TC holder's data except in the case where the Public Authority for Civil Aviation has agreed otherwise.

GM-1 to M.A.501(b) Classification and Installation

- (a) To ensure a component is in a satisfactory condition, the person referred to under M.A.801(b)(2), M.A.801(b)(3), M.A.801(c) or M.A.801(d), or the approved maintenance organisation shall perform an incoming physical inspection.
- (b) The incoming physical inspection shall be performed before the component is installed on the aircraft.
- (c) The following list, although not exhaustive, contains typical checks to be performed:
 - (1) verify the general condition of the components and their packaging in relation to damages that could affect their integrity;
 - (2) verify that the shelf life of the component has not expired;
 - (3) verify that items are received in the appropriate package in respect of the type of the component: e.g. correct ATA 300 or electrostatic sensitive devices packaging, when necessary;
 - (4) verify that the component has all plugs and caps appropriately installed to prevent damage or internal contamination. Care shall be taken when tape is used to cover electrical connections or fluid fittings/openings because adhesive residues can insulate electrical connections and contaminate hydraulic or fuel units.
- (d) Items (e.g. fasteners) purchased in batches shall be supplied in a package. The packaging shall state the applicable specification/standard, P/N, batch number, and the quantity of the items. The documentation that accompanies the material shall contain the applicable specification/ standard, P/N, batch number, supplied quantity, and the manufacturing sources.

(e) If the material is acquired from different batches, acceptance documentation for each batch shall be provided.

GM-2 to M.A.501(b) Classification and installation

INSTALLATION OF COMPONENTS

- (a) Components, standard parts and materials shall only be installed when they are specified in the applicable maintenance data. This could include parts catalogue (IPC), service bulletins (SBs), aircraft maintenance manual (AMM), component maintenance manual (CMM), etc. So, a component, standard part or material can only be installed after having checked the applicable maintenance data. This check shall ensure that the part number, modification status, limitations, etc., of the component, standard part or material are the ones specified in the applicable maintenance data of the particular aircraft or component (i.e. IPC, SB, AMM, CMM, etc.) where the component, standard part or material is going to be installed.
- (b) When the installation is performed outside a maintenance organisation, that is by the persons referred to in CAR-M.A.801(b)(2), CAR-M.A.801(b)(3), CAR-M.A.801(c) or CAR-M.A.801(d), then these persons are responsible to perform this check before installation. When the installation is performed by a CAR-M Subpart F organisation, then the organisation has to establish procedures to ensure that this check is performed before installation.

CAR-M.A.502 Component maintenance

- (a) Except for components referred to in CAR-21.A.307(c), the maintenance of components shall be performed by maintenance organisations appropriately approved in accordance with Section A, Subpart F of this CAR-M or with CAR-145.
- (b) By derogation from paragraph (a), maintenance of a component in accordance with aircraft maintenance data or, if agreed by PACA, in accordance with component maintenance data, may be performed by an an A-rated organisation approved in accordance with Section A, Subpart F of this CAR-M or with CAR-145 as well as by certifying staff referred to in point CAR-M.A.801(b)2 only whilst such components are fitted to the aircraft. Nevertheless, such an A-rated 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 paragraph is not eligible for the issuance of an PACA Form 1 and shall be subject to the aircraft release requirements provided for in CAR-M.A.801.
- (c) By derogation from para (a), maintenance of an engine/Auxiliary Power Unit (APU) component in accordance with engine/APU maintenance data or, if agreed by PACA, in accordance with component maintenance data, may be performed by a B-rated organisation approved in accordance with Section A, Subpart F of this CAR-M or with CAR-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 para (a) and point CAR-M.A.801(b)2, maintenance of a component while installed or temporarily removed from an LA1 aircraft not used in commercial air transport and performed in accordance with component maintenance data, may be performed by certifying staff referred to in point CAR-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. or equivalent airworthiness codes acceptable to the PACA.

Component maintenance performed in accordance with para (d) is not eligible for the issuance of a PACA Form 1 and shall be subject to the aircraft release requirements provided for in CAR-M.A.801.

(e) Maintenance of components referred to in CAR-21.059 shall be performed by an A-rated organisation approved in accordance with Section A, Subpart F of this CAR-M or CAR-145, by certifying staff referred to in point CAR-M.A.801(b)2 or by the pilot-owner referred to in point CAR-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 PACA Form 1 and should be subject to the aircraft release requirements provided for in CAR-M.A.801.

AMC M.A.502 Component maintenance

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

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

- (a) CAR-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 CAR-M.1, paragraph 2. Subpart F maintenance organisations, or to CAR-145.1 for CAR-145 maintenance organisations), or,
 - (2) The authority of State of registry in the case of maintenance performed by independent certifying staff.
- (b) This shall only be permitted by the Public Authority for Civil Aviation in the case of simple component maintenance, where the Public Authority for Civil Aviation 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 CAR-66 aircraft maintenance licence.

AMC M.A.502(d) Component maintenance

Independent certifying staff may issue (as established in CAR-M.A.801(b)(2)) a release to service for maintenance that is performed outside an approved maintenance organisation. This is limited to the maintenance of aircraft that are not required by regulation to be maintained by a CAR-145 or CAR-M Subpart-F organisation. For LA1 aircraft maintenance, this may include complex tasks.

CAR-M.A.503 Service life limited components

- (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 CAR-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.

CAR-M.A.504 Segregation of components

- (a) Unserviceable and unsalvageable components shall be segregated from serviceable components, standards parts and materials.
- (b) Unsalvageable components 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 in accordance with CAR-21.

AMC-1 M.A.504(a) Segregation of components

- (a) Unserviceable components shall be identified and stored in a separate secure location that is managed by the maintenance organisation until a decision is made on the future status of such components. Certifying staff outside maintenance organisations (CAR-M.A.801(b)(2), CAR-M.A.801(c) or CAR-M.A.801(d)) that release aircraft maintenance shall send, with the agreement of the aircraft owner/lessee, any unserviceable component to a maintenance organisation for controlled storage. Nevertheless, the person or organisation that declared the component unserviceable may transfer its custody, after identifying it as unserviceable, to the aircraft owner/lessee provided that such transfer is reflected in the aircraft logbook, or engine logbook, or component logbook.
- (b) 'Secure location under the control of an approved maintenance organisation' refers to a location that is managed by the approved maintenance organisation that prevents the component from being reused or tampered with. This may include facilities that are established by the organisation at locations different from the main maintenance facilities. These locations shall be identified in the relevant procedures of the organisation.
- (c) In the case of unsalvageable components, the person or organisation shall:
 - (1) retain such components in the secure location referred to in paragraph (b);
 - (2) arrange for the component to be mutilated in a manner that ensures that it is cannot be restored for use, before disposing it; or
 - (3) mark the component indicating that it is unsalvageable, when, in agreement with the component owner, the component is disposed of for legitimate non-flight uses (such as training and education aids, research and development), or for non-aviation applications, mutilation is often not appropriate. Alternatively to marking, the original part number or data plate information can be removed, or a record kept of the disposal of the component for legitimate non-flight uses.

AMC-2 M.A.504 Segregation of components

MUTILATION OF COMPONENTS

- (a) Mutilation shall be accomplished in such a manner that the components become permanently unusable for their originally intended use. Mutilated components shall not be able to be reworked or camouflaged to provide the appearance of being serviceable, such as by replating, shortening and rethreading long bolts, welding, straightening, machining, cleaning, polishing, or repainting.
- (b) Mutilation may be accomplished by one or a combination of the following procedures:
 - (1) grinding;
 - (2) burning;
 - (3) removal of a major lug or other integral feature;
 - (4) permanent distortion of parts;
 - (5) cutting a hole with cutting torch or saw;
 - (6) melting;
 - (7) sawing into many small pieces; and
 - (8) any other method accepted by PACA.
- (c) The following procedures are examples of mutilation that are often less successful because they may not be consistently effective:
 - (1) stamping or vibro-etching;
 - (2) spraying with paint;
 - (3) small distortions, incisions, or hammer marks;
 - (4) identification by tags or markings;
 - (5) drilling small holes; and
 - (6) sawing in two pieces only.
- (d) As the 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 shall provide the original manufacturer with the data plate and/or serial number and final disposition of those components.

CAR M.A.505 Control of Unserviceable Components

- (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 programme;
 - (2) non-compliance with the applicable airworthiness directives and other continuing airworthiness requirement mandated by the Authority;
 - (3) absence of the necessary information to determine the airworthiness status or eligibility for installation;
 - (4) evidence of defects or malfunctions; and
 - (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 the maintenance organisation until a decision is made on the future status of such component. Nevertheless, for aircraft not used in commercial air transport other than large aircraft, the 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) In the case of unsalvageable components the organisation shall:
 - (1) retain such component in the paragraph (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.
- (d) Notwithstanding paragraph (c), the organisation may transfer responsibility of components classified as unsalvageable to an organisation for training or research without mutilation.

Note: More PACA requirements are detailed in the following Notices:

- (1) CAN 3-30: Usage of Parts Removed from an Aircraft No Longer in Service and Disposal of Scrap Parts.
- (2) CAN 3-31: Suspected Unapproved Parts

AMC-1 M.A.505(b) Control of Unserviceable components

- (a) The organisation shall ensure proper identification of any unserviceable components.
- (b) The unserviceable status of the component shall 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 shall 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 shall be provided to prevent unwanted separation of this tag from the component.
- (c) 'A Secure location under the control of an approved maintenance organisation' refers to a secure location whose security is the responsibility of the approved maintenance organisation. This may include facilities that are established by the organisation at locations different from the main maintenance facilities. These locations shall be identified in the relevant procedures of the organisation.

AMC-2 M.A.504(c) Control of Unserviceable Components

- (a) The following types of components shall typically be classified as unsalvageable:
 - (1) Components with non-repairable defects, whether visible or not to the naked eye;
 - (2) Components that do not meet design specifications, and cannot be brought into conformity with such specifications;
 - (3) Components subjected to unacceptable modification or rework that is irreversible;
 - (4) Certified life-limited parts that have reached or exceeded their certified life limits, or have missing or incomplete records;
 - (5) Components that cannot be returned to airworthy condition due to exposure to extreme forces, heat or adverse environment;
 - (6) Components for which conformity with an applicable airworthiness directive cannot be accomplished;
 - (7) Components for which maintenance records and/or traceability to the manufacturer cannot be retrieved.

(b) It is common practice for owners 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 shall consider the possibility of such components later being misrepresented and sold as serviceable components. Caution shall be exercised to ensure that unsalvageable components are disposed of in a manner that does not allow them to be returned to service.

SUBPART F — MAINTENANCE ORGANISATION

CAR-M.A.601 Scope

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.

CAR-M.A.602 Application

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

AMC M.A.602 Application

An application shall be made on a PACAForm 2 (Appendix IX to AMC M.A.602 and AMC M.A.702) or equivalent acceptable to the PACA.

The PACA Form 2 is valid for the application for M.A. Subpart F, CAR-145 and M.A. Subpart G organisations. Organisations applying for several approvals may do so by using a single PACA Form 2.

CAR-M.A.603 Extent of approval

- (a) An organisation involved in activities subject to this Subpart should not exercise its activities unless approved by the PACA. Appendix V to CAR-M provides the template certificate for this approval.
- (b) The maintenance organisation's manual referred to in point M.A.604 should specify the scope of work deemed to constitute approval. Appendix IV to CAR-M defines all classes and ratings possible under Subpart F of this CAR-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

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 APU	C1 Air Condition & Press	21
	C2 Auto Flight	22
	C3 Comms and Nav	23 - 34
	C4 Doors - Hatches	52
	C5 Electrical Power & Light	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 - Rotor	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 Propeller	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

- 1. The agreement by the Public Authority for Civil Aviation for the fabrication of parts by the approved maintenance organisation shall 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 shall 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 PACA, 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 PACA 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 shall 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 shall 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 PACA.
- 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 Public Authority for Civil Aviation in accordance with a procedure specified in the maintenance organisation manual.

9. Inspection and Identification.

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

CAR-M.A.604 Maintenance organisation manual

(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 CAR-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 should be approved by the PACA.
- (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

- 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 CAR-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.

CAR-M.A.605 Facilities

The organisation should 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 should ensure segregation of unserviceable components and material from all other components, material, equipment and tools. Storage conditions should be in accordance with the manufacturers' instructions and access should be restricted to authorised personnel.

AMC M.A.605(a) Facilities

1. Where a hangar is not owned by the CAR-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 shall be demonstrated by the preparation of a projected aircraft hangar visit plan relative to the aircraft maintenance programme. The aircraft hangar visit plan shall 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 CAR-M.A.402. For complex repairs or component maintenance requiring a PACA Form 1, suitable approved workshops shall be provided. The facilities and environmental conditions required for inspection and maintenance shall 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 LA2 aircraft (when not performing major repairs) may perform the work in alternative suitable facilities (and possibly at remote locations) as agreed by the PACA.

- 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 shall be to a standard that prevents the ingress of rain, hail, ice, snow, wind and dust etc. Aircraft hangar and aircraft component workshop floors shall be sealed to minimise dust generation.
- 3. Aircraft maintenance staff shall be provided with an area where they may study maintenance instructions and complete continuing airworthiness records in a proper manner.
- 4. Special case for LA2 aircraft

For LA2 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 Public Authority for Civil Aviation 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 shall 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

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

- (1) Storage facilities for serviceable aircraft components shall be clean, well-ventilated and maintained at an even dry temperature to minimise the effects of condensation. Manufacturer's storage recommendations shall be followed for those aircraft components identified in such published recommendations.
- (2) Adequate storage racks shall 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, shall remain packaged in their protective material to minimise damage and corrosion during storage. A shelf life control system shall 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 shall be ensured according to the pertinent procedure approved to that organisation.
- (6) Procedures shall be defined by the organisation describing the decision process for the status of unserviceable components. This procedure shall 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 shall establish secure areas in which to segregate such items and to prevent unauthorised access. Unsalvageable components shall 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 shall be identified.

CAR-M.A.606 Personnel requirements

- (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 CAR.
- (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) should be ultimately responsible to the accountable manager.
- (c) All point (b) persons shall be able to show relevant knowledge, background and appropriate experience related to aircraft and/or component maintenance.
- (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.
- (e) The qualification of all personnel involved in maintenance, airworthiness reviews and development of maintenance programmes shall be demonstrated and recorded.
- (f) Personnel who carry out specialised tasks such as welding, non-destructive testing/inspection other than colour contrast should be qualified in accordance with an officially recognised standard.
- (g) The maintenance organisation shall have sufficient certifying staff to issue certificates of release to service for aircraft and components provided for in points CAR-M.A.612 and CAR-M.A.613. They should comply with the requirements of CAR-66.
- (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:
 - 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 license, 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.
- (i) If the organisation performs CMR and issues the corresponding CMR for LA1 aircraft not involved in commercial operations, it shall have qualified airworthiness review staff.
- (j) If the organisation is involved in the development and processing of approval of the maintenance programme for LA2 aircraft not involved in commercial operations in accordance with M.A.201(e)(ii), it shall have qualified staff who should be able to show relevant knowledge and experience.

AMC M.A.606(a) Personnel requirements

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 Public Authority for Civil Aviation 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

- 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 shall have, dependent upon the extent of approval, an aircraft maintenance manager, a workshop manager all of whom shall 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 CAR-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 shall identify to the Public Authority for Civil Aviation the titles and persons chosen to carry out these functions.

AMC M.A.606(c) Personnel requirements

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

Training courses shall be as a minimum at a level equivalent to CAR-66, and could be imparted by a CAR-147 organisation, by the manufacturer, or by any other organisation accepted by the PACA.

2.5. knowledge of maintenance standards.

AMC M.A.606(d) Personnel requirements

- 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

- 1. Personnel involved in maintenance shall 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 shall be provided and recorded to ensure continued competence.

AMC M.A.606(f) Personnel requirements

- 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 shall be conducted by personnel or organisations under the general control of such a board. In the absence of a national aerospace NDT board, examinations shall be conducted by personnel or organisations under the general control of the PACA NDT board.
- 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 shall 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 shall 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 nondestructive testing shall establish qualification procedures for non-destructive testing.
- 8. Boroscoping and other techniques such as delamination coin tapping are non-destructive inspections rather than non-destructive testing. Notwithstanding such differentiation, approved maintenance organisation shall 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. Nondestructive inspections, not being considered as non-destructive testing by M.A. Subpart F are not listed in Appendix IV to CAR-M under class rating D1.
- 9. The referenced standards, methods, training and procedures shall 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 CAR-M shall qualify for such nondestructive 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

- 1. For the issue of a limited certification authorisation the commander shall 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 shall be of sufficient duration to ensure that the individual has a thorough understanding of the task to be completed and shall involve training in the use of associated maintenance data.
 - (c) Completion of the procedural training.

The above procedures shall be specified in the maintenance organisation manual and be accepted by the PACA.

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 shall have a finite life of twelve months subject to satisfactory recurrent training on the applicable aircraft type.

CAR-M.A.607 Certifying staff and airworthiness review staff

- (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 of CAR-66, except when CAR-66 refers to other Regulation, in which case they should 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.
- (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 license rated for the aircraft type requiring certification provided there is no organisation appropriately approved under this CAR 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 PACA within seven days after issuing such certification authorisation. The approved maintenance organisation issuing the one-off certification authorization should ensure that any such maintenance that could affect flight safety is re-checked.

(c) The approved maintenance organisation should 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

- 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 shall hold copies of all documents that attest to qualification, and to recent experience.

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

- 1. The following minimum information as applicable shall 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, shall 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 LA1 aircraft;
 - (e) qualifications relevant to the approval (knowledge of relevant parts of CAR-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 shall 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 Public Authority for Civil Aviation shall be granted access to the records upon request.

CAR-M.A.608 Components, equipment and tools

- (a) The organisation shall:
 - hold the equipment and tools specified in the maintenance data described in point CAR-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 should be kept by the organisation.
- (c) The organisation shall inspect, classify and appropriately segregate all incoming components, standard parts and materials.

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

- 1. Once the applicant for M.A. Subpart F approval has determined the intended scope of approval for consideration by the PACA, 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 shall 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 shall ensure that they are controlled in terms of servicing or calibration as required.

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

- 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 shall be maintained for all the organisation's precision tooling and equipment together with a record of calibrations and standards used.
- Inspection, service or calibration on a regular basis shall 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.

CAR-M.A.609 Maintenance data

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

When an organisation uses customer provided maintenance data, the scope of approval indicated in the maintenance organisation manual shall 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.

CAR-M.A.610 Maintenance work orders

Before the commencement of maintenance a written work order should 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

'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.

CAR-M.A.611 Maintenance standards

All maintenance shall be carried out in accordance with the requirements of Section A, Subpart D of this CAR-M.

CAR-M.A.612 Aircraft certificate of release to service

At the completion of all required aircraft maintenance in accordance with this Subpart an aircraft certificate of release to service should be issued according to point CAR-M.A.801.

CAR-M.A.613 Component certificate of release to service

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

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

- 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, a PACA Form1 or equivalent acceptable by PACA 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 CAR-145, CAR-M and CAR-21 and not released on an PACA Form 1 or equivalent in accordance with CAR-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 a PACA Form 1 may be issued.
- 2.1. A PACA Form 1 may be issued for an aircraft component which has been:
 - Maintained before CAR-145, or CAR-M became effective or manufactured before CAR-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 a PACA 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 PACA. 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 PACA 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. A PACA Form 1 issued in accordance with this paragraph 2 shall be issued by signing in block 14b and stating 'Inspected/Tested' in block 11. In addition, block 12 shall 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 crossreference to any original documentation which shall 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 shall 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, shall be attached to the PACA Form 1.
- 2.5. New/unused aircraft components
- 2.5.1. Any unused aircraft component in storage without a PACA Form 1 up to the effective date(s) for CAR-21 that was manufactured by an organisation acceptable to the Public Authority for Civil

Aviation at the time may be issued a PACA Form 1 by an appropriately rated maintenance organisation approved under M.A. Subpart F. The PACA Form 1 shall be issued in accordance with the following subparagraphs which shall be included in a procedure within the maintenance organisation manual.

- **Note** 1: It shall 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 CAR-21. It is not intended to bypass the production release procedure for parts and subassemblies intended for fitment on the manufacturers own production line.
- (a) An acceptance test report or statement shall 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 shall 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 shall be inspected for damage, corrosion and leakage to ensure good condition.
- (c) The storage life used of any storage life-limited parts shall 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 shall 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, a PACA 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 PACA registered aircraft may be issued a PACA Form 1 by an appropriately rated organisation subject to compliance with this subparagraph.
 - (a) The organisation shall 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 shall be inspected for satisfactory condition including in particular damage, corrosion or leakage and compliance with any additional maintenance data.
 - (d) The aircraft record shall 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 a PACA 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 shall be available for all used serialised aircraft components.
 - (f) Compliance with known modifications and repairs shall be established.
 - (g) The flight hours/cycles/landings as applicable of any service life-limited parts including time since overhaul shall be established.

- (h) Compliance with known applicable airworthiness directives shall be established.
- (i) Subject to satisfactory compliance with this subparagraph 2.6.1, a PACA Form 1 may be issued and shall 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 an aircraft which do not register in Sultanate of Oman may only be issued a PACA 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. A PACA Form 1 may be issued and shall 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 an Oman registered aircraft withdrawn from service may be issued a PACA 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 shall be accomplished under the control of an organisation approved under M.A. Subpart F, employing procedures approved by the PACA.
 - (b) To be eligible for installation, components removed from such aircraft may be issued with a PACA 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 shall, 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 shall 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 shall 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 shall 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 shall 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 CAR-145.

For used components maintained by a maintenance organisation not approved under CAR-M Subpart F or CAR-145, due care shall be taken before acceptance of such components. In such cases an appropriately rated maintenance organisation approved under M.A. Subpart F shall 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 TCCA CAR573 approved maintenance organisations (Canada) that does not hold a PACA CAR-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 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 CAR-21,
- (d) inspection for satisfactory condition including in particular damage, corrosion or leakage,
- (e) issuance of a PACA 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 Public Authority for Civil Aviation oversight, as attested by the following documents:

- Maintenance Annex Guidance (MAG) between the PACA and EASA,
- Maintenance Annex Guidance (MAG) between the PACA and FAA,
- Maintenance Annex Guidance (MAG) between the PACA and TCCA.
- 2.9. Used aircraft components removed from an aircraft involved in an accident or incident. Such components shall only be issued with a PACA Form 1 or equivalent acceptable to PACA 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 shall be referenced in block 12.
- 3. A certificate shall 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 shall 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 shall only be issued by organisations approved by Public Authority for Civil Aviation, EASA or FAA as applicable within the scope of the approval.

CAR-M.A.614 Maintenance and airworthiness review records

- (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 should 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 should 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 should 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 PACA.

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

- 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 shall 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 shall remain legible throughout the required retention period.
- 4. Paper systems shall 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 shall have at least one backup system which

shall 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

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 shall refer to the revision status of the data used.

CAR-M.A.615 Privileges of the organisation

The maintenance organisation approved in accordance with Section A, Subpart F of this CAR-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 PACA 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 LA1 aircraft not involved in commercial operations,
 - 1. perform CMR and issue the corresponding CMR, and
 - 2. perform CMR and issue the corresponding recommendations,
- (f) develop the maintenance programme and process its approval in accordance with point M.A.302 for LA2 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 to M.A.615 Privileges of the organisation

CAR-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 Public Authority for Civil Aviation 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 to M.A.615(a) Privileges of the organisation

CAR-M.A.615(a) applies also to facilities which may not be individually approved by the PACA, such as those described in AMC M.A.605(a) for LA2 aircraft.

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

CAR-M.A.615(b) refers to work carried out by another organisation which is not appropriately approved under CAR-M.A. Subpart F or CAR-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 shall meet an officially recognised standard or, otherwise, it shall be acceptable to the Public Authority for Civil Aviation (through the approval of the Maintenance Organisation Manual).

'Under the control of the Subpart F organisation' means that the Subpart F organisation shall 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 Public Authority for Civil Aviation via the Maintenance Organisation Manual.

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

CAR-M.A.616 Organisational review

To ensure that the approved maintenance organisation continues to meet the requirements of this Subpart, it should organise, on a regular basis, organisational reviews.
AMC M.A.616 Organisational review

- 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 shall identify:
 - (a) the person responsible for the organisational review;
 - (b) the frequency of the reviews;
 - (c) the scope and content of the reviews;
 - (d) the persons accomplishing the reviews;
 - (e) the procedure for planning, performing and processing review findings; and,
 - (f) the procedure for ensuring corrective actions are carried out in the appropriate time frame.

3. The organisation quality system as specified in CAR-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 shall be used to manage the organisational reviews.

CAR-M.A.617 Changes to the approved maintenance organisation

In order to enable the PACA to determine continued compliance with this CAR, the approved maintenance organisation should 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 should be notified at the earliest opportunity.

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

The Public Authority for Civil Aviation shall be given adequate notification of any proposed changes in order to enable the maintenance organisation to remain approved if agreed by the Public Authority for Civil Aviation during negotiations about any of the specified changes. Without this paragraph the approval would automatically be suspended in all cases.

CAR-M.A.618 Continued validity of approval

(a) An approval shall be issued for an unlimited duration. It should 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 Public Authority for Civil Aviation 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 should be returned to the PACA.

CAR-M.A.619 Findings

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

SUBPART G — CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATION

CAR-M.A.701 Scope

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.

CAR-M.A.702 Application

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

AMC M.A.702 Application

An application shall be made on a PACA Form 2 (Appendix IX to AMC M.A.602 and AMC M.A.702) or equivalent acceptable to the Public Authority for Civil Aviation.

The PACA Form 2 is valid for the application for CAR-M.A. Subpart F, CAR-145 and CAR-M.A. Subpart G organisations. Organisations applying for several approvals may do so using a single PACA Form 2.

CAR-M.A.703 Extent of approval

- (a) The approval is indicated on a certificate included in Appendix VI issued by PACA.
- (b) Notwithstanding point (a), for licensed air carriers, the approval shall be part of the air operator certificate issued by PACA, for the aircraft operated.
- (c) The scope of work deemed to constitute the approval should be specified in the continuing airworthiness management exposition in accordance with point M.A.704.

CAR-M.A.704 Continuing airworthiness management exposition

- (a) The continuing airworthiness management organization or operator 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 CAR-M.A.706(a), CAR-M.A.706(c), CAR-M.A.706(d) and CAR-M.A.706(i), and;
 - 4. an organisation chart showing associated chains of responsibility between all the person(s) referred to in points CAR-M.A.706(a), CAR-M.A.706(c), CAR-M.A.706(d) and CAR-M.A.706(i), and;
 - 5. a list of the airworthiness staff referred to in point CAR-M.A.707, specifying, where applicable, the staff authorised to issue permits to fly in accordance with point CAR-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 CAR, and;
- 8. the continuing airworthiness management exposition amendment procedures, and;
- 9. the list of approved aircraft maintenance programmes, or, for aircraft not used by licensed air carriers, the list of 'generic' and 'baseline' maintenance programmes.
- (b) The continuing airworthiness management exposition and its amendments shall be approved by the PACA. The CAMO/Operator shall ensure the continuing airworthiness management exposition amended as necessary to keep the information contained threin up to date. Copies of all amendments to the operator's continuing airworthiness management exposition shall be furnished promptly to all organizations or persons to whom the manual has been issued.
- (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 PACA.
- (d) The design and application of the continuing airworthiness management exposition shall observe Human Factor principles.
- **Note :** Guidance material on the application of Human Factors Principles can be found in the Cabin Crew Safety Training Manual (DOC10002).
- (e) The operator shall provide the state of the operator and the state of Registry with a copy of the operator's continuing airworthiness management exposition, together with all amendements and/or revisions to it and shall incorporate in it such mandatory material as the state of the operator shall be furnished promptly to all organizations or persons to whom the manual has been issued.

AMC-1 M.A.704 Continuing airworthiness management exposition

- 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 CAR-Mrequirements.
- 2. A continuing airworthiness management exposition shall 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 shall be familiar with those parts of the continuing airworthiness management exposition that are relevant to their tasks.
- 4. The CAMO shall specify in the exposition who is responsible for the amendment of the document. Unless otherwise agreed by the PACA, the person responsible for the management of the quality system or for the organisational review shall be responsible for monitoring and amending the continuing airworthiness management exposition, including associated procedure's manuals, and

the submission of proposed amendments to the PACA. The Public Authority for Civil Aviation 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 Public Authority for Civil Aviation('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 shall be made available to the PACA in a form acceptable to the latter. Attention shall 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 shall 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.

AMC-2 M.A.704 Continuing airworthiness management exposition

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 CAR-145 organisation:
 - CAR-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 shall cover the functions specified in M.A.712 'Quality system' and 145.A.65 'Safety and quality system'.

Part 4 Contracts

This chapter shall include:

- the contracts of the CAMO with the owners/operators as per Appendix I to CAR-M;

- 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
 - Part 1 General
 - Part 2 Description
 - Part 3 General procedures
 - Part 4 Working procedures

This part shall 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

- Part 0 'General organisation' of the continuing airworthiness management exposition shall 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 CAR-M and will be complied with at all times.
- 2. The accountable manager's exposition statement shall embrace the intent of the following paragraph, and in fact this statement may be used without amendment. Any amendment to the statement shall not alter its intent:

'This exposition defines the organisation and procedures upon which the Public Authority for Civil Aviation CAMO approval is based.

These procedures are approved by the undersigned and shall 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 Public Authority for Civil Aviation will approve this organisation whilst the Public Authority for Civil Aviation is satisfied that the procedures are followed and the work standard is maintained. It is understood that the Public Authority for Civil Aviation reserves the right to suspend, limit or revoke the CAMO approval or the air operator certificate, as applicable, if the Public Authority for Civil Aviation 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) ... '

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.

CAR-M.A.705 Facilities

The continuing airworthiness management organisation shall provide suitable office accommodation at appropriate locations for the personnel specified in point CAR-M.A.706.

AMC M.A.705 Facilities

Office accommodation shall 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 Public Authority for Civil Aviation 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 shall also include an adequate technical library and room for document consultation.

CAR-M.A.706 Personnel requirements

- (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 CAR.
- (b) For licenced air carriers 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.
- (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.
- (d) For licenced air carriers, 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).
- (e) The nominated post holder referred to in point (d) shall not be employed by a CAR-145 approved organisation under contract to the operator, unless specifically agreed by PACA.
- (f) The organisation shall have sufficient appropriately qualified staff for the expected work.
- (g) All point (c) and (d) persons shall be able to show relevant knowledge, background and appropriate experience related to aircraft continuing airworthiness.
- (h) The qualification of all personnel involved in continuing airworthiness management shall be recorded.
- (i) For organisations extending CMR in accordance with points CAR-M.A.711, the organisation sall nominate persons authorised to do so, subject to approval by PACA.
- (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 CAR-M.A.706(a), CAR- CAR-M.A.706(c), CAR-M.A.706(d) and CAR-M.A.706(i).

(k) For complex motor-powered aircraft and for aircraft used by licensed air carriers, 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 PACA. In addition to the necessary expertise related to the job function, competence must include an understanding of the application of human factors principles and human performance issues appropriate to that person's function and responsibilities in the organisation.

AMC M.A.706 Personnel requirements

- The person or group of persons shall 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 shall 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 Public Authority for Civil Aviation to accept the number of persons and their qualifications, an organisation shall 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 shall be updated.
- 4. Nominated person or group of persons shall 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 shall 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 PACA. '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 shall 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 shall be at least at a level equivalent to CAR-66 Appendix III Level I General Familiarisation and could be imparted by a CAR-147 organisation, or equivalent accepted by the authority, by the manufacturer, or by any other organisation accepted by PACA.

'Relevant sample' means that these courses shall 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 PACA. This assessment shall be recorded.

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

AMC M.A.706(a) Personnel requirements

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 Public Authority for Civil Aviation 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

- 1. The Public Authority for Civil Aviation of the operator shall only accept that the nominated post holder be employed by the organisation approved under CAR-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 CAR-145 and the operator are the same organisation.

AMC M.A.706(f) Personnel requirements

Additional training in fuel tank safety as well as associated inspection standards and maintenance procedures shall be required of CAMO technical personnel, especially the staff involved with the management of CDCCL, Service Bulletin assessment, work planning and maintenance programme management. PACA 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

The approval by the Public Authority for Civil Aviation of the exposition, containing in M.A.704(a)3 the list of M.A.706(i) personnel, constitutes their formal acceptance by the Public Authority for Civil Aviation and also their formal authorisation by the organisation.

Airworthiness review staff are automatically recognised as persons with authority to extend a CMR in accordance with M.A.711.

AMC M.A.706(k) Personnel requirements

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

CAR-M.A.707 Airworthiness review staff

- (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 and, if applicable, to issue a permit to fly in accordance with point CAR-M.A.711(c):
 - 1. For aircraft used by licenced air carriers, 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 CAR-66 or Equivalent acceptable by PACA 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 CAR-M.A.707(a)1(b) may be replaced by five (5) years of experience in continuing airworthiness additional to those already required by point CAR-M.A.707(a)1(a).
 - 2. For aircraft not used by licenced air carriers 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 CAR-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).
- (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 PACA after satisfactory completion of an airworthiness review under the

supervision of the PACA or under the supervision of the organisation's airworthiness review staff in accordance with a procedure approved by PACA.

- (c) The organisation shall ensure that aircraft airworthiness review staff can demonstrate appropriate recent continuing airworthiness management experience.
- (d) Airworthiness review staff shall be identified by listing each person in the continuing airworthiness management exposition together with their airworthiness review authorisation reference.
- (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

- 1. Airworthiness review staff are only required if the CAMO wants to be granted CAR-M.A.711(b) airworthiness review and, if applicable, CAR-M.A.711(c) permit to fly privileges.
- '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 shall be considered as holding the equivalent to an aeronautical degree.
- 4. An appropriate licence in compliance with CAR-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 CAR-66 at the time of the review.

5. To hold a position with appropriate responsibilities means the airworthiness review staff shall 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 CAR-145/M.A. Subpart F approval, may nominate maintenance personnel from their CAR-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 shall 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

For all aircraft used by air carriers licensed in accordance with CAR-OPS 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 shall be at least at a level equivalent to CAR-66 Level I General Familiarisation and could be imparted by a CAR-147 organisation or equivalent accepted by the PACA, by the manufacturer, or by any other organisation accepted by PACA.

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

- Maintenance methods.

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

For all balloons and any other aircraft of 2 730 Kg MTOM and below, not used by air carriers licensed in accordance with CAR- OPS:

- 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 shall be at least at a level equivalent to CAR-66 Level I General Familiarisation and could be imparted by a CAR-147 organisation or equivalent accepted by PACA , by the manufacturer, or by any other organisation accepted by PACA.
 - 'Relevant sample' means that these courses shall 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 Public Authority for Civil Aviation or by other airworthiness review staff already authorised within the organisation in accordance with approved procedures. This assessment shall be recorded.

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

The formal acceptance by the Public Authority for Civil Aviation of the airworthiness review staff is granted through the corresponding PACA Form 4.

If the airworthiness review is performed under the supervision of existing airworthiness review staff, evidence shall be provided to the Public Authority for Civil Aviation together with PACA Form 4. If satisfied, PACA will issue the formal acceptance through PACA Form 4.

Once the airworthiness review staff has been accepted by PACA, 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

In order to keep the validity of the airworthiness review staff authorisation, the airworthiness review staff shall 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 shall conduct at a satisfactory level an airworthiness review under the supervision of the Public Authority for Civil Aviationor, if accepted by the PACA, 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

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

- Name,
- Date of Birth,
- Basic Education,
- Experience,
- Aeronautical Degree and/or CAR-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.

CAR-M.A.708 Continuing airworthiness management

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

- 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 PACA for approval, unless covered by an indirect approval procedure in accordance with point M.A.302(c), and for aircraft not used by licensed air carriers 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 CAR-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 CAR-145 or CAR-M.A. Subpart F, the organisation should in consultation with the operator, establish a written maintenance contract with a CAR-145 or CAR-M.A. Subpart F approved organisation or another operator, detailing the functions specified under CAR-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 CAR-145 or CAR-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 CAR-145 or CAR-M.A. Subpart F maintenance organisation in the case of:
 - 1. an aircraft requiring unscheduled line maintenance,
 - 2. component maintenance, including engine maintenance.
- (e) The organisation shall ensure that human factors and human performance limitations are taken into account during continuing airworthiness management, including all contracted and subcontracted activities.

GM to M.A.708 Continuing airworthiness management

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

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

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

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.

AMC-1 M.A.708(c) Continuing airworthiness management

- 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 CAR-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 CAR-M.A.301 paras (2), (3), (5) and (6). If the CAMO does not hold the appropriate maintenance organisation approval (Subpart F organisation approval or a CAR-145 approval), then the CAMO shall 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 shall be satisfied before the intended flight that all required maintenance has been properly carried out.
- 3. The CAMO shall 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 shall 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) shall 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 shall 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 shall 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.

AMC-2 M.A.708(c) Continuing airworthiness management

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 shall 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 shall place great emphasis on monitoring compliance with the above. The list of approved maintenance organisations, or a reference to this list, shall be included in the CAMO's continuing airworthiness management exposition.
- 2. This contract shall 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 CAR-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 CAR-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 CAR-145 for the same type of aircraft. A typical case is that of a dryleased 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 CAR-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 CAR-M.A.706(c) continuing airworthiness management group of persons and quality system as referred to in CAR-M.A.712.

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

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

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 shall be noted that this paragraph implies that even where base maintenance is ordered on a case-by-case basis, there shall be a written maintenance contract.

CAR-M.A.709 Documentation

- (a) The approved continuing airworthiness management organisation shall hold and use applicable current maintenance data in accordance with point CAR-M.A.401 for the performance of continuing airworthiness tasks referred to in point CAR-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 CAR-M.A.714.
- (b) For aircraft not used by licensed air carriers, 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 CAR-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 CAR-M.A.302 in due time before exercising the privileges referred to in point CAR-M.A.711.

AMC M.A.709 Documentation

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

The sentence '..., except when required by point CAR-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 shall 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 shall be available to the Public Authority for Civil Aviation prior to the initial approval and prior to the extension of the scope of an existing organisation

approval. The intent is that the Public Authority for Civil Aviationis 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 shall 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 shall include provisions to notify to the Public Authority for Civil Aviation that an aircraft maintenance programme specific for a customer has been created. The reason is that, according to CAR-M.A.704(a)9, for aircraft not used by air carriers licensed in accordance with CAR-OPS, the Continuing Airworthiness Management Exposition (CAME) only needs to include the reference to the baseline/generic maintenance programme.

GM to M.A.709 Documentation

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.

CAR-M.A.710 Certificate of Maintenance Review (CMR)

In order to maintain a "C of A" valid, a "CMR" is required to be issued in accordance with CAN 3-02 and CAN 3-08 and at the times prescribed in the approved maintenance program for the aircraft concerned. CAA approved Aircraft Maintenance Organisations and Oman operator approved procedures, in part, shall limit the authority to certify the "CMR" to senior and well qualified licensed Aircraft Maintenance Engineers. It must be determined at the time of issuance that the aircraft complies with the following:

- (a) Completion of all inspections and other maintenance requirements of the Approved Maintenance Program.
- (b) Accomplishment of all applicable terminating or recurring ADs and CAA mandatory SBs, modifications or inspections.
- (c) No parts, components or assemblies exceed their life/service limits.
- (d) No outstanding defects or inoperative items exist, or if any, have been deferred in accordance with procedures acceptable or approved by the CAA.
- (e) Mandatory requirements of CAA Civil Aviation Notices affecting airworthiness have been met.
- (f) No known condition(s) exists that would adversely affect the aircraft airworthiness, safe operation, or endanger passengers or crew members.

- (g) A CMR 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 Oman ; or
 - 4. the type certificate under which the airworthiness certificate was issued is suspended or revoked.
- (h) An aircraft must not fly if the CMR 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 CAR; or
 - 2. the aircraft does not remain in conformity with the type design approved by the State of design; 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 CAR-21 and CAN 3-35.
- (i) Upon surrender or revocation, the CMR shall be returned to the PACA.
- (j) When transferring an aircraft registration due to change of ownership, the applicant shall:
 - 1. inform the PACA, then;
 - 2. apply to the PACA for the issuance of a new Certificate of Registration and a new CMR and C of A in accordance with CAR-21 and CAN 3-08 and CAN 3-02, if the management of the aircraft maintenance program is changed.
- (K) When importing an aircraft onto a Sultanate of Oman register from a foreign country, the applicant shall:
 - 1. apply to the PACA for the issuance of a new CMR and C of A in accordance with CAR-21, CAN 3-02 and CAN 3-08; and
 - 2. for aircraft other than new, have a CMR carried out satisfactorily; and
 - 3. have all maintenance carried out to comply with the approved maintenance programme in accordance with point M.A.302.
- (I) 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 a CMR to the PACA.
- (m) The owner shall allow access to the aircraft for inspection by the PACA.
- (d) A new CMR will be issued by Sultanate of Oman when it is satisfied the aircraft complies with the prescriptions of CAR-21, CAN 3-02 and CAN 3-08.
- (e) The PACA shall also issue the CMR and C of A valid normally for one year, unless the PACA has safety reason to limit the validity.

CAR-M.A.711 Privileges of the organization

- (a) A continuing airworthiness management organisation approved in accordance with Section A, Subpart G of this CAR-M may:
 - 1. manage the continuing airworthiness of aircraft, except those used by licensed air carriers, as listed on the approval certificate;
 - 2. manage the continuing airworthiness of aircraft used by licensed air carriers, 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;
- (b) An approved continuing airworthiness management organisation may, additionally, be approved to carry out airworthiness reviews referred to in point CAR-M.A.710.

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

SUBCONTRACTING OF CONTINUING AIRWORTHINESS TASKS

- 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 CAR-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 shall 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 shall 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 shall 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 shall 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 shall demonstrate that adequate coordination controls are in place and that the individuals' responsibilities are clearly defined in the related contracts.
- 7. Contracts shall not authorise the subcontracted organisation to subcontract to other organisations elements of the continuing airworthiness management tasks.
- 8. The Public Authority for Civil Aviation shall exercise oversight of the subcontracted activities through the CAMO approval. The contracts shall be acceptable to the PACA. The CAMO shall only subcontract to organisations which are specified by the Public Authority for Civil Aviation on PACA Form 14 (CAMO PACA Certificate).
- 9. The subcontracted organisation shall agree to notify the CAMO of any changes affecting the contract as soon as practical. The CAMO shall then inform PACA. Failure to do so may invalidate the PACA'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

An organisation may be approved for the privileges of CAR-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 CAR-M.A.711(b) for a particular aircraft type, it is necessary to be approved for the privileges of CAR-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 shall 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.

CAR-M.A.712 Quality system

(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 CAR-M. It should at least include the following functions:
 - 1. monitoring that all activities carried out under Section A, Subpart G of this CAR-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 the CAR-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, the quality system may be replaced by regular organisational reviews subject to the approval of the authority, except when the organisation issues airworthiness review certificates for aircraft above 2,730 kg MTOM other than balloons. In the case where there is no quality system, the organisation should not contract continuing airworthiness management tasks to other parties.

AMC M.A.712(a) Quality system

- 1. Procedures shall 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, shall be verified and validated before use where practicable.
- 3. The feedback part of the system shall 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 shall lead to the accountable manager specified in M.A.706.
- 4. The independent quality audit reports referenced in AMC M.A.712(b) shall be sent to the relevant department for rectification action giving target rectification dates. Rectification dates shall 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 shall 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

- 1. The primary objectives of the quality system are to enable the CAMO to ensure airworthy aircraft and to remain in compliance with the CAR-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 requirement for an airworthiness review to be satisfied that all aircraft managed by the organisation remain airworthy.
- 5. The independent audit shall ensure that all aspects of CAR-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 shall 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 authority.
- 6. Where the organisation has more than one location approved the quality system shall describe how these are integrated into the system and include a plan to audit each location every year.
- 7. A report shall 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 shall 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 shall establish a quality plan acceptable to the Public Authority for Civil Aviationto show when and how often the activities as required by M.A. Subpart G will be audited.

AMC M.A.712(f) Quality system

A small organisation is considered to be an organisation with up to 5 full-time staff (including all CAR-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 shall also be considered before replacing the quality system by an organisational review.

Appendix XIII to this AMC shall be used to manage the organisational reviews.

The following activities shall 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 PACA:

• 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 shall 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.

CAR-M.A.713 Changes to the approved continuing airworthiness organization

In order to enable the PACA to determine continued compliance with this CAR, 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

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 Public Authority for Civil Aviation during negotiations about any of the specified changes. Without this paragraph the approval would automatically be suspended in all cases.

CAR-M.A.714 Record-keeping

- (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 should 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.
- (c) The continuing airworthiness management organisation shall retain a copy of all records referred to in points (a) and (b) until two years after the aircraft has been permanently withdrawn from service.
- (d) The records shall be stored in a manner that ensures protection from damage, alteration and theft.

- (e) 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.
- (f) 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.
- (g) 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

- 1. The CAMO shall ensure that it always receives a complete CRS from the approved maintenance organisation, CAR-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 shall 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 CAR-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 Public Authority for Civil Aviation 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 shall remain legible throughout the required retention period.
- 4. Paper systems shall use robust material which can withstand normal handling and filing.
- 5. Computer systems shall have at least one backup system which shall be updated within twenty-four (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 shall be as legible as the original record and remain so for the required retention period.

CAR-M.A.715 Continued validity of approval

- (a) An approval shall be issued for a Limited duration not exceeding 1 years. It should remain valid subject to:
 - 1. the organisation remaining in compliance with this CAR, in accordance with the provisions related to the handling of findings as specified under point M.B.705 and;
 - 2. the 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 should be returned to the PACA.

CAR-M.A.716 Findings

- (a) A level 1 finding is any significant non-compliance with CAR-M requirements which lowers the safety standard and hazards seriously the flight safety.
- (b) A level 2 finding is any non-compliance with the CAR-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 should define a corrective action plan and demonstrate corrective action to the satisfaction of the Authority within a period agreed with this authority.

SUBPART H — CERTIFICATE OF RELEASE TO SERVICE — CRS

CAR-M.A.801 Aircraft certificate of release to service

- (a) Except for aircraft released to service by a maintenance organisation approved in accordance with CAR-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 CAR-M; or
 - 2. certifying staff in compliance with the requirements laid down in 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 CAR-M.A.803;
- (c) By derogation from point CAR-M.A.801(b)2 for LA1 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 CAR-M.A.801(b)2;
- (d) By derogation from point CAR-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 CAR-M or CAR-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 CAR-M.A.801(b) or an organisation approved in accordance with Section A, Subpart F of this CAR-M, or with CAR-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 CAR-M.A.201(i), or PACA 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 CAR-M.A.801(b)2 or point CAR-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 CAR-M and the certifying staff issuing such a certificate; or

- (ii) in the case of point CAR-M.A.801(b)2 or M.A.801(c) certificate of release to service, the identity and if applicable license 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 should 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 should not be issued in the case of any known non-compliance which endangers flight safety.

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

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

- 1. '3 years of appropriate maintenance experience' means three (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 CAR-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

- 1. The aircraft certificate of release to service shall contain the following statement:
- (a) 'Certifies that the work specified except as otherwise specified was carried out in accordance with CAR-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 shall contain the following statement:

'Certifies that the limited pilot-owner maintenance specified except as otherwise specified was carried out in accordance with CAR-M and in respect to that work the aircraft is considered ready for release to service'.

- 2. The certificate of release to service shall 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 shall 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 shall be retained in the work-pack record.
- 5. The person issuing the certificate of release to service shall use his normal signature except in the case where a computer release to service system is used. In this latter case the Public Authority for Civil Aviation 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 shall ensure they have a clear, concise, legible record of the work performed.
- 7. In the case of an CAR-M.A.801(b)2 release to service, certifying staff shall 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

- Being unable to establish full compliance with sub-paragraph CAR-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 shall 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 shall be kept stating what action the mechanic, supervisor and certifying staff shall 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

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.

CAR-M.A.802 Component certificate of release to service

- (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 PACA Form 1 constitutes the component certificate of release to service, except when such maintenance on aircraft components has been performed in accordance with CAR-M.A.502(b), CAR-M.A.502(d) or CAR-M.A.502(e) in which case the maintenance is subject to aircraft release procedures in accordance with point CAR-M.A.801.

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

When an approved organisation maintains an aircraft component for use by the organisation a PACA Form 1 may not be necessary depending upon the organisation's internal release procedures, however all the information normally required for the PACA Form 1 shall be adequately detailed in the certificate of release to service.

CAR-M.A.803 Pilot-owner authorization

- (a) To qualify as a Pilot-owner, the person must:
 - 1. hold a valid pilot licence (or equivalent) issued or validated by the Authorrity 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 <u>Appendix VIII</u>.
- (c) The scope of the limited Pilot-owner maintenance shall be specified in the aircraft maintenance programme referred to in point CAR-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 authorization

- 1. Privately operated means the aircraft is operated pursuant to CAR-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 shall 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 CAR-M. An alternative would be the maintenance programme to contain a procedure to ensure how such a list of competent Pilot-owners shall 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 shall in any case be issued in accordance with the particular Member State's system. In such a case, the equivalent certificate or qualification number shall be used instead of the pilot's licence number for the purpose of the CAR-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 CAR-M.A.803(a)1 for the purpose of the Pilot-owner authorisation.

SUBPART I — AIRWORTHINESS REVIEW CERTIFICATE

(Reserved)

SECTION B — PROCEDURE FOR PACA

SUBPART A — GENERAL

CAR-M.B.101 Scope

This Section establishes the administrative requirements to be followed by the PACA who should be in charged of the application and the enforcement of Section A of this CAR.

CAR-M.B.102 Public Authority for Civil Aviation

(a) General

The PACA shall be responsible for the issuance, continuation, change, suspension or revocation of certificates and for the oversight of continuing airworthiness. The PACA 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 CAR-M shall be appropriately qualified and have appropriate knowledge, experience, initial training and continuation training to perform their allocated tasks.

(d) Procedures

The PACA shall establish procedures detailing how compliance with this CAR-M is accomplished.

The procedures shall be reviewed and amended to ensure continued compliance.

AMC M.B.102(a) Public Authority for Civil Aviation— General

- In deciding upon the required airworthiness organisational structure, the Public Authority for Civil Aviation shall review the number of certificates to be issued, the number and size of potential operators, the number of CAR-M.A. Subpart F approved maintenance organisations and CAMOs within Sultanane of Oman, as well as the level of civil aviation activity, number and complexity of aircraft and the size of Sultanate of Oman's aviation industry.
- 2. The Public Authority for Civil Aviation shall retain effective control of important inspection functions and not delegate them in such a way that aircraft owners, operators, CAR-M.A. Subpart F approved maintenance organisations and CAMOs, in effect, regulate themselves in airworthiness matters.
- 3. The set-up of the organisational structure shall ensure that the various tasks and obligations of the Public Authority for Civil Aviation are not relying on individuals. That means that a continuing and undisturbed fulfilment of these tasks and obligations of the Public Authority for Civil Aviation shall also be guaranteed in case of illness, accident or leave of individual employees.

AMC-1 M.B.102(c) Public Authority for Civil Aviation — Qualification and training

- 1. Public Authority for Civil Aviation inspectors shall 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 PACA'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 AMC-1 M.B.102(c). These courses shall be at least at a level equivalent to CAR-66 General Familiarisation.

'Relevant sample' means that these courses shall 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 shall 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 shall 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.

AMC-2 M.B.102(c) Public Authority for Civil Aviation — Qualification and training

AIRCRAFT CONTINUING AIRWORTHINESS MONITORING (ACAM) INSPECTORS

- 1. ACAM in-depth surveys shall be performed by Public Authority for Civil Aviation inspectors qualified in accordance with CAR-M.B.102(c).
- 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 CAR-M.B.102(c).

AMC M.B.102(d) Public Authority for Civil Aviationorganisation – Procedures

The documented procedures shall contain the following information:

- (a) The designation of the PACA.
- (b) The title(s) and name(s) of the manager(s) of the Public Authority for Civil Aviation and their duties and responsibilities.
- (c) Organisation chart(s) showing associated chains of responsibility of the airworthiness staff.
- (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 CAR-M.

CAR-M.B.104 Record-keeping

- (a) The 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 CAR-M approved 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. the PACA 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 PACA.
- (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. CMRs,
 - 3. Section A Subpart G organisation recommendations,
 - 4. reports from the airworthiness reviews carried out directly by the PACA,
 - 5. all relevant correspondence relating to the aircraft,
 - 6. details of any exemption and enforcement action(s),
 - 7. any document approved by the PACA pursuant to CAR-M or CAR-OPS.
- (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 CAR-M.B.104 shall be made available upon request by other competent authorities, when legal.

AMC M.B.104(a) Record-keeping

- 1. The record-keeping system shall ensure that all records are accessible whenever needed within a reasonable time. These records shall be organized in a consistent way throughout the Public Authority for Civil Aviation (chronological, alphabetical order, etc.).
- 2. All records containing sensitive data regarding applicants or organisations shall 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 shall 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 shall be taken that all necessary data continues to be accessible at least through the full period specified in CAR-M.B.104(c) and/or (e).

AMC M.B.104(f) Record-keeping

The cases, when records shall be made available shall be limited to:

- incidents or accidents,
- findings through the aircraft continuing monitoring program where organisations approved by another ICAO member state are involved, to determine the root cause,
- aircraft mainly operated in another Member State,
- an aircraft previously operated in another ICAO Member State,
- an organisation having approvals in several ICAO Member States.

CAR-M.B.105 Mutual exchange of information

(a) In order to contribute to the improvement of air safety, PACA may participate in a mutual exchange of all necessary information with other competent authorities or international bodies.
(b) Without prejudice to the competencies of the ICAO Member States , in the case of a potential safety threat involving other ICAO member states, PACA should assist in carrying out the necessary oversight action.

SUBPART B — ACCOUNTABILITY

CAR-M.B.201 Responsibilities

PACA should be responsible for conducting inspections and investigations in order to verify that the requirements of this CAR are complied with.

SUBPART C — CONTINUING AIRWORTHINESS

CAR-M.B.301 Maintenance programme

- (a) Except for those cases where the owner has issued a declaration for the maintenance programme in accordance with CAR-M.A.302(h), PACA shall verify that the maintenance programme is in compliance with CAR-M.A.302.
- (b) Except where stated otherwise in paras CAR-M.A.302(c) and CAR-M.A.302(h) the maintenance programme and its amendments shall be approved directly by the PACA.
- (c) In the case of indirect approval, the maintenance programme procedure shall be approved by the Authority through the continuing airworthiness management exposition.
- (d) In order to approve a maintenance programme according to paragraph (b), PACA shall have access to all the data required in CAR-M.A.302(d), (e) and (f).

AMC M.B.301(a) Maintenance programme

To verify compliance with CAR-M.A.302, PACA auditing surveyor/inspector shall have received training on maintenance programme development and control.

AMC M.B.301(b) Maintenance programme

- 1. When assessing aircraft maintenance programmes for approval, the Public Authority for Civil Aviation shall 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 Public Authority for Civil Aviation shall 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 Public Authority for Civil Aviation 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 takeoff 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 Public Authority for Civil Aviation proposed maintenance schedule, all the out of phase manufacturer recommendations shall be incorporated into the final maintenance programme in order for it to be approved.
- 4. A copy of the approved programme shall be retained by the PACA, unless the programme is approved by a CAMO.
- 5. The documentation issued by the Public Authority for Civil Aviation 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 CAR-M.
- 6. In the case of aircraft used by air carriers licensed in accordance with CAR-OPS 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 shall have been satisfactorily repeated at the existing frequency several times before being proposed for escalation. Appendix I to AMC M.A.302 and CAR-M.B.301(b) gives further information.

- 7. The Public Authority for Civil Aviation 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 Public Authority for Civil Aviation 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

- Approval of an aircraft maintenance programme through a procedure established by a CAMO shall require the organisation to demonstrate to the Public Authority for Civil Aviation 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 shall 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 Public Authority for Civil Aviation requests it, the organisation shall make provision for the attendance of a representative of the Public Authority for Civil Aviation at meetings held to consider maintenance implications arising from reviews of the above provisions.

AMC M.B.301(d) Maintenance programme

Programmes and all associated airworthiness data, including that data used for substantiating the escalation of programmes shall be made available to the Public Authority for Civil Aviation upon request.

CAR-M.B.302 Exemptions

All exemptions granted shall be recorded and retained by the PACA.

CAR-M.B.303 Aircraft continuing airworthiness monitoring

- (a) PACA shall develop a survey programme 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 should 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 CAR-M.A.201. PACA will have a process in place to analyse findings for their safety significance.
- (e) PACA shall record all findings and closure actions.
- (f) If during aircraft surveys evidence is found showing non-compliance with this CAR or with any other CAR, the finding shall be dealt with as prescribed by the relevant CAR.
- (g) If so required to ensure appropriate enforcement action, PACA shall exchange information on noncompliances identified in accordance with point (f) with other competent authorities.

AMC-1 M.B.303(a) Aircraft continuing airworthiness monitoring (ACAM)

ACAM SURVEY PROGRAMME — SCOPE

- 1. The Public Authority for Civil Aviation shall establish a programme covering in-depth surveys and ramp surveys.
- PACA's survey programme shall 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 shall prioritise the operator/fleet/aircraft/key risk elements which are causing the greatest concern.
- 4. The survey programme shall also include a certain percentage of unannounced ramp surveys.
- 5. The survey programme and changes thereto shall be documented.

AMC-2 M.B.303(a) Aircraft continuing airworthiness monitoring (ACAM)

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 Public Authority for Civil Aviation may take credit of aircraft airworthiness inspections qualifying for the ACAM programme when these inspections are performed in accordance with the provisions of CAR-OPS and its implementing rules.

GM to M.B.303(a) Aircraft continuing airworthiness monitoring (ACAM)

COMBINED SURVEYS

In the interest of efficient use of Public Authority for Civil Aviation resources, aircraft inspection procedures may be established covering the combined scope of various aircraft survey tasks performed by PACA, 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 CAR-M.B.704(c);
- product audit in accordance with CAR-145 or CAR-M Subpart F;
- review under supervision for airworthiness review staff authorisation, provided it covers the full scope of the physical survey; and
- ramp inspections performed.

Depending on which type of survey is required, any actual survey performed may cover a subset of the combined scope.

AMC-1 M.B.303(b) Aircraft continuing airworthiness monitoring

SCOPE OF SURVEYS

1. The Public Authority for Civil Aviation shall undertake sample product surveys of aircraft on its register to verify that:

- (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 indepth).
- 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) shall 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 GM-1 M.B.303(b).

AMC-2 M.B.303(b) Aircraft continuing airworthiness monitoring

IN-DEPTH SURVEY

- 1. An ACAM in-depth survey is a sample inspection of the key risk elements (KREs) and shall be performed during scheduled/extensive maintenance. Appendix III to GM-1 M.B.303(b) provides guidance on KREs that can be used for planning and/or analysis of the inspections.
- 2. The survey shall be a 'deep cut' through the elements or systems selected.
- 3. The record of an ACAM inspection shall identify which KREs were inspected.

AMC-3 M.B.303(b) Aircraft continuing airworthiness monitoring

KEY RISK ELEMENTS

- 1. The following KREs shall 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
 - (I) Repairs
 - (m) Records
- 2. These KREs and their detailed components shall 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 GM-1 M.B.303(b).

GM to M.B.303(b) Aircraft continuing airworthiness monitoring

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 GM-1 M.B.303(b).

AMC M.B.303(d) Aircraft continuing airworthiness monitoring (ACAM)

FINDINGS ANALYSIS

1. The process shall 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 shall 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.

CAR-M.B.304 Revocation and suspension

The Authority shall:

- (a) suspend an airworthiness certificate on reasonable grounds in the case of potential safety threat, or;
- (b) suspend or revoke an airworthiness certificate pursuant to CAR-M.B.903(1).

SUBPART D — MAINTENANCE STANDARDS

(to be developed as appropriate)

SUBPART E — COMPONENTS

(to be developed as appropriate)

SUBPART F — MAINTENANCE ORGANISATION

CAR-M.B.601 Application

Where maintenance facilities are located outside the Sultanate of Oman the investigation and continued oversight of the approval shall be carried out where the other maintenance facilities are located.

CAR-M.B.602 Initial Approval

- (a) Provided the requirements of M.A.606(a) and (b) are complied with, PACA shall formally indicate its acceptance of the M.A.606(a) and (b) personnel to the applicant in writing.
- b) PACA shall establish that the procedures specified in the maintenance organisation manual comply with M.A Subpart F and ensure the accountable manager signs the commitment statement.
- (c) PACA shall verify that the organisation is in compliance with the Subpart F of Section A of CAR-M requirements.
- (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) PACA 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 PACA before the approval can be issued.

AMC M.B.602(a) Initial approval

- 'Formally indicate in writing' means that an PACA Form 4 (Appendix X to AMC M.B.602(a) and AMC M.B.702(a)) shall be used for this activity. With the exception of the accountable manager, a PACA Form 4 shall be completed for each person nominated to hold a position required by CAR-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

The Public Authority for Civil Aviations shall indicate approval of the maintenance organisation manual in writing.

AMC M.B.602(c) Initial approval

- 1. The Public Authority for Civil Aviation shall 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 shall at least cover the activities identified as weak for the first type.
- 3. The Public Authority for Civil Aviation auditing surveyor shall 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 shall 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

- 1. Findings shall 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 Public Authority for Civil Aviation shall review the provisional finding levels, adjusting them if necessary and change the categorisation from 'provisional' to 'confirmed'.
- 2. All findings shall be confirmed in writing to the applicant organisation within two (2) weeks of the audit visit.
- 3. There may be occasions when the Public Authority for Civil Aviation finds situations in the applicant's organisation on which it is unsure about compliance. In this case, the organisation shall be informed about possible non-compliance at the time and the fact that the situation will be reviewed within the Public Authority for Civil Aviation 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

- 1. The audit report shall be made on an PACA Form 6F (see appendix VI).
- 2. A quality review of the PACA Form 6F audit report shall be carried out by a competent independent person nominated by the PACA. The review shall 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 shall be indicated by a signature on the PACA Form 6F.

AMC M.B.602(g) Initial approval

The audit reports shall include the date each finding was cleared together with reference to the Public Authority for Civil Aviation report or letter that confirmed the clearance.

CAR-M.B.603 Issue of approval

- (a) PACA shall issue to the applicant an PACA Form 3 approval certificate (Appendix V) which includes the extent of approval, when the maintenance organisation is in compliance with the applicable paragraphs of this CAR.
- (b) PACA shall indicate the conditions attached to the approval on the PACA Form 3 approval certificate.
- (c) The reference number shall be included on the PACA Form 3 approval certificate in a manner specified by the PACA.

AMC M.B.603(c) Issue of approval

The numeric sequence of the approval reference shall be unique to the particular approved maintenance organisation.

CAR-M.B.604 Continuing oversight

- (a) PACA shall keep and update a program listing for each M. A Subpart F approved maintenance organisations 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) PACA 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

- 1. Where the Public Authority for Civil Aviation has decided that a series of audit visits are necessary to arrive at a complete audit of an approved maintenance organisation, the program shall 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 shall be completed by the auditing surveyor including all recorded findings, closure actions and recommendation. An PACA Form 6F shall be used for this activity.
- 4. Credit may be claimed by the Public Authority for Civil Aviation surveyor(s) for specific item audits completed during the preceding 23-month period subject to four conditions:
 - (a) the specific item audit shall be the same as that required by CAR-M.A. Subpart F latest amendment, and

- (b) there shall be satisfactory evidence on record that such specific item audits were carried out and that all corrective actions have been taken, and
- (c) the Public Authority for Civil Aviation surveyor(s) shall 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 shall be audited not later than 24 months after the last audit of the item.
- 5. When performing the oversight of organisations that hold both CAR-M.A. Subpart F and M.A. Subpart G approvals, the Public Authority for Civil Aviation shall arrange the audits to cover both approvals avoiding duplicated visit of a particular area.

CAR-M.B.605 Findings

- (a) When during audits or by other means evidence is found showing non-compliance to the CAR-M requirement, PACA should take the following actions:
 - 1. For level 1 findings, immediate action shall be taken by the PACA 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 PACA 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 PACA can extend the three month period subject to a satisfactory corrective action plan.
- (b) Action shall be taken by the PACA to suspend in whole or part the approval in case of failure to comply within the timescale granted by the PACA.

AMC M.B.605(a)(1) Findings

For a level 1 finding it may be necessary for the Public Authority for Civil Aviation to ensure that further maintenance and re-certification of all affected products is accomplished, dependent upon the nature of the finding.

CAR-M.B.606 Changes

- (a) PACA shall comply with the applicable elements of the initial approval for any change to the organisation notified in accordance with point CAR-M.A.617.
- (b) PACA may prescribe the conditions under which the approved maintenance organisation may operate during such changes, unless it determines that the approval shall 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), PACA shall verify that the procedures specified in the manual are in compliance with CAR-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 CAR-M.A.604(c), PACA 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 CAR-M.

AMC M.B.606 Changes

1. Changes in nominated persons.

The Public Authority for Civil Aviation shall have adequate control over any changes to personnel specified in CAR-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 Public Authority for Civil Aviation and when it was approved.
- 3. The Public Authority for Civil Aviation shall define the minor amendments to the manual which may be incorporated through indirect approval. In this case a procedure shall be stated in the amendment section of the maintenance organisation manual.

Changes notified in accordance with CAR-M.A.617 are not considered minor.

For all cases other than minor, the applicable part(s) of the PACA Form 6F shall be used for the change.

4. The approved maintenance organisation shall submit each manual amendment to the Public Authority for Civil Aviation whether it be an amendment for Public Authority for Civil Aviation approval or an indirectly approved amendment. Where the amendment requires Public Authority for Civil Aviation approval, the Public Authority for Civil Aviation when satisfied, shall indicate its approval in writing. Where the amendment has been submitted under the indirect approval procedure the Public Authority for Civil Aviation shall acknowledge receipt in writing.

CAR-M.B.607 Revocation, suspension and limitation of an approval

PACA 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

CAR-M.B.701 Application

- (a) For licensed air carriers PACA 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 CAR-145 approved maintenance organisation.
- (b) Where facilities are located outside the Sultanate of Oman the investigation and continued oversight of the approval shall be carried out where the other facilities are located.

AMC M.B.701(a) Application

- The documents listed in CAR-M.B.701(a) points (1), (2) and (3) may require approval. Draft documents shall be submitted at the earliest opportunity so that assessment of the application can begin. Grant or change cannot be effected until the Public Authority for Civil Aviation has received the completed documents. This information is required to enable the Public Authority for Civil Aviation 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 Public Authority for Civil Aviation 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 CAR-145 organisations to demonstrate that arrangements are in place for all base and scheduled line maintenance for an appropriate period of time.

CAR-M.B.702 Initial approval

- (a) Provided the requirements of CAR-M.A.706(a), (c), (d) and CAR-M.A.707 are complied with, PACA shall formally indicate its acceptance of the CAR-M.A.706(a), (c), (d) and CAR-M.A.707 personnel to the applicant in writing.
- (b) PACA shall establish that the procedures specified in the continuing airworthiness management exposition comply with Section A, Subpart G of this CAR-M and ensure the accountable manager signs the commitment statement.
- (c) PACA shall verify the organisation's compliance with CAR-M.A. Subpart G requirements.
- (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) PACA 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 PACA before the approval can be issued.

AMC M.B.702(a) Initial approval

- 'Formally indicate in writing' means that an PACA Form 4 (Appendix X to AMC M.B.602(a) and AMC M.B.702(a)) shall be used for this activity. With the exception of the accountable manager, a PACA Form 4 shall be completed for each person nominated to hold a position required by CAR-M.A.706(c), (d) and CAR-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

- 1. The Public Authority for Civil Aviation shall indicate approval of the continuing airworthiness management exposition in writing.
- Contracts for sub-contracting continuing airworthiness management tasks by CAMOs shall be included in the continuing airworthiness organisation exposition. The competent authorities shall verify that the standards set forth in AMC M.A.711(a)(3) have been met when approving the exposition.
- 3. The Public Authority for Civil Aviation 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

- 1. The Public Authority for Civil Aviation shall 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 shall 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 shall be taken into account, e.g. approval to carry out airworthiness reviews.

- 4. The Public Authority for Civil Aviation auditing surveyor shall 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 shall 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

- Findings shall 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 Public Authority for Civil Aviation shall review the provisional finding levels, adjusting them if necessary and change the categorisation from 'provisional' to 'confirmed'.
- 2. All findings shall be confirmed in writing to the applicant organisation within 2 weeks of the audit visit.
- 3. There may be occasions when the Public Authority for Civil Aviation finds situations in the applicant's organisation on which it is unsure about compliance. In this case, the organisation shall be informed about possible non-compliance at the time and the fact that the situation will be reviewed within the Public Authority for Civil Aviation 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

- 1. The audit report form shall be the PACA Form 13 (Appendix VII).
- A quality review of the PACA Form 13 audit report shall be carried out by a competent independent person nominated by the paca. The review shall take into account the relevant paragraphs of CAR-M.A. Subpart G, the categorisation of finding levels and the closure action taken. Satisfactory review of the audit form shall be indicated by a signature on the PACA Form 13.

AMC M.B.702(g) Initial approval

The audit reports shall include the date each finding was cleared together with reference to the Public Authority for Civil Aviation report or letter that confirmed the clearance.

CAR-M.B.703 Issue of approval

- (a) The Authority shall issue to the applicant a PACA Form 14 approval certificate (Appendix VI) which includes the extent of approval, when the continuing airworthiness management organisation is in compliance with CAR-M.A. Subpart G.
- (b) The Authority shall indicate the validity of the approval on the PACA Form 14 approval certificate.
- (c) The reference number shall be included on the Form 14 approval certificate in a manner specified by the PACA.

(d) In the case of licensed air carriers, the information contained on a PACA Form 14 will be included on the air operator's certificate.

AMC M.B.703 Issue of approval

The table shown for the Approval Schedule in PACA Form 14 includes a field designated as 'Aircraft type/series/group'.

The intention is to give maximum flexibility to the Public Authority for Civil Aviation 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 CAR-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' 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 PACA 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 Public Authority for Civil Aviation to endorse in PACA 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 Public Authority for Civil Aviation shall be satisfied that the organisation has the capability to manage the types/groups/series endorsed in the PACA 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 PACA Form 14, may be considered as not affecting the approval and not subject to CAR-M.A.713. As a consequence, for these changes the Public Authority for Civil Aviation may allow the use by the CAMO of the indirect approval procedure defined in CAR-M.A.704(c).

In the example mentioned above, before endorsing the Group 3 in PACA Form 14 for the first time, the Public Authority for Civil Aviation shall make sure that the organisation is capable of managing this category of aircraft as a whole. In particular, the Public Authority for Civil Aviation shall ensure that Baseline/Generic Maintenance Programmes (see CAR-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 Public Authority for Civil Aviations shall 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 LA1 aircraft:

In order to promote standardisation, for this category of aircraft the following approach is recommended:

- Possible ratings to be endorsed in PACA Form 14:
 - LA1 sailplanes;
 - LA1 powered sailplanes and LA1 aeroplanes;
 - LA1 balloons;
 - LA1 airships.
- Before endorsing any of those ratings (for example, LA1 sailplanes) in PACA Form 14, the Public Authority for Civil Aviation shall audit that the organisation is capable of managing at least one aircraft type (for example, one type of sailplanes within the LA1 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 PACA Form 14 (for example, LA1 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(c) Issue of approval

The numeric sequence shall be unique to the particular CAMO.

CAR-M.B.704 Continuing oversight

- (a) PACA shall keep and update a program listing for each CAR-M.A. Subpart G approved continuing airworthiness organisations 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 CAR-M.B. Subpart G approved organisation shall be surveyed in every twenty-four (24) month period. The size of the sample will be decided by the PACA based on the result of prior audits and earlier product surveys.
- (d) All findings shall be confirmed in writing to the applicant organisation.
- (e) PACA 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 twenty-four (24) months to ensure he/she remains informed of significant issues arising during audits.

AMC M.B.704(b) Continuing oversight

1. Where the Public Authority for Civil Aviation 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 shall 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 CAR-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 shall be completed by the auditing surveyor including all recorded findings, closure actions and recommendation. A PACA Form 13 shall be used for this activity.
- 4. Credit may be claimed by the Public Authority for Civil Aviation surveyor(s) for specific item audits completed during the preceding twenty-three (23) month period subject to four conditions:
 - (a) the specific item audit shall be the same as that required by CAR-M.A. Subpart G latest amendment, and
 - (b) there shall be satisfactory evidence on record that such specific item audits were carried out and that all corrective actions have been taken, and
 - (c) the Public Authority for Civil Aviation surveyor(s) shall 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 shall be audited not later than twentyfour (24) months after the last audit of the item.
- 5. When a CAMO sub-contracts continuing airworthiness management tasks all sub-contracted organisations shall also be audited by the Public Authority for Civil Aviation 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 Public Authority for Civil Aviation auditing surveyor shall always ensure that he/she is accompanied throughout the audit by a senior technical member of the CAMO. All findings shall be sent to and corrected by the CAMO.
- 6. When performing the oversight of organisations that hold both CAR-M.A. Subpart F and CAR-M.A. Subpart G approvals, the Public Authority for Civil Aviation shall arrange the audits to cover both approvals avoiding duplicated visit of a particular area.

CAR-M.B.705 Findings

- (a) When during audits or by other means evidence is found showing non-compliance to the CAR-M requirement, PACA shall take the following actions:
 - 1. For level 1 findings, immediate action shall be taken by the PACA 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 PACA 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 PACA can extend the three month period subject to a satisfactory corrective action plan.
- (b) Action shall be taken by the PACA to suspend in whole or part the approval in case of failure to comply within the timescale granted by the PACA.

AMC M.B.705(a)(1) Findings

For a level 1 finding the Public Authority for Civil Aviation shall inform the owner/operator 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).

CAR-M.B.706 Changes

- (a) PACA shall comply with the applicable elements of the initial approval for any change to the organisation notified in accordance with point CAR-M.A.713.
- (b) PACA may prescribe the conditions under which the approved continuing airworthiness management organisation may operate during such changes unless it determines that the approval shall 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 CAR-M.A.704(b), PACA shall verify that the procedures specified in the exposition are in compliance with CAR-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 CAR-M.A.704(c), PACA 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 CAR-M.

AMC M.B.706 Changes

- 1. Changes in nominated persons. The Public Authority for Civil Aviation shall have adequate control over any changes to the personnel specified in CAR-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 Public Authority for Civil Aviation and when it was approved.
- 3. The Public Authority for Civil Aviation shall define the minor amendments to the exposition which may be incorporated through indirect approval. In this case a procedure shall be stated in the amendment section of the approved continuing airworthiness management exposition.
- 4. Changes notified in accordance with CAR-M.A.713 are not considered minor. For all cases other than minor, the applicable part(s) of the PACA Form 13 shall be used for the change.
- 5. The CAMO shall submit each exposition amendment to the Public Authority for Civil Aviation whether it be an amendment for Public Authority for Civil Aviation approval or an indirectly approved amendment. Where the amendment requires Public Authority for Civil Aviation approval, the Public Authority for Civil Aviation when satisfied, shall indicate its approval in writing. Where the amendment has been submitted under the indirect approval procedure the Public Authority for Civil Aviation shall acknowledge receipt in writing.

CAR-M.B.707 Revocation, suspension and limitation of an approval

The 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 M.B.705.

SUBPART H — CERTIFICATE OF RELEASE TO SERVICE — CRS

(to be developed as appropriate)

SUBPART I — AIRWORTHINESS REVIEW CERTIFICATE

(to be developed as appropriate)

APPENDICES TO CAR – M

Appendix I — Continuing airworthiness management contract

- 1. When an owner/operator contracts in accordance with CAR-M.A.201 a continuing airworthiness organisation approved pursuant CAR-M Subpart G (CAMO) to carry out continuing airworthiness management tasks, upon request by the Public Authority for Civil Aviation a copy of the contract shall be sent by the owner/operator to the Public Authority for Civil Aviation once it has been signed by both parties.
- 2. The contract shall be developed taking into account the requirements of CAR-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 Public Authority for Civil Aviation 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;
- organise the approval of any modification to the aircraft in accordance with CAR-21 before it is embodied;
- organise the approval of any repair to the aircraft in accordance with the CAR-21 before it is carried out;
- 5. inform the Public Authority for Civil Aviation whenever the aircraft is not presented to the approved maintenance organisation by the owner as requested by the approved organisation;
- 6. inform the Public Authority for Civil Aviation 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 certificate is issued;
- 8. send a copy of any airworthiness certificate issued or extended to the Public Authority for Civil Aviation;
- 9. carry out all occurrence reporting mandated by applicable regulations;
- 10. inform the Public Authority for Civil Aviation 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 CAR-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 Public Authority for Civil Aviation whenever the present contract is denounced by either party;
- 8. inform the CAMO and Public Authority for Civil Aviation 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;
- enter the certificate of release to service in the logbooks as mentioned in point CAR-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 CAR-M.A.803(c);
- 12. inform the CAMO not later than thirty (30) days after completion of any pilot-owner maintenance task in accordance with point CAR-M.A.305(a).

GM to Appendix I — Continuing airworthiness management contract

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

PACA Form 1

These instructions relate only to the use of the PACA Form 1 for maintenance 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 handwritten 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 shall 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 shall 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 Public Authority for Civil Aviationunder whose jurisdiction this Certificate is issued. When the Public Authority for Civil Aviationis the competent Authority , only 'PACA must be stated.

Block 2 PACA Form 1 header

'AUTHORISED RELEASE CERTIFICATE

PACA 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 PACA 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.

<u>Block 6 Item</u>

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 shall 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 PACA 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 CAR-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 CAR-M and in respect to that work the item is considered ready for release to service. THIS IS NOT A RELEASE UNDER CAR-145"

If printing the data from an electronic PACA Form 1, any appropriate data not fit for other blocks shall 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.

<u>Block 14a</u>

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 CAR-M, 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 CAR-M.
- (c) Where the maintenance was carried out in accordance with a requirement other than that specified in CAR-M. In this case block 12 shall specify the particular national regulation.

For all maintenance carried out by maintenance organisations approved in accordance with CAR-145, 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 CAR-145..
- (c) Where the maintenance was carried out in accordance with a requirement other than that specified CAR-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 Public Authority for Civil Aviation 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.'

PAC	X	AUTHORISED RELEASE CERTIFICATE			3. Fo Numbe	rm Tracking r	
العبنة العامة الطيران المدني PUBLIC AUTHORITY FOR CIVIL AVIATION SULTANATE OF OMAN							
4. Organisation Name and Address:					5. Wo Order/C e	5. Work Order/Contract/Invoic e	
6. Item	7. Descri	ption	8. Part No.	9. Qty	10. Serial No.	11. S	tatus/Work
12. Remarks							

13a. Certifies that the items identifi conformity to :	ed above were manufactured in	14a. □ CAR145.A.50 Release to Service □ Other regulation specified in block 12		
☐ approved design data ar	nd are in a condition for safe	Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, was accomplished in accordance with CAR-45 and in respect to that work the items are considered ready for release to service.		
non-approved design data	specified in block 12			
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)	
USER/INSTALLER RESPONSIBILITIES 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.				

AMC to Appendix II to CAR-M — Use of the PACA Form 1 for maintenance

1. The following formats of an issued PACA 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 PACA Form 1 or equivalent when complying with the following subparagraph 2.
- 2. Electronic signature and electronic exchange of the PACA Form 1
- a) Submission to the Public Authority for Civil Aviation:

Any organisation intending to implement an electronic signature procedure to issue PACA Form 1 and/or to exchange electronically such data contained on the PACA Form 1, shall document it and submit it to the Public Authority for Civil Aviation as part of the documents attached to its exposition.

b) Characteristics of the electronic system generating the PACA Form 1:

The electronic system shall:

- 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 PACA 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 PACA 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 shall be made).
- provide for a 'personal' electronic signature, identifying the signatory. The signature shall 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 shall 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 shall 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.

The electronic system shall 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 PACA Form 1 may contain additional data such as;

- Manufacturer code;
- Customer identification code;
- Workshop report;
- Inspection results;
- -etc.

c) Characteristics of the PACA Form 1 generated from the electronic system.

To facilitate understanding and acceptance of the PACA Form 1 released with an electronic signature, the following statement shall 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 PACA Form 1 shall meet the general format as specified in Appendix II to CAR-M. A watermark-type 'PRINTED FROM ELECTRONIC FILE' shall 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, shall be in a legible format and be identified as a reference from the PACA Form 1.

Additional information not required by the PACA Form 1 completion instructions may be added to the printed copies of PACA Form 1, as long as the additional data do not prevent a person from filling out, issuing, printing, or reading any portion of the PACA Form 1. This additional data shall 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 PACA Form 1

The electronic exchange of the electronic PACA Form 1 shall be accomplished on a voluntary basis. Both parties (issuer and receiver) shall agree on electronic transfer of the PACA Form 1.

For that purpose, the exchange needs to include:

- all data of the PACA Form 1, including referenced data required by the PACA Form 1 completion instructions;
- all data required for authentication of the PACA Form 1.
- In addition, the exchange may include:
- data necessary for the electronic format;
- additional data not required by the PACA Form 1 completion instructions, such as manufacturer code, customer identification code.
- The system used for the exchange of the electronic PACA Form 1 shall provide:
- A high level of digital security; the data shall be protected, not altered or not corrupted;
- Traceability of data back to its source.

Trading partners wishing to exchange PACA Form 1 electronically shall 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 PACA Form 1.

The receiver shall be capable of regenerating the PACA Form 1 from the received data without alteration; if not, the system shall 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 CAR-M — Use of the PACA Form 1 for maintenance

PACA 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 — PACA Form 15

PACA Form 15b (to be developed as appropriate)

Appendix IV — Class and Ratings System to be used for the Approval of Maintenance Organisations referred to CAR-M Subpart F and CAR-145

- 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 CAR -M and CAR-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 PACA. The maintenance organisation exposition scope of work shall reflect such activity where permitted by the PACA.
- 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 CAR-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 shall 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 CAR-M.A.604(c) and CAR-M.B.606(c) or CAR-145.A.70(c) and CAR-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	KG AND BELOW	
	AND BELOW	PISTON ENGINE 5700	
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 shall be noted that such an organisation may be further limited by the Public Authority for Civil Aviation in the scope of approval, dependent upon the capability of the particular organisation.

13. Table

CLASS	RATING	LIMITATION	BASE	LINE	
AIRCRAFT	A1 Aeroplanes above 5700 Kg	[Rating reserved to maintenance Organisations approved in accordance with CAR-145]	[YES/NO]*	[YES/NO]*	
		[shall state aeroplane manufacturer or groupe or series or type and/or the maintenance tasks]			
		Example: Airbus A320 Series			
	A2 Aeroplanes 5700 Kg and below	[shall state aeroplane manufacturer or groupe or series or type and/or the maintenance tasks]	[YES/NO]*	[YES/NO]*	
		Example: DHC Twin Otter Series			
	A3 Helicopters	[shall state helicopter manufacturer or groupe or series or type and/or the maintenance task(s)]	[YES/NO]*	[YES/NO]*	
		Example: Robinson R44			
	A4 Aircraft other than A1,A2 and A3	[shall state aircraft series or type and/or the maintenance task(s)]	[YES/NO]*	[YES/NO]*	
Engines	B1 Turbine	[shall state engine manufacture or group or type and/or the maintenance task(s)]	[YES/NO]*	[YES/NO]*	
		Example : PT6A Series			
	B2 Piston	[shall state aircraft series or type and/or the maintenance task(s)]			
	B3 APU	[shall state aircraft series or type and/or the maintenance task(s)]			
	C1 Air Condition & Press	[shall state aircraft type or aircraft m	nanufacturer or component nent and/or cross refer to a he maintenance task (s).]		
COMPLETE	C2 Auto Flight	capability list in the exposition and/or th			
APU	C3 Comms and Nav	Evenue DTCA Evel Control			
	C4 Doors - Hatches	Example PT6A Fuel Control			
	C5 Electrical Power & Light				
	C6 Equipment				
	C7 Engine – APU				

CAR – M – Continuing Airworthiness Requirements

CLASS	RATING	LIMITATION	BASE	LINE
	C8 Flight Controls			
	C9 Fuel			
	C10 Helicopters - Rotor			
	C11 Helicopter – Trans			
	C12 Hydraulic Power			
	C13 Indicating/Recording Systems			
	C14 Landing Gear			
	C15 Oxygen			
APU	C16 Propeller			
	C17 Pneumatic & Vacuum			
	C18 Protection ice/rain/fire			
	C19 Windows			
	C20 Structural			
	C21 Water Ballast			
	C22 Propulsion Augmentation			
SPECIALISED SERVICES	D 1 NON Destructive Testing	[shall state particular NDT method(s)]		
(*) Delete as appropriate				
Appendix V — Maintenance organisation approval referred to CAR-M Subpart F

MAINTENANCE ORGANISATION APPROVAL					
CERTIFICATE					
Reference N: AWR/MF/XXX-XXX/YY					
Pursuant to the Civil Aviation Law and the Civil Aviation rules & regulation of Sultanate of Oman for the time being in force and subject to the condition specified below, the Directorate General of Civil A for Civil Aviation Regulation of Sultanate of Oman hereby certifies:					
Company Name					
ADDRESS					
COUNTRY					
as a maintenance organization in compliance with Section A. Subpart F of CAP M 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,					
CONDITIONS					
 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 CAR-M, and This approval requires compliance with the procedures specified in the approved maintenance organisation manual, and This approval is valid whilst the approved maintenance organisation remains in compliance with CAR-M Subject to compliance with the foregoing conditions, this approval shall remain valid for one year unless the approval has previously been surrendered, superseded, suspended or revoked. 					
Date of Original issue:					
Date of current issue:					
Director General for Civil Aviation Regulation					
Signature:					

MAINTENANCE ORGANISATION APPROVAL SCHEDULE

ORGANISATION Name: Reference : LIMITATION RATING CLASS BASE LINE AIRCRAFT A1 Aeroplanes above 5700 Kg [YES/NO]* [YES/NO]* A2 Aeroplanes 5700 Kg and below [YES/NO]* [YES/NO]* A3 Helicopters [YES/NO]* [YES/NO]* A4 Aircraft other than A1,A2 and [YES/NO]* [YES/NO]* A3 **B1** Turbine Engines B2 Piston B3 APU COMPONENTS C1 Air Condition & Press Component in accordance with the approved OTHER THAN C2 Auto Flight capability list COMPLETE C3 Comms and Nav ENGINES OR C4 Doors - Hatches APU C5 Electrical Power & Light C6 Equipment C7 Engine – APU **C8** Flight Controls C9 Fuel C10 Helicopters - Rotor C11 Helicopter - Trans C12 Hydraulic Power C13 Indicating/Recording Systems C14 Landing Gear C15 Oxygen C16 Propeller C17 Pneumatic & Vacuum C18 Protection ice/rain/fire C19 Windows C20 Structural C21 Water Ballast C22 Propulsion Augmentation SPECIALISED **D 1 NON Destructive Testing** [shall state particular NDT method(s)] SERVICES 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 organization exposition. Maintenance Organization Exposition Reference: Date of Initial issue: Authorised Signature: Date of This issue: Date of Expiry:

AMC to Appendix V to CAR-M — Maintenance Organisation Approval referred to in CAR-M Subpart F

The following fields on page 2 'Maintenance Organisation Approval Schedule' of the maintenance organisation approval certificate shall 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.

Appendix VI — Continuing airworthiness management organisation approval referred to CAR-M Subpart G

CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATION

APPROVALCERTIFICATE

Reference N: AWR/CAMO/XXX-XXX/YY

AOC Reference No: XXX XXX

Pursuant to the Civil Aviation Law and the Civil Aviation rules & regulation of Sultanate of Oman for the time being in force and subject to the condition specified below, the Directorate General of Civil Aviation Regulation of Sultanate of Oman hereby certifies:

[COMPAGNY NAME]

[ADDRESS]

As a continuing airworthiness management organisation in compliance with CAR-M Subpart G, approved to manage the continuing airworthiness of the aircraft listed in the attached schedule of approval.

CONDITIONS

1. This approval is limited to that specified in the scope of approval section of the approved continuing airworthiness management exposition.

2. This approval requires compliance with the approved continuing airworthiness management exposition procedures.

3. 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.

4. This approval is valid whilst the approved continuing airworthiness management organisation remains in compliance with CAR-M.

5. 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.

6. This approval does not constitute anauthorisation to operate the types of aircraft referred in paragraph 1.

The authorisation to operate the aircraft is the Air Operator Certificate (AOC).

7.Termination, suspension or revocation of the AOC automatically invalidates the present approval inrelation to the aircraft registrations specified in the AOC, unless otherwise explicitly stated by the PACA.

8.Subject to compliance with the previous conditions, this approval shall remain valid till the date of expiry of attached Approval Schedule unless the approval haspreviously been surrendered, superseded, suspended or revoked.

Date of Original issue:DDTHMonthYYYY

Director General for Civil Aviation Regulation

Signature:

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CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATION

APPROVAL SCHEDULE

Reference N: AWR/CAMO/XXX-XXX/YY

AOC Reference No: XXX XXX

Organisation: [COMPAGNY NAME AND ADDRESS]

AIRCRAFT TYPE/SERIES/GROUP	CMR AUTHORISED	PERMITS TO FLY AUTHORISED	ORGANISATION(S) WORKING UNDER THE QUALITY SYSTEM
	[YES/NO]	[YES/NO]	

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 continuing airworthiness management exposition.

Continuing Airworthiness Management Exposition Reference: At latest amendment..

Date of original issue: DDTH Month YYYY

Date of Current issue: DDTH Month YYYY

Date of Expiry: DDTH Month YYYY

Signed:

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AMC to Appendix VI to CAR-M — Continuing Airworthiness Management Organisation Approval referred to in CAR-M Subpart G

The following fields on page 2 'Continuing Airworthiness Management Organisation Approval Schedule' of the continuing airworthiness management organisation approval certificate shall 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

The following constitutes the complex maintenance tasks referred to in points CAR-M.A.801(b)2 and CAR-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;
 - (I) 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

The sentence 'suitably approved or authorised welder' contained in Appendix VII, paragraph 3(c), means that the qualification shall meet an officially recognised standard or, otherwise, shall be accepted by the authority.

Appendix VIII — Limited Pilot-owner maintenance

In addition to the requirements laid down in CAR-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 CAR-M) 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 CAR-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 CAR-M 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 'CAR-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 CAR-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 CAR-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 thirty (30) days after completion of the Pilot-owner maintenance task in accordance with point CAR-M.A.305(a).

AMC to Appendix VIII — Limited Pilot Owner Maintenance

- 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 CAR-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 Pilotowner 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 CAR-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 Monthly periods.

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 shall be released by an appropriate licensed engineer.

Part A – PILOT-OWNER MAINTENANCE TASKS for POWERED AIRCRAFT (AEROPLANES)

ΑΤΑ	Area	Task	Aeroplanes <=2730 Kg
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

ΑΤΑ	Area	Task	Aeroplanes <=2730 Kg
		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 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**
		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**
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

ΑΤΑ	Area	Task	Aeroplanes <=2730 Kg
		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.	
		Ye	
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
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

ΑΤΑ	Area	Task	Aeroplanes <=2730 Kg
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 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
		Removal/installation of emergency flotation gears with quick disconnect connectors.	Yes
		ELT – Removal/Reinstallation.	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**
		Pitot Static System – Simple sense and leak check, excluding IFR operations	Yes**

Part B - PILOT-OWNER MAINTENANCE TASKS for ROTORCRAFT

ΑΤΑ	Area	Task	Aeroplanes <=2730 Kg
		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
		Fit and remove snow landing pads.	Yes
		Replacement of landing skids and skid shoes.	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	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
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

ΑΤΑ	Area	Task	Aeroplanes <=2730 Kg
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	Cowling – Removal and reinstallation not requiring removal of propeller or disconnection of flight controls.	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 and gearbox fluid.	Yes

Part C – PILOT-OWNER MAINTENANCE TASKS for SAILPLANES AND POWERED SAILPLANES

Abbreviations applicable to this Part:

N/A SP	not applicable for this category sailplane
SSPS	self-sustained powered sailplane
SLPS/TM	self-launching powered sailplane/touring motorglider

ΑΤΑ	Area	Task	SP	SSPS	SLPS
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
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

ΑΤΑ	Area	Task	SP	SSPS	SLPS
		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
		Bonding – Replacement of broken bonding cable.	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
24	Electrical power	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
25	Equipment	Safety Belts – Replacement of safety belts 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
		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

ΑΤΑ	Area	Task	SP	SSPS	SLPS
		ELT – Removal/Reinstallation.	Yes	Yes	Yes
26	Fire Protection	Fire Warning – Replacement of sensors and indicators	N/A	Yes	Yes
27	Flight Controls	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 it is a design feature with quick disconnect connectors, excluding IFR operations	Yes	Yes	Yes
		Pitot Static System – Simple sense and leak check, excluding IFR operations	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 excluding IFR operations	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 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
		Wheel fairings (spats) – Removal and reinstallation.	Yes	Yes	Yes
		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

ΑΤΑ	Area	Task	SP	SSPS	SLPS
		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		
		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
51	Structure	Fairings – Simple repairs to non-structural fairings and cover plates which do not change the contour.	Yes	Yes	Yes
52	Doors and Hatches	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

ΑΤΑ	Area	Task	SP	SSPS	SLPS
71	Powerplant installation	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			
A) ENVELOPE						
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				
4- Melting link (temperature flag) - replacement.	Yes	Yes	N/A			
5- Temperature transmitter and temperature indication cables - removal or reinstallation.		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) BURNER	Yes	Yes	N/A			
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			
12- Burner Valves - adjustment of closing valve not requiring special tools or test equipment.		Yes	N/A			
C) BASKET AND GONDOLA						
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			
D) FUEL CYLINDER						
17- Liquid valve - replacement of O-rings in the outlet	Yes	Yes	No			
E) INSTRUMENTS AND EQUIPMENT	T	ſ	1			
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			
F) ENGINES						

Area and Task	Hot Air Airship	Hot Air Balloon	Gas Balloon		
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 NiCd 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 GMs TO CAR-M

Appendix I to AMC M.A.302 and AMC M.B.301(b) — Content of the maintenance programme

1. General requirements

1.1. The maintenance programme shall 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 shall be stated and include a tolerance of not more than 25%. Where utilisation cannot be anticipated, calendar time limits shall 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 shall be inspected. This shall include the type and degree of inspection required.
- 1.1.11. The periods at which components shall 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 shall be made.
- 1.1.17. A cross-reference to other documents approved by the PACA 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 shall 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 shall refer to them.
- 1.1.20. Each maintenance task quoted shall be defined in a definition section of the programme.

2. Programme basis

2.1. An owner or a CAMO aircraft maintenance programme shall 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 shall not be assumed that a programme approved for one owner or the CAMO would automatically be approved for another.

Evaluation shall 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 Public Authority for Civil Aviationis not satisfied that the proposed maintenance programme can be used as is, the Public Authority for Civil Aviation shall 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 shall be developed. CDCCL's are characterised by features in an aircraft installation or component that shall 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 shall 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 Public Authority for Civil Aviationor 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 shall 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 shall 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 shall 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 CAR-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' shall be used carefully.
- 6.2.5. A CAMO of a small fleet of aircraft, when establishing a reliability programme, shall consider the following:
 - (a) The programme shall 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 shall be exercised before taking decisions:
 - A '0' rate in the statistical calculation may possibly simply reveal that enough statistical data is missing, rather that 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 Public Authority for Civil Aviation shall impose additional restrictions on the MRB/MPD tasks intervals (e.g. no variations or only minor evolution are possible, and with the Public Authority for Civil Aviation 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 Public Authority for Civil Aviation is expected to ensure that the organisation which runs the programme (it may be CAMO, or an CAR-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 Public Authority for Civil Aviation to reject the approval of the reliability programme and therefore the aircraft maintenance programme.
- 6.4. Contracted maintenance
- 6.4.1. Whereas CAR-M.A.302 specifies that, the aircraft maintenance programme which includes the associated reliability programme -, shall 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 Public Authority for Civil Aviation 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 shall be justified and documented.
- 6.4.4. The arrangement between the CAMO and the maintenance organisation shall 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 shall be taken of this paragraph. All associated procedures shall be clearly defined.

- 6.5.1. Objectives
- 6.5.1.1. A statement shall be included summarising as precisely as possible the prime objectives of the programme. To the minimum it shall 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 shall 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 shall be consulted in every case.
- 6.5.1.3. In case of a MSG-3 based maintenance programme, the reliability programme shall 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 shall 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) shall be cross referenced in the programme.

6.5.3. Terms and definitions.

The significant terms and definitions applicable to the Programme shall be clearly identified. Terms are already defined in MSG-3, CAR-145 and CAR-M.

6.5.4. Information sources and collection.

- 6.5.4.1. Sources of information shall be listed and procedures for the transmission of information from the sources, together with the procedure for collecting and receiving it, shall be set out in detail in the CAME or MOE as appropriate.
- 6.5.4.2. The type of information to be collected shall be related to the objectives of the Programme and shall 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 shall be taken of continuing airworthiness and safety information promulgated under CAR-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 shall be stated. The format shall 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 shall 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 shall be oriented accordingly.

6.5.6. Examination, analysis and interpretation of the information.

The method employed for examining, analysing and interpreting the programme information shall 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 shall be fully described in the programme documentation.

6.5.6.2. Analysis and Interpretation.

The procedures for analysis and interpretation of information shall be such as to enable the performance of the items controlled by the programme to be measured; they shall also facilitate recognition, diagnosis and recording of significant problems. The whole process shall 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 shall be related to the particular programme and to the facilities available. The following, at least, shall 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 shall be established and details shall 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 shall 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 shall be described, and the associated documentation shall 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 shall 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), shall be defined. Participation of the Public Authority for Civil Aviation shall be stated. This information shall be contained in the CAME as appropriate.

6.5.9. Presentation of information to the PACA.

The following information shall be submitted to the Public Authority for Civil Aviation 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 shall contain sufficient detailed information to enable the Public Authority for Civil Aviation to make its own evaluation where necessary.

6.5.10. Evaluation and review.

Each programme shall 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 shall be detailed (progressive, monthly, quarterly, or annual reviews, procedures following reliability 'standards' or 'alert levels' being exceeded, etc.).

- 6.5.10.1. Each Programme shall contain procedures for monitoring and, as necessary, revising the reliability 'standards' or 'alert levels'. The organisational responsibilities for monitoring and revising the 'standards' shall 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 Public Authority for Civil Aviation 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 shall 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 shall be taken by the Public Authority for Civil Aviationon a case by case basis.
- 6.6.3. In case of a short term lease agreement (less than 6 month) more flexibility against the para6.6.1 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 Public Authority for Civil Aviation shall 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 Public Authority for Civil Aviationis 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

1. Subcontracted continuing airworthiness management tasks

- 1.1. To actively control the standards of the subcontracted organisation, the CAMO shall 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 shall 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 shall 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 shall 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 shall have procedures for the management control of these arrangements. The continuing airworthiness management exposition shall contain relevant procedures to reflect its control of those arrangements made with the sub-contracted organisation.
- 1.5. Subcontracted continuing airworthiness management tasks shall be addressed in a contract between the CAMO and the subcontracted organisation. The contract shall 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 shall 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 shall be compatible with the continuing airworthiness management exposition and the terms of the contract. These shall be accepted by the Public Authority for Civil Aviation as extended procedures of the CAMO and as such shall be cross-referenced from the continuing airworthiness management exposition. One current copy of the subcontracted organisation's relevant procedures shall be kept by the CAMO and shall be accessible to the Public Authority for Civil Aviation 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 shall also specify that the subcontracted organisation's procedures may only be amended with the agreement of the CAMO. The CAMO shall ensure that these amendments are compatible with its continuing airworthiness management exposition and comply with M.A. Subpart G.
- The CAMO shall 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 shall 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 shall 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 shall 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 shall be provided to the Authority for monitoring.
- 1.12. The contract shall address the respective responsibilities to ensure that any findings arising from the Public Authority for Civil Aviation 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 shall 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 Public Authority for Civil Aviation approval; the relevant procedures shall specify these responsibilities. The contract shall also stipulate that any data necessary to substantiate the approval of the initial programme or an amendment to this programme shall be provided for CAMO agreement and/or Public Authority for Civil Aviationupon request.

2.3. Maintenance programme effectiveness and reliability

The CAMO shall 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 shall be specified in the relevant procedures. Reference shall be made to the approved maintenance and reliability programme. Participation of the CAMO's personnel in reliability meetings with the subcontracted organisation shall 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 shall 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 PACA.

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, shall be defined.

The planning control and documentation shall be specified in the appropriate supporting procedures. These procedures shall 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 dayto-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 shall 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 shall 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 shall 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 PACA.

2.7. Access to the Public Authority for Civil Aviation

The contract shall specify that the subcontracted organisation shall always grant access to the PACA.

2.8. Maintenance data

The maintenance data used for the purpose of the contract shall 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 shall 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 shall 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 shall 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 shall 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 shall 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 shall be specified in the contract.

2.11. Service life limit controls and component control/removal forecast

Where the subcontracted organisation performs planning activities, it shall be specified that the organisation shall 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 shall 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 shall 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 shall 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 shall also specify what kind of feedback information (such as engine limitation, appropriate technical advice, etc.) the organisation shall provide to the CAMO.

2.13. Defect control

Where the CAMO has subcontracted the day-to-day control of technical log deferred defects, this shall be specified in the contract and shall 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 shall 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 shall 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 shall be ensured.

The subcontracted organisation shall 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 shall 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 CAR-M and CAR-145 shall be reported as required by the respective requirements. The CAMO shall 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 shall be provided with the current status of AD compliance and service life-limited components in accordance with the agreed procedures. The CAMO shall 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 CAR-M shall be met. Access to the records by duly authorised members of the Public Authority for Civil Aviation shall 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 shall 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 shall specify what information shall 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 shall be used to establish good communication between the CAMO, the subcontracted organisation and the contracted maintenance organisation. The terms of the contract shall 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 shall 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 shall 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 shall 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 shall specify the involvement of the CAMO and of the subcontracted organisation in that programme, including their participation in reliability meetings. Provision to enable Public Authority for Civil Aviation participation in the periodical reliability meetings shall also be made.

Appendix III to GM M.B.303(b) — KEY RISK ELEMENT

	Title	Description	
A. AIRCRAFT	A. AIRCRAFT CONFIGURATION		
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 EASA CS-STAN as a standard change/repair 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 PACA, 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.	
B. AIRCRAFT	OPERATION		
B.1	Aircraft documents	Aircraft certificates and documents necessary for operations.	
В.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.	
В.З	Mass & balance	Mass and balance data is required to make sure the aircraft is capable of operating within the approved envelope.	
В.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.	

	Title	Description
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.
C. AIRCRAFT	MAINTENANCE	
C.1	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.
C.2	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.
C.3	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 EASA CS-STAN as a standard change/repair, all repairs not defined in the appropriate maintenance manual need to be appropriately approved and recorded with the reference to the approval.
C.4	Records	Continuing Airworthiness records are defined in M.A.305 and M.A.306 and related AMC.
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 EASA CS-STAN as a standard change/repair any changes to type design shall be approved and, for those embodied, shall be recorded with the reference to the approval.
Supporting information		Typical inspection items
The type design consists of: 1. the drawings and specifications, and a listing of those drawings and specifications, necessary to define the		1. 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.).

	Title	Description
configuration of the prod components, with the ap	n and the design features uct (i.e. the aircraft, its etc.) shown to comply plicable type-certification	2. Check that changes have been approved properly (approved data is used, and a direct relation to the approved data).
basis and e requirement	environmental protection s;	3. Check for unintentional deviations from the approved type design, sometimes referred to as concessions,
2. informat processes manufacture	ion on materials and and on methods of and assembly of the	divergences, or non-conformances, Technical Adaptations, Technical Variations, etc.
product ne conformity o	cessary to ensure the fthe product;	4. Check cabin configuration (LOPA).
3. an a Limitation Instructions Airworthines	pproved Airworthiness Section (ALS) of the for Continued s (ICA); and	5. 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.
4. 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.		 a. Aircraft S/N applicable b. Applicable engines c. Applicable APU d. Max. certified weights e. Seating configuration f. Exits
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.		6. Check that the individual aircraft design/configuration is properly established and used as a reference.
Depending on the product State of Design, Bilateral Agreements and/or PACA decisions on acceptance of certification findings exist and should be taken into account.		
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 with this airworthiness limitation is complied with.
Supporting information		Typical inspection items
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		 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. Check that the aircraft and the components thereof comply with the approved AMP.

	Title	Description
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).		 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. Typical Airworthiness Limitation items: Safe Life ALI (SL ALI)/Life-limited parts, Damage Tolerant ALI (DT ALI)/Structure, including ageing aircraft structure, Certification Maintenance Requirements (CMR), Ageing Systems Maintenance (ASM), including Airworthiness Limitations for Electrical Wiring Interconnection System (EWIS), Fuel Tank Ignition Prevention (FTIP)/Flammability Reduction Means (FRM), CDCCL, check wiring if any maintenance carried out in same area - wiring separation, Ageing fleet inspections mandated through ALS or AD are included in the AMP.
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 (CAR-21.007).
Supporting information		Typical inspection items
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 Sultanate of Oman, shall apply unless the PACA has issued a different Decision before the date of entry into force of that airworthiness directive.		 Check if all ADs applicable to the airframe, engine(s), propeller(s) and equipment have been incorporated in the AD-status, including their revisions. Check records for correct AD applicability (including ADs incorrectly listed as nonapplicable). 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). Check that applicable ADs related to maintenance are included into the Aircraft Maintenance Programme. Check that task-cards correctly reflect AD requirements or refer to procedures and standard practises referenced in ADs. Sample during a physical survey some ADs for which
B.1	Aircraft documents	Aircraft certificates and documents necessary for operations.

	Title	Description
Supporting information		Typical inspection items
The aircraft on necessary for but are not r	certificates and documents r operations may include, necessarily limited to:	1. Check that all certificates and documents pertinent to the aircraft and necessary for operations (or copies, as appropriate) are on board.
Certificate of	Registration;	2. Check C of A modification/Aircraft identification.
Certificate of Noise certific	Airworthiness;	3. Check that noise certificate corresponds to aircraft configuration.
Aircraft certi	ficate of release to service;	 Check Permit to fly and Flight Condition when necessary.
Technical log CMR;	book, if required;	5. Check that there is an appropriate aircraft certificate of release to service.
Etc.		
B.2	Flight Manual	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.
Supp	orting information	Typical inspection items
The Flight Manual needs to reflect the current status/configuration of the aircraft. When it does not, it may provide flight crew members with		1. Check the conformity of the Flight Manual (FM), latest issue, with aircraft configuration, including modification status, (AD, SB, STC etc.).
wrong information.		2. Check.
This may lead to errors and/or to override limitations that could contribute to severe failure.		- the impact of modification status on noise and weight & balance;
		- additional required manuals (QRH/FCOM/OM-B etc.);
		- FM limitations.
В.З	Mass & balance	Mass and balance data is required to make sure the aircraft is capable of operating within the approved envelope.
Supporting information		Typical inspection items
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.		 Check that mass and balance report is valid, considering current configuration.
		2. Make sure that modifications and repairs are taken into account in the report.
operating envelope.		3. Check that equipment status is recorded on the mass and balance report.

	Title	Description
		4. Compare current mass and balance report with previous report for consistency.
B.4	Markings & placards	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.
Supporting i	nformation	Typical inspection items
Markings and placards on instruments, equipment, controls, etc. shall include such limitations or information as necessary for the direct attention of the		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.
Markings an	d placards or instructions	2. Check that all installed placards are readable.
shall be	provided to give any	3. Check the Flight Manual versus the instruments.
information	that is essential to the	(General Aviation usually).
the possibili	ty of mistakes in ground	4. Check registration markings, including State of Registry fireproof nameplate.
could pass u	unnoticed and that could	5. Check product data plates.
jeopardise th	ne safety of the aircraft in	Examples of markings & placards:
Markings and placards or instructions		door means of opening,
shall be information of passenger	provided to give any essential in the prevention r injuries.	each compartment's weight/load limitation/placards stating limitation on contents,
National registration markings must be installed. They include registration, possible flag, fireproof registration plate.	passenger information signs, including no smoking signs,	
	emergency exit marking,	
	pressurised cabin warning,	
When mark	rings and placards are	calibration placards,
missing, or u	kings and placards are inreadable, or not properly stakes or aircraft damages	cockpit placards and instrument markings,
installed, mistakes or aircraft damages may occur and could subsequently contribute to a severe failure.		O ² system information data,
	accesses to the fuel tanks with flammability reduction means (CDCCL),	
		fuelling markings (fuel vent, fuel dip stick markings),
		EWIS identification,
		towing limit markings,
		break-in markings,
		inflate tyres with nitrogen,

	Title	Description
		RVSM + static markings.
B.5	Operational requirements	Requirements for the type of operation are complied with (e.g. equipment, documents, approvals).
Supporting i	nformation	Typical inspection items
This includes all equipment required by the applicable operational code including national requirements. In case of malfunction, it can create a hazardous situation. Especially emergency equipment needs attention during this inspection.		 Check permits & approvals required for type of operation. Check for the presence and serviceability of equipment required by operational approvals. Check safety equipment, check that emergency equipment is readily accessible.
Reference d	ocuments: PACA	M.A.201(a)(2)
		CAR-21 Subpart I
		CAR-OPS.
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 includes, amongst others, the MEL system, the CDL system and deferred defects management
Supporting information		Typical inspection items
This KRE add defect man consider de	lresses the effectiveness of agement, it should also effects found during the	1. Check that the deferred defects have been identified, recorded, and rectified/deferred in accordance with approved procedures and within approved time limits.
physical inspection.		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:
		a. TLB and hold item list,
		b. maintenance task cards,
		c. engine shop report,
		d. (major) component shop report,
		e. maintenance/repair/modification working party files after embodiment of modifications or repairs,
		f. occurrence reporting data,
		g. communications between the user of maintenance data and the maintenance data author in case of

	Title	Description
		inaccurate, incomplete, ambiguous procedures and practices.
		3. Check that the consequences of the deferral have been managed with Operation/Crew.
		4. Check that defects are being deferred in accordance with approved data (current revision of the MEL, CDL, aircraft maintenance programme).
		5. Compare physical location of parts/serial numbers with recorded locations to identify undocumented parts swaps for troubleshooting.
C.1	Aircraft Maintenance Programme	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.
Supporting in	nformation	Typical inspection items
The Aircraft	Maintenance Programme	Review of AMP contents:
(AMP) is intended to include scheduled maintenance tasks, the associated procedures and standard maintenance practises. It also includes the reliability programme, when required.		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.
Tasks included in the maintenance programme can originate from: - tasks for which compliance is mandatory: instructions specified in repetitive Airworthiness Directives (AD),		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 M.A.301 point 7.
or Limi whic	in the Airworthiness tations Section (ALS), the may include Certification	3. Check that the AMP properly reflects the maintenance tasks specified in repetitive ADs.
Mair (CM the	ntenance Requirements Rs). The ALS is included in Instructions for Continuing	4. Check that the AMP properly reflects additional instructions for continuing airworthiness resulting from specific installed equipment or modifications embodied.
Airw appr - task reco	rorthiness (ICA) of a design roval holder; as for which compliance is mmended: additional	5. Check that the AMP properly reflects additional instructions for continuing airworthiness resulting from repairs embodied.
instr Mair Repo	uctions specified in the ntenance Review Board prt (MRBR), the	6. If applicable, check that the AMP properly reflects additional maintenance tasks required by specific approvals (e.g. RVSM, ETOPS, MNPS, B-RNAV).
Mair Docu Bulle	ntenance Planning ument (MPD), Service etins (SB), or any other	7. Check for any additional scheduled maintenance measures required due to the use of the aircraft and the operational environment.

	Title	Description
non-mandatory continuing airworthiness information issued by the design approval holder;		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 AMC M.A.803 point 3.
instr own	uctions proposed by the er or the continuing	9. Check approval status of additional or alternative instructions (M.A.302(d)(iii)).
airw orga	orthiness management nisation once approved in rdance with point	10. Check if a reliability programme is present and active when required.
accordance with point M.A.302(d)(iii); The AMP shall contain details, including frequency, of all maintenance		11. Check if the AMP is approved by the Public Authority for Civil Aviationdirectly, or by the CAMO via indirect approval procedure, or if it is a self-declared maintenance programme.
to be carried tasks linked	to the type and the	Review of aircraft compliance with an AMP:
specificity of	operations.	12. Check if the AMP used is valid for the aircraft, and is reviewed annually.
		13. Check if tasks are performed within the value(s) quoted in AMP and the source documents
		14. Sample check that no task has been omitted without justifications accepted by the Public Authority for Civil Aviation(at the time of decision).
		15. Check the reporting of performed scheduled maintenance into the records system.
		16. Analyse the effectiveness of the AMP and reliability by reviewing the unscheduled tasks.
C.2	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.
Supporting in	nformation	Typical inspection items
Depending on each maintenance task, accomplishment is scheduled or unscheduled. Refer to KRE C.1 'Aircraft Maintenance Programme'.		 Check that the mandatory maintenance tasks are identified as such and managed separately from recommendations. Sample check installed components (PN and SN)
Components affected by scheduled maintenance:		against aircraft records:
Life-limited	components are of two	a. Correct Part Number and Serial Number installed.
types: 2 components subject to a certified life limit; 2 components subject to a service life limit.		b. Correct authorised release document available.

	Title	Description
Components must be perservice wher limitation component aircraft level a service components components restoration of their level components restoration of their level components periodic mad deterioration predictable invariably def is less likely to is necessary, failure resist below a def scheduled to Reference is components because con inspected, an maintenance	with a certified life-limit rmanently removed from n, or before, their operating is exceeded. The life is controlled at the level (in opposition to). I Components subject to life ('time controlled ') include the following: I for which removal and are scheduled, regardless /el of failure resistance. is made to hard time : They are subject to intenance dealing with a n that is assumed to be (the overall reliability ecreases with age): Failure to occur before restoration ; I components for which rance can reduce and drop ined level: Inspections are o detect potential failures. s made to 'On-condition' : They are called such omponents, which are re left in service (no further e action taken)	 3. Check the current status of time-controlled components, with due consideration to deferred items. They must identify: a. The affected components (Part Number and Serial Number). 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. c. For components subject to an unscheduled task: the task description and reference, the accomplishment data (date, the 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. 4. Check current status of life-limited components. This status can be requested upon each transfer throughout the operating life of the part: 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).
on the cond meet specific Notes: 1. Restorati components condition' t monitor grad primarily do continue to next planned 2. Compone monitoring' service maintenance occurs	ition that they continue to ed performance standards. On tasks for hard time are not the same as 'On- asks, since they do not dual deterioration, but are ne to ensure the item may remain in service until the d restoration. Ints subject to 'condition- are permitted to remain in without preventive e until functional failure prence is made to 'fly-to-	 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.

	Title	Description	
failure'. Such components are subject			
to unschedu	ed tasks.		
C.3	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 EASA CS-STAN as a standard change/repair, 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.	
Supporting i	nformation	Typical inspection item	
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.		1. Sample the repair status to confirm it appropriately traces repairs and un-repaired damage/deteriorations.	
		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.	
manual, proc repair design	edure or to a EASA Part 21 n approval, the drawings/	3. Check that repair instructions detailed in the repair file comply with published approved repair data.	
material and accomplishment instructions, as well as the maintenance and operational instructions.		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.	
'Repair statu	s' means a list of:	5. Check that new or amended maintenance instructions	
- the repairs embodied since the original delivery of (and still existent		resulting from repairs have been considered for inclusion in the aircraft maintenance programme.	
upon) the a component;	ircraft/ engine/ propeller/ and	6. Compare the repair status and the physical status of the repaired aircraft/engine(s)/propeller(s), and thei repaired components (physical survey) in order to confirm the accuracy of the repair status. Sample	
- the degradations	un-repaired damage/ 5.		
It also inclu reference documentati substantiatir compliance airworthines	des, either directly or by to supporting on (i.e. repair files), the og data supporting with the applicable s requirements.	repair files (physical survey).	
The repair s repair file classification aircraft/engi	tatus should identify the reference, the repair , the repaired item (i.e. ne/propeller/component,		

	Title	Description
and a precise the date a accumulated repair or fin damage/deg to the programmes necessary. I State of Des and/or PACA of certificat should be ta determinatio repairs.	e location if necessary), and and total life in FH/FC by the item at the time of nding of the un-repaired radations. Cross-reference aircraft maintenance should also be included, as Depending on the product sign, Bilateral Agreements ADecisions on acceptance tion findings exist and aken into account for the on of acceptable data for	
C.4	Records	Continuing Airworthiness records are defined in M.A.305 and M.A.306 and related AMC.
Supporting i	nformation	Typical inspection items
Retention/Transfer of the records is required so that the status of the aircraft and its components can be readily established at any time. 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: Scheduled tasks: - one-time: life-limited parts status, modification status, repair status. - repetitive: maintenance programme status. unscheduled tasks.		 Check the aircraft continuing airworthiness record system: M.A.305 and M.A.306, as applicable, require that certain records are kept for defined periods. Pay attention to the continuity, integrity and traceability of records: a. integrity: Check the data recorded is legible, b. continuity: Check that records are available for the applicable retention period, c. traceability: Check the link between operator/CAMO and maintenance documentation, traceability to approved data,
		 traceability to appropriate release documents, etc. 2. If applicable, make sure that the tech log system is used correctly, including: a. current aircraft release to service (including the maintenance statement) issued and b. pre-flight inspections signed-off by authorised persons; 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.

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			
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		
ТВО	Time Between Overhauls		
тс	Type Certificate		
TCDS	Type Certificate Data Sheet		
TLB	Technical Logbook		
TSO	Technical Standard Order		

Appendix IV to AMC M.A.604 — Maintenance organisation manual

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 CAR-M according to the extent of approval and the privileges granted to the organisation.

The maintenance organisation manual shall define precisely the work that the approved maintenance organisation is authorised to carry out and the subcontracted work. It shall 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) shall be designed to be used directly on a day to day basis. The working documents and lists shall be directly included into the manual. It shall 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 Public Authority for Civil Aviation
 - 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 CAR-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 CAR-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)
- 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 PACA Form 1
- Incomplete maintenance
- Check flight authorisation
- Copy of CRS and EASA Form 1

- Records

- Airworthiness review procedures and records for LA1 aircraft not involved in commercial operations

- Development and approval processing for maintenance programmes for LA2 aircraft not involved in commercial operations

- Special procedures

Such as specialised tasks, disposal of unsalvageable components, re-certification of parts not having an PACA 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 Public Authority for Civil Aviation
- Final validation

Part E – Appendices

- Sample of all documents used.
- List of maintenance locations.
- List of CAR-145 or M.A. Subpart F organisations.
- List of subcontracted specialised services.

3. Approval

The Public Authority for Civil Aviation shall 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 CAR-M

When a maintenance organisation manual no longer meets the requirements of this CAR-M, whether through a change in CAR-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

CONTINUING AIRWORTHINESS MANAGEMENT EXPOSITION (CAME)

TABLE OF CONTENT

Part 0 General organisation

- 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 Public Authority for Civil Aviation of changes to the organisation's activities/approval/location/personnel

0.6 Exposition amendment procedures

Part 1 Continuing airworthiness management procedures

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

Part 2 Quality system

- 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

Part 3 Contracted maintenance

- 3.1 Maintenance contractor selection procedure
- 3.2 Quality audit of aircraft

Part 4 Airworthiness review procedures

- 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

Part 4B Permit to fly procedures

- 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

Part 5 Appendices

- 5.1 Sample documents
- 5.2 List of airworthiness review staff
- 5.3 List of subcontractors as per M.A.711(a)(3)
- 5.4 List of contracted approved maintenance organisations
- 5.5 Copy of contracts for subcontracted work (Appendix II to AMC M.A.711(a)(3))

LIST OF EFFECTIVE PAGES

Page	Revision	Page	Revision	Page	Revision
1	Original	3	Original	5	Original
2	Original	4	Original		

DISTRIBUTION LIST

(The document shall include a distribution list to ensure proper distribution of the manual and to demonstrate to the Public Authority for Civil Aviation that all personnel involved in continuing airworthiness 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 shall be distributed to:

- the operator's or the organisation's management personnel and to any person at a lower level as necessary; and
- the CAR-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 shall embrace the intent of the following paragraph, and in fact this statement may be used without amendment. Any amendment to the statement shall not alter its intent.)

'This exposition defines the organisation and procedures upon which the M.A. Subpart G approval of Joe Bloggs under CAR-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 Public Authority for Civil Aviation from time to time where these new or amended regulations are in conflict with these procedures.

The Public Authority for Civil Aviation will approve this organisation whilst it is satisfied that the procedures are followed. It is understood that the Public Authority for Civil Aviation reserves the right to suspend, limit or revoke the M.A. Subpart G continuing airworthiness management approval of the organisation, as applicable, if the Public Authority for Civil Aviation has evidence that the procedures are not followed and the standards not upheld.

In the case of air carriers licensed in accordance with Regulation CAR-OPS, 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 shall describe broadly how the whole organisation (i.e. including the whole operator in the case of air carriers licensed in accordance with Regulation CAR-OPS or the whole organisation when other approvals are held) is organised under the management of the accountable manager, and shall 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 shall explain the specific relationship the organisation may have with other members of that group, e.g. links between X Airlines, X Finance, X Leasing, X Maintenance, etc.)

(2) Consortia

(Where the organisation belongs to a consortium, it shall be indicated here. The other members of the consortium shall 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 shall be consulted and their agreement to the arrangement shall be clearly stated. This paragraph shall then make reference to any consortium's continuing airworthiness related manual or procedure and to any Public Authority for Civil Aviationagreement that would apply.)

c) Scope of work — Aircraft managed

(This paragraph shall 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 CAR-OPS, 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 shall explain where the current list of aircraft managed is available for consultation.)

d) Type of operation

(This paragraph shall give broad information on the type of operations such as: commercial air transport operations, (commercial) specialised operations, training organisation, long haul/short haul/regional, scheduled/charter, regions/countries/continents flown, etc.)

0.3 Management personnel

a) Accountable manager

(This paragraph shall address the duties and responsibilities of the accountable manager as regards M.A. Subpart G approvals and shall 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 shall:

- 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 CAR-M responsibility for continuing airworthiness.

c) Continuing airworthiness coordination

(This paragraph shall 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 CAR-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 shall 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 shall 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:

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'
(Detailed information about the	BB1	bb1 = BB1'
management of group of persons)	BB2	bb2 = BB2'
Other	сс	cc =CC'
Total	тт	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 shall show that the training and qualification standards for the personnel mentioned above are consistent with the size and complexity of the organisation. It shall 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 shall provide a comprehensive understanding of the whole company's organisation. For example, the case of an air carrier licensed in accordance with Regulation CAR-OPS.

a) General organisation chart



b) Continuing airworthiness management organisation chart

This flow chart shall give further details on the continuing airworthiness management system, and shall 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. Accountable Quality Manager System Nominated Nominated Nominated person person for for person for contracts technical planning Technical Technical Technical

Avionics

Engines

Airframes

0.5 Procedure to notify the Public Authority for Civil Aviation of changes to the organisation's activities/approval/location/personnel

(This paragraph shall explain the cases where the company shall inform the Public Authority for Civil Aviation 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 Public Authority for Civil Aviation 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.

X will not incorporate such changes until they have been assessed and approved by the PACA.)

0.6 Exposition amendment procedure

(This paragraph shall explain who is responsible for the amendment of the exposition and its submission to the Public Authority for Civil Aviation for approval. This may include, if agreed by the PACA, the possibility for the approved organisation to approve internally minor amendments that have no impact on the approval held. The paragraph shall 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 shall provide instructions for using the aircraft technical log and/or continuing airworthiness record system. It shall emphasise the respective responsibilities of the maintenance personnel and operating crew. Samples of the technical log and/or continuing airworthiness record system shall be included in Part 5 'Appendices' in order to provide enough detailed instructions.)

(3) Aircraft technical log approval

(This paragraph shall explain who is responsible for submitting the aircraft technical log, and any subsequent amendment thereto, to the Public Authority for Civil Aviation 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 shall 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 shall 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 shall 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 shall explain how the continuing airworthiness and maintenance personnel make the flight crew aware of an MEL limitation. This shall refer to the technical log procedures.)

(4) Acceptance by the crew

(This paragraph shall 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 shall 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 Public Authority for Civil Aviation may allow the owner/operator to overrun the MEL time limitation under specific conditions. Where applicable, this paragraph shall 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 shall 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 shall 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) shall be used as a guideline to develop this paragraph.)

c) Development

(1) Sources

(This paragraph shall explain what are the sources (MRB, MPD, maintenance manual, etc.) used for the development of an aircraft maintenance programme.)

(2) Responsibilities

(This paragraph shall explain who is responsible for the development of an aircraft maintenance programme.)

(3) Manual amendments

(This paragraph shall demonstrate that there is a system for ensuring the continuing validity of the aircraft maintenance programme. Particularly, it shall show how any relevant information is used to update the aircraft maintenance programme. This shall include, as applicable, MRB report revisions, consequences of modifications, manufacturer and Public Authority for Civil Aviationrecommendations, inservice experience, and reliability reports.)

(4) Acceptance by the authority

(This paragraph shall explain who is responsible for the submission of the maintenance programme to the Public Authority for Civil Aviationand what the procedure to follow is. This shall in particular address the issue of the approval for variation to maintenance periods either by the Public Authority for Civil Aviationor 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 shall 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 shall 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 shall 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 been altered during the retention period (especially computer records).)

d) Transfer of continuing airworthiness records

(This paragraph shall 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 shall 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 shall 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 shall explain what the AD information sources are and who receives them in the company. Where available, multiple sources (e.g. EASA, FAA + Public Authority for Civil Aviation+ manufacturer or association) may be useful.)

b) Airworthiness directive decision

(This paragraph shall 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 shall include as necessary a specific procedure for the management of emergency airworthiness directives.)

c) Airworthiness directive control

(This paragraph shall specify how the organisation manages to ensure that all the applicable airworthiness directives are accomplished and that they are accomplished on time. This shall 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 shall 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 shall 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, <a>[] amendment of maintenance or operational procedures,
- etc.)

1.6 Non-mandatory modification embodiment policy

(This paragraph shall 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 shall 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 shall also identify the type of approval required, and the procedure to follow to have a repair or modification approved by the Authority based on the approval of the design organisation.

1.8 Defect reports

a) Analysis

(This paragraph shall explain how the defect reports provided by the contracted maintenance organisations are processed by the continuing airworthiness management organisation. Analysis shall 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 shall be established with the manufacturer and the certification Public Authority for Civil Aviationso 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 shall 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 shall present the scope of the organisation's engineering activity in terms of approval of modifications and repairs. It shall 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 shall identify the person in charge of accepting the design before submission to the Agency or the competent authority.

1.10 Reliability programmes

(This paragraph shall explain appropriately the management of a reliability programme. It shall 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 Public Authority for Civil Aviationis needed.)

(This paragraph may, where necessary, be subdivided as follows:)

- a) Airframe
- b) Propulsion
- c) Component

1.11 Pre-flight inspections

(This paragraph shall 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 shall 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 shall 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 shall 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 shall include a formal quality policy statement — that is a commitment to what the quality system is intended to achieve. It shall include as a minimum the monitoring compliance with CAR-M and with any additional standards specified by the organisation.)

b) Continuing airworthiness quality plan

(This paragraph shall show how the quality plan is established. The quality plan will consist of a quality audit and sampling schedule that shall cover all the areas specific to CAR-M in a definite period of time. However, the scheduling process shall also be dynamic and allow for special evaluations when trends or concerns are identified. In case of subcontracting, this paragraph shall 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 shall be sufficiently detailed to address all the steps of an audit from preparation to conclusion; it shall show the audit report format (e.g. by reference to paragraph 5.1 'Sample of document'), and shall 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 shall 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 shall be given on how such reviews shall be conducted and what shall be evaluated.)

2.2 Monitoring of continuing airworthiness management activities

(This paragraph shall 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 shall 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 shall 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 shall 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 shall establish the required training and qualification standards for auditors. Where persons act as part-time auditors, it shall 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 shall 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) shall be explained. In particular, it shall cover responsibilities, tasks and interaction with the maintenance organisation and with the owner/operator.

This paragraph shall 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 shall be included in Part 5.1.)

b) Maintenance contractor selection procedure

(This paragraph shall explain how a maintenance contractor is selected by the CAMO. Selection shall 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 shall 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 shall 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 shall set out the procedure when performing a quality audit of an aircraft. It shall 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 CAR-M.)

PART 4 — AIRWORTHINESS REVIEW PROCEDURES

4.1 Airworthiness review staff

(This paragraph shall establish the working procedures for the assessment of the airworthiness review staff. The assessment addresses experience, qualification, training, etc. A description shall 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 shall 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 shall be described.)

4.3 Physical survey

(This paragraph shall describe how the physical survey needs to be performed. It shall 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 shall describe the additional tasks regarding the recommendation for the issue of an airworthiness review certificate in the case of import of aircraft. This shall include: communication with the Public Authority for Civil Aviationof 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 shall 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 shall be described.)

4.6 Issue of airworthiness review certificates (ARCs)

(This paragraph shall set out the procedure for the issue of ARCs. It shall address recordkeeping, distribution of ARC copies, etc. The procedure shall 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 shall 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 shall 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 shall describe the process to complete the PACA Form 20b (see CAR-21) is established before signing off the permit to fly. It shall also describe how the organisation ensures compliance with CAR-21 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) shall 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 shall 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 CAR-21.

4B.5 Permit to fly records, responsibilities, retention and access

(This paragraph shall 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 shall set out that the list shall be periodically reviewed.)

5.4 List of approved maintenance organisations contracted

(This paragraph shall include the list of contracted maintenance organisations, detailing the scope of the contracted work. In addition, it shall set out that the list shall 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) — PACA Form 6F

M.A. SUBPART F APPROVAL RECOMMENDATION REPOR	T	PACA FORM 6F
Part 1: General		
Name of organisation:		
Approval reference:		
Requested approval rating/		
PACA 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:		
Public Authority for Civil Aviation surveyor:		Signature(s):
Public Authority for Civil Aviation office:		Date of PACA Form 6E part 1
completion:		
*delete where applicable		

M.A. SUBPART F APPROVAL RECOMMENDATION REPORT PACA FORM 6F

Part 2: M.A. Subpart F 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 M.A. Subpart F subparagraphs please either tick (v) 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

M.,	A.603	Extent of approval					
M.,	A.604	Maintenance Organisation Manual (see Part 3)					
M.,	A.605	Facilities					
M.,	A.606	Personnel requirements					
M.,	A.607	Certifying staff and airworthiness review staff					
M.,	A.608	Components, Equipment and tools					
M.,	A.609	Maintenance data					
M.,	A.610	Maintenance work orders					
M.,	A.611	Maintenance standards					
M.,	A.612	Aircraft certificate of release to service					
M.,	A.613	Component certificate of release to service					
M.,	A.614	Maintenance records					
M.,	A.615	Privileges of the organisation					
M.,	A.616	Organisational review					
M.,	A.617	Changes to the approved maintenance organisation					
M.,	A.619	Findings					
Public	Author	rity for Civil Aviation surveyor(s):		Signat	ure(s):	· •	
Public	: Author	rity for Civil Aviation office:	Date	of PACA F	Form 6F p	oart 2 cor	npletion

M.A. SUBPART F APPROVAL RECOMMENDATION REPORT PACA FORM 6F							
Part 3: Compliance with M.A. Subpart F maintenance organisation manual (MOM)							
Please e	ither tick (V) th	he 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		Table of content					
1.2		List of effective pages					
1.3		Record of amendments					
1.4		Amendment procedure					
1.5		Distribution					
1.6		Accountable manager's statement					
Part B	Description						
2.1		Organisation's scope of work					
2.2		General presentation of the organisation					
2.3		Name and title of management personnel					
2.4		Organisation chart					
2.5		Certifying staff and airworthiness review staff					
2.6		Personnel					
2.7		General description of the facility					
2.8		Tools, equipment and material					
2.9		Maintenance data					
Part C (General proced	ures					
3.1		Organisational review					
3.2		Training					
3.3		Subcontracting of specialised services					
3.4		One time authorisations					
M.A. SU	BPART F APPRC	OVAL RECOMMENDATION REPORT PACA FORM 6F					
Part 3: C	Compliance with	h M.A. Subpart F maintenance organisation manual (MOM)					
Part D	Working Proce	dures					
4.1		Work order acceptance					
4.2		Preparation and issue of work package					
4.3		Logistics					
4.4		Execution					
4.5		Release to service – Certifying staff					
4.6		Release to service – Supervision					
4.7		Release to service – Certificate of release to service					
4.8		Records					
4.9		Airworthiness review procedures and records for LA1 aircraft not involved in					
		commercial operations					
4.10		Procedures for the development and approval processing for maintenance					
		programmes for LA2 aircraft not involved in commercial operations					
4.11		Special procedures					
4.12		Occurrence reporting					
4.13		Management of indirect approval of the manual					
Part E A	ppendices						
5.1		Sample of all documents used					
5.2		List of subcontractors.					
5.3		List of maintenance locations					
5.4		List of CAR-145 or M.A. Subpart F organisations					

MOM reference:

Public Authority for Civil Aviation audit staff:

MOM amendment:

Signature(s):

Public Authority for Civil Aviation office:

Date of PACA Form 6F part 3 completion:

M.A. SUBPART F APPROVAL RECOMMENDATION REPORT PACA FORM 6F Part 4: Findings regarding M.A. Subpart F compliance status Each level 1 and 2 finding shall be recorded whether it has been rectified or not and shall be identified by a simple cross reference to the Part 2 requirement. All non-rectified findings shall be copied in writing to the organisation for the necessary corrective action. Part Audit reference(s) : L 2 or 3 Findings Е Corrective action V Date Date Е Refere Ref. L Due Due nce

M.A. SUBPART F APPROVAL RECOMMENDATION REPORT PACA FORM 6F					
Part 5: M.A. Subpart F approval or continued approval or change recommendation					
Name of organisation:					
Approval reference:					
Audit reference(s):					
The following M.A. Subpart F scope of approval is recommended for this organisation:					
Or, it is recommended that the M.A. Subpart F scope of approval specified in PACA Form 3 referenced					
Name of recommending Public Authority for Civil Aviation surveyor:					
Signature of recommending Public Authority for Civil Aviation surveyor:					
Public Authority for Civil Aviation office:					
Date of recommendation:					
PACA Form 6F review (quality check): Date:					

PORT PACA FORM 13	
to	
Signature(s):	
	to Signature(s):

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M A 303	Airworthiness directives]	
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M.A.713	Changes to the approved continuing						
	airworthiness organisation						

M.A.714	Record-keeping					
M.A.716	Findings					
Public Author	rity for Civil Aviationsurveyor(s):	Signature(s):				
Public Authority for Civil Aviationoffice:						
Date of PACA Form 13 Part 2 completion:						

M.A. SUBPART G APPROVAL RECOMMENDATION REPORT PACA FORM 13

Part 3: Compliance with M.A. Subpart G continuing airworthiness management exposition (CAME) Please either tick (v) 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 G	eneral organisation
0.1	Corporate commitment by the accountable manager
0.2	General information
0.3	Management personnel
0.4	Management organisation chart
0.5	Notification procedure to the Public Authority for Civil Aviationregarding changes
	to the organisation's activities/approval/location/personnel
0.6	Exposition amendment procedures
PART 1 Continuin	g airworthiness management procedures
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, 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
PART 2 Quality sy	stem
2.1	Continuing airworthiness quality policy, plan and audits 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
PART 3 Contracte	d Maintenance
3.1	Procedures for contracted maintenance
3.2	Quality audit of aircraft

PART 4 Airworthiness r	eview procedures				
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 airworthiness review				
	certificates				
4.6	Issuance of airworthiness review certificates				
4.7	Airworthiness review records, responsibilities, retention and access				
PART 4B Permit to fly p	rocedures				
4B.1	Conformity with approved flight conditions				
4B.2	Issue of 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				
PART 5 Appendices					
5.1	Sample Documents				
5.2	List of airworthiness review staff				
5.3	List of subcontractors as per M.A.711(a)(3)				
5.4	List of approved maintenance organisations contracted				
5.5	Copy of contracts for subcontracted work (Appendix II to AMC M.A.711(a)(3))				
CAME Reference:	CAME Amendment:				
Public Authority for Civil Aviationaudit staff: Signature(s):					
Public Authority for Civil Aviationoffice:					
Date of PACA Form 13 Part 3 completion:					
M.A. SUBPART G APPROVAL RECOMMENDATION REPORT PACA FORM 13					

Part 4: Findings regarding M.A. Subpart G compliance status Each level 1 and 2 finding shall be recorded whether it has been rectified or not and shall be identified by a simple cross reference to the Part 2 requirement. All non-rectified findings shall be copied in writing to the organisation for the necessary corrective action.

Part 2 or 3	Audit reference(s) : Findings		Corr	ective action	
		evel	Date	Date	
Ref.		_	Due	Due	Reference

M.A. SUBPART G	APPROVAL RECOMMENDATION REPOR	T PACA	FORM 13
Part 5: M.A. Sub	part G approval or continued approval o	or change	e recommendation*
Name of organisa	ation:		
Approval referen	ce:		
	、		
Audit reference(s	5):		
The following M	A Subpart G scope of approval is recomm	nondod f	or this organisation:
		nenueu i	
Or, it is recomm	ended that the M.A. Subpart G scope o	of approv	al specified in PACA Form 14 referenced
	be continued.		
Norse of record	anding Dublic Authority for Civil Aviation		
Name of recomm	lending Public Authority for Civil Aviation	isurveyo	r.
Signature of reco	mmending Public Authority for Civil Avia	tionsurv	evor.
Signature of reco			
Public Authority f	for Civil Aviationoffice:		
Date of recomme	endation:		
PACAForm 13 rev	view (quality check):	Date:	
		*	
		aeiet	le as appropriate

Appendix VIII to AMC M.A.616 — Organisational Review

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 shall 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 shall have the following features, which shall be described in the Maintenance Organisation Manual (MOM):

a. Identification of the person responsible for the organisational review programme.

By default, this person shall 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 shall have a thorough knowledge of the regulations and of the maintenance organisation procedures. They shall 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 shall be addressed.
 - A schedule for the accomplishment of the checklist items. Each item shall 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 shall 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 shall be recorded and notified to the affected persons.

- All level 1 findings, in the sense of M.A.619(a), shall be immediately notified to the Public Authority for Civil Aviationand all necessary actions on aircraft in service shall be immediately taken.

- All occurrence reports shall be reviewed with the aim for continuous improvement of the system by identifying possible corrective and preventive actions. This shall 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 shall 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 shall be recorded along with a summary of the corrective action.

- The accountable manager shall 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 PACA Form 3.
- The scope of work in the MOM does not disagree with PACA Form 3.
- No work has been performed outside the scope of PACA 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 LA2 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,
 - Public Authority for Civil Aviation 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 PACA Form 1 or equivalent.
- Obtain a copy of the current approval certificate (PACA 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 (PACA 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 — PACA Form 2

Application for		
PACA:	CAR-M Subpart F Approval*	initial grant*/ Change*
	CAR-145 Approval*	initial grant*/ Change*
	CAR-M Subpart G Approval*	initial grant*/ Change*
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 F/CAR-145 approval:	o this application: see page 2 for possibi	lities in the case of a Subpart
6. Position and name of the (pro	oposed*) Accountable Manager:	
7. Signature of the (proposed*)	Accountable Manager:	
8. Place:		
9. Date:		
Note (1): A note giving the addr	ress(es) to which the PACA Form(s) shall l	be sent.
Note (2): An optional note to give	ve information on any fees payable.	
* delete as applicable PACA For	rm 2 Page 1 of 2	

PACA Form 2 Page 1 of 2

Class	Rating	Limitation	Line and/or	Omani	
	(A1, A2,A3, A4)	(Type of aircraft with fitted engine)	Base	Operator(s)	
Aircraft	A1 Aeroplanes above 5700 kg	[Rating reserved to Maintenance Organisations approved in accordance with CAR-145 [State aeroplane manufacturer or group or series or type and/or the maintenance tasks] Example: Airbus A320 Series	[YES/ NO]*	[YES/ NO]*	
	A2 Aeroplanes 5700 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 forLA1 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 LA1 aircraft not involved in commercial operations).	[YES/ NO]*	[YES/ NO]*	
Class	Rating	Limitatio	on		
Engines	B1 Turbine (Quote engine type) B2 Piston (Quote engine manufacturer or group or type)	[State engine series or type and/or the maintenance task(s)] Example: PT6A Series [State engine manufacturer or group or series or type and/or the maintenance task(s)]			
	B3 APU (Quote engine manufacturer or type)	[State engine manufacturer or series or type and/or the maintenance task(s)]			
Class	Rating	Limitation (List aircraft type or aircraft manufacture or component manufacture or the particular component and or cross refer to a capability list in the exposition)			
		Tick as appli	icable		
Component Other Than Complete Engines Or APUs	C1 Air Cond. & Press. C2 Auto Flight C3 Comms. & Nav. C4 Doors -	[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).]			
	Hatches				

xample: PT6A Fuel Control		
Limitation (List aircraft type or aircraft manufacture or component manufacture or the particular component and or cross refer to a capability list in the exposition)		
ick as applicable		
State particular NDT method(s)]		

Appendix X to AMC M.B.602(a) and AMC M	.B.702(a) —	PACA Form 4				
PACA Form 2 Page 2 of 2						
1. Details of Management Personnel required to be accepted as specified in CAR-M/CAR-145/CAR-21						
2. Title / First Name / Surname:						
Click here to enter text						
3. Position within the Organisation:						
Enter the title of position as stated in Production Organisat	ion Exposition.					
4. Qualifications relevant to the item (3) position:						
5. Work experience relevant to the item (3) position:						
Information on work experience can be provided in a sepa	arate document (i.e. Cu	urriculum Vitae) attached to this				
6. Organisation: Click here to enter text						
7. Approval Number relevant to the item 1 (if applicable):		Click here to enter text				
Signature:	Date:	Click here to enter a date				

8 .Date ofBirth and place of Birth:			
9.*Educationalbackgroundandtechnica dates and duration)	Iqualificationsincludingapprenticeship, training, if	any(Give	approximate
10.*Employment Record (indate seque	nce):		
	······		
11.*Briefdescription of the last position	ns heid:		
*Add separate sheet if necessary			
12.Certification of Accountable Manage	er:		
Iherebycertifythattheabovenor DGCARrequirements and proce	minatedpersonisqualifiedfortheappropriatetask(s) edures on matter forwhichheis responsible.	and conve	ersant with
Signature	Date:		
Name:	Office:		

Name and signature of authorised Public Authority for Civil Aviationstaff member Accepting / Approving /Rejecting this person:

Signature:

Date:

Name:

Office:

Appendix XI to AMC M.A.708(c) — Contracted maintenance

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 shall 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 shall 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 shall 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 shall 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 shall be specified unambiguously. In case of line and/or base maintenance, the contract shall specify the aircraft type and, preferably, shall include the aircraft's registrations.

In case of engine maintenance, the contract shall 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 shall be specified. The certificate held by the maintenance organisation at the place(s) where maintenance will be performed shall 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 shall 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 shall 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 shall be given to the CAMO to any information (especially the quality monitoring information) about the maintenance organisation's subcontractors involved in the contract. It shall, however, be noted that under the CAMO responsibility both the CAMO and its Public Authority for Civil Aviationare entitled to be fully informed about subcontracting, although the Public Authority for Civil Aviationwill 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 shall have that maintenance programme approved by its competent authority.

2.5. Quality monitoring

The terms of the contract shall include a provision allowing the CAMO to perform a quality surveillance (including audits) of the maintenance organisation. The maintenance contract shall specify how the results of the quality surveillance are taken into account by the maintenance organisation (see also paragraph 2.22. 'Meetings').

2.6. Public Authority for Civil Aviationinvolvement

The contract shall identify the competent authority(ies) responsible for the oversight of the aircraft, the operator, the CAMO, and the maintenance organisation. Additionally, the contract shall allow competent authority(ies) access to the maintenance organisation.

2.7. Maintenance data

The contract shall 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 shall specify in which condition the aircraft shall 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 shall 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 shall 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 shall specify how the CAMO shall provide the current hours and cycles to the maintenance organisation and whether the maintenance organisation shall 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 shall specify whether the CAMO shall 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 shall 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 shall 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 shall specify how the subject of pooled parts at line stations shall be addressed.

2.14. Scheduled maintenance

For planning scheduled maintenance checks, the support documentation to be given to the maintenance organisation shall 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 shall be addressed, where applicable, in the maintenance contract.

2.15. Unscheduled maintenance/defect rectification

The contract shall specify to which level the maintenance organisation may rectify a defect without reference to the CAMO. It shall describe, as a minimum, the management of approval of repairs and the incorporation of major repairs. The deferment of any defect rectification shall 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 shall 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 shall 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 shall 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 shall specify the acceptability criterion and whether a representative of the CAMO shall 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 shall, 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 shall 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 CAR-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 shall specify what information shall 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 shall 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 shall 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 AMC-1 M.B.102(c) — Fuel Tank Safety training

This appendix includes general instructions for providing training on Fuel Tank Safety issues.

A) Effectivity:

- Large aeroplanes as defined (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 (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).
- The 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 shall 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 shall 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 CAR-M appendix XII to AMC M.A. 706(f) and M.B.102(c) are already in compliance with Phase 1.

<u>Type</u>: It shall 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 shall be a course at the level of familiarisation with the principal elements of the subject.

Objectives:

The trainee shall, 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 nonconformities.
- 3. Be able to use typical terms.

<u>Content:</u> The course shall 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 short-term flexible period may be granted by PACA to allow organisations to ensure the necessary courses required by personnel have been completed and incorporated within the organisation's training schemes/practices.

The persons who have already attended the Level 2 Detailed training course in compliance with CAR-M appendix XII to AMC M.A. 706(f) and M.B.102(c) either from a CAMO or from a CAR-147 training organisation are already in compliance with Phase 2 with the exception of continuation training.

Staff shall have received Phase 2 training by 31 December 2019 or within 12 months of joining the organization, whichever comes later.

<u>Type:</u> It shall be a more in-depth internal or external course. It shall not take the form of a training bulletin or other self-study. An examination shall be required at the end, which shall be in the form of a multi choice question, and the pass mark of the examination shall be 75%.

Level: It shall 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 shall meet the following criteria:
- A continuous evaluation process shall ensure the effectiveness of the training and its relevance; Some questions at intermediate steps of the training shall be proposed to ensure that the trainee is authorized to move to the next step;
- The content and results of examinations shall be recorded;
- Access to an instructor in person or at distance shall 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 shall be very familiar with the data in Objectives and Guidelines. To be familiar, an instructor shall have attended himself a similar course in a classroom and made additionally some lecture of related subjects.

Objectives:

The attendant shall, 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.

<u>Content</u>: Following the guidelines described in paragraph E).

Continuation training:

The organisation shall 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) shall 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 shall 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 shall 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 shall 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 shall 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 shall be approved as required by M.A.704(b). The necessary changes to the CAME to meet the content of this decision shall be made and implemented at the time requested by the competent authority.

Appendix XIII to AMC M.A.712(f) — Organisational review

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 shall have the following features, which shall be described in the CAME:

a. Identification of the person responsible for the organisational review programme:

By default, this person shall 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 shall have a thorough knowledge of the regulations and of the continuing airworthiness management organisation (CAMO) procedures. They shall 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: 2 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 shall be addressed.
 - A schedule for the accomplishment of the checklist items. Each item shall 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 shall 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 shall be recorded and notified to the affected persons.
 - All level 1 findings, in the sense of M.A.716(a), shall be immediately notified to the Public Authority for Civil Aviation and all necessary actions on aircraft in service shall be immediately taken.
 - All occurrence reports shall be reviewed with the aim for continuous improvement of the system by identifying possible corrective and preventive actions. This shall 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 shall 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 shall be recorded along with a summary of the corrective action.
- The accountable manager shall 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 (Public Authority for Civil Aviationor 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 CAR-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,
 - Public Authority for Civil Aviation 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 – CMR