CAR PART V

CAR-M - CONTINUING AIRWORTHINESS REQUIREMENTS

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FOREWORD

Objective and Scope

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 United Arab Emirates Civil Aircraft Registry; or
   b. registered in a third country and used by a United Arab Emirates operator where the UAE GCAA 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 UAE operator.

3. The continuing airworthiness provisions of this Regulation as clarified in CAR M.201 are applicable to:

   a. Licensed air carriers, air transport operators and commercial activities as defined by CAR OPS 1.003 and CAR OPS 3.003,
   b. Private Operators certified under CAR-OPS 1 and CAR-OPS 3,
   c. Aircraft used for commercial activities,
   d. Complex motor powered aircraft,
   e. Aeroplanes of a MTOM of more than 2730 kg, and
   f. Rotorcraft of a MTOM of more than 1200 kg.

The continuing airworthiness requirements set forth in the Supplement S-1.CAMO shall be applicable to the continuing airworthiness management of any aircraft used by operators conducting CAT and/or the CMPA, as specified in the CAR-M 201.

Definitions

Within the scope of this Regulation, the following definitions shall apply:

(a) "*Regulation*" means the rules published by the GCAA that an approved organisation must show compliance with to first be granted an approval and then to maintain it. Approved organisations must ensure that they regularly review all applicable published regulation(s) to ensure that they maintain compliance in the light of changes to the rules, or changes with to the practices within the organisation.

(b) "*Acceptable Means Of Compliance*" (AMC) means material that is published in support of the regulation and provides the GCAA's approved method of complying with the published rules. Approved organisations should follow these methods to achieve compliance. Where AMC material

is not published it has been determined that the regulation is clear enough as to not require the provision of additional information.

It is possible for an organisation to agree a different method of compliance but such a difference must be formally notified and proposed to the GCAA for review. If an alternative AMC is accepted then this will be notified to the organization by letter and will, at some point in the future, be published in the regulations to allow all other approved organisations the opportunity to adopt the practice.

(c) "*Guidance Material*" means material which helps to illustrate the meaning of regulations or AMCs.

(d) "aircraft" means any machine that can derive support in the atmosphere from the reactions of the air other than reactions of the air against the earth's surface;

(e) "certifying staff" means personnel responsible for the release of an aircraft or a component after maintenance;

(f) "component" means any engine, propeller, part or appliance;

(g) "continuing airworthiness" means all of the processes ensuring that, at any time in its operating life, the aircraft complies with the airworthiness requirements in force and is in a condition for safe operation;

(h) "*the GCAA*" means the United Arab Emirates General Civil Aviation Authority, also referred to as the Authority;

(i) ***"CAR"*** means UAE Civil Aviation Regulations;

(j) *'complex motor-powered aircraft'* shall mean:

(i) an aeroplane:

- with a maximum certificated take-off mass exceeding 5 700 kg, or
- certificated for a maximum passenger seating configuration of more than nineteen, or
- certificated for operation with a minimum crew of at least two pilots, or
- equipped with (a) turbojet engine(s) or more than one turboprop engine, or

(ii) a helicopter certificated:

- for a maximum take-off mass exceeding 3 175 kg, or
- for a maximum passenger seating configuration of more than nine, or
- for operation with a minimum crew of at least two pilots, or

(iii) a tilt rotor aircraft;

(k) *"maintenance"* means any one or combination of overhaul, repair, inspection, replacement, modification or defect rectification of an aircraft or component, with the exception of pre-flight inspection;

(l) *"organisation"* means a natural person, a legal person or part of a legal person. Such an organisation may be established at more than one location;

(m) *"pre-flight inspection"* means the inspection carried out before flight to ensure that the aircraft is fit for the intended flight;

(n) *"Commercial Operations"* - Unless otherwise specifically authorised by the GCAA, the following activities are categorised as commercial operations:

(1) Sightseeing flights (A to A or A to B within UAE airspace);

(2) Aerial work operations, including:

(i) Agricultural operations
(ii) External load operations
(iii) Aerial photography and survey
(iv) Aerial reconnaissance
(v) Aerial advertising

(vi) Air shows and aerial demonstrations
(vii) Carriage and dropping of parachutists (operator of aircraft)
(viii) Navigation aid calibration
(ix) Other activities as determined by the GCAA.

(o) *"Commercial Air Transport"* means an aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire. The term encompasses Air Carriers and Air Transport Operators.

(p) *"Air Carrier"* is a commercial operator of an aeroplane engaged in the transportation of passengers, cargo and mail for remuneration or hire and offering services to the public in accordance with a published schedule.

(q) *"Air Transport Operator"* - An Air Transport Operator is a commercial operator of an aeroplane engaged in transportation of passengers, cargo and mail for remuneration or hire offering service to the public on demand and not to a published schedule;

(r) *"Private Operator" – means a person, organisation or enterprise engaged in the carriage of persons or cargo not for hire or reward.*

(s) "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

(t) ATO means Approved Training Organization

(u) Tilt rotor aircraft is an aircraft which generates lift and propulsion by way of one or more powered rotors (sometimes called proprotors) mounted on rotating engine pods or nacelles usually at the ends of a fixed wing or an engine mounted in the fuselage with drive shafts transferring power to rotor assemblies mounted on the wingtips. It combines the vertical lift capability of a helicopter with the speed and range of a conventional fixed-wing aircraft.

(v) Standard Changes (SC) are changes to a type-certificate in relation to following listed aircraft that follow design data included in the certification specifications CS-STAN issued by the Authority of the State of Design, containing acceptable methods, techniques and practices for carrying out and identifying standard changes, including the associated instructions for continuing airworthiness and that are not in conflict with the TC holders' data:-
(i) aeroplanes of 5 700 kg Maximum Take-Off Mass (MTOM) or less;
(ii) rotorcraft of 3 175 kg MTOM or less;
(iii) sailplanes, powered sailplanes, balloons and airships of 2000 kg MTOM and less.

(w) Standard Repairs (SR) are repairs in relation to following listed aircraft that follow design data included in the certification specifications CS-STAN issued by the Authority of the State of design, containing acceptable methods, techniques and practices for carrying out and identifying standard repairs, including the associated instructions for continuing airworthiness and that are not in conflict with TC holders' data.
(i) aeroplanes of 5 700 kg Maximum Take-Off Mass (MTOM) or less;
(ii) rotorcraft of 3 175 kg MTOM or less;
(iii) sailplanes and powered sailplanes, balloons and airships of 2000 kg MTOM and less.

Continuing airworthiness requirements

1. The continuing airworthiness of aircraft and components shall be ensured in accordance with the provisions of CAR-M and the supplement S-1.CAMO, where the supplement is applicable.

2. Organisations and personnel involved in the continuing airworthiness of aircraft and components, including maintenance, shall comply with the provisions of CAR M, the supplement S-1.CAMO, where the supplement is applicable, and where appropriate those specified in CAR 145 and CAR 66.

3. Reserved

4. Reserved

Maintenance organisation approvals

Maintenance Organisation approval shall be issued in accordance with Subpart F of CAR-M or CAR-145.

1. Maintenance approvals issued or recognised by the GCAA in accordance with CAR requirements and procedures and valid before the entry into force of this Regulation shall be deemed to have been issued in accordance with this Regulation.

2. Personnel qualified to carry out and/or control a continued airworthiness non-destructive test of aircraft structures and/or components, on the basis of any standard recognised by the GCAA prior to the entry into force of this Regulation as providing an equivalent level of qualification, may continue to carry out and/or control such tests.

3. Certificates of release to service and authorised release certificates issued before the date of entry into force of this Regulation by a maintenance organisation approved under the GCAA requirements shall be deemed equivalent to those required under CAR M.801 and CAR M.802, respectively.

Certifying staff

1. Certifying staff shall be qualified in accordance with the provisions of CAR 66 or the existing regulation as agreed by the GCAA until full implementation of CAR 66 provisions, except as provided for in CAR M.606(h), CAR M.607(b), CAR M.801(d), CAR M.803 and in CAR 145.30(j) and Appendix IV to CAR 145.

   For the purpose of this Chapter, licenses issued prior to CAR 66 entry into force shall be considered equivalent to CAR 66 licenses.

2. Reserved

Training organisation requirements

1. Organisations involved in the training of personnel referred to in CAR 66 shall be approved in accordance with CAR 147 and will be entitled to:

   (a) conduct recognised basic training courses; and/or
   (b) conduct recognised type training courses; and
   (c) conduct examinations; and
   (d) issue training certificates.

2. Reserved

Entry into force

1. This issue 06 of CAR M shall enter into force on 1st July 2023.

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RECORD OF AMENDMENTS

Revision No	Date of Revision
Issue: Initial Revision: 00	01 July 2011
Issue: Initial Revision: 01	December 2013
Issue: 02 Revision: 00	October 2014
Issue: 02 Revision: 01	November 2014
Issue: 03 Revision: 00	December 2015
Issue: 04	21st November 2018
Issue: 05	11th January 2021
Issue: 06	13th February 2023

AMENDMENTS HISTORY

Amendment	Subject(s)	Issue/ Rev. Date
Issue: Initial Revision 00	New regulations	01 July 2011
Issue: Initial Revision:01	Addition of a Guidance Material 702 and related appendix XIV to GM 702 Removal of references to CAR PART V Chapter 2 concerning Certificate of Maintenance Review (M 710 and M 711) , independent inspections (M 402) and validity of C of A (M 902) Correction of Typo errors	December 2013
Issue: 02 Revision: 00	Removal of references to balloons, ELA1 aircraft, Light Sport Aircraft, pilot owner maintenance, maintenance by independent certifying staff, complex maintenance tasks, and contracting CAW organisations by private operators, Appendix I to CAR M. Addition of requirement for Chief Executive to sign the Accountable Manager statement in both MOM and CAME if the AM is not the Chief Executive (taken from CAR 145.70). Addition of action to be taken if findings are not responded to within the agreed timescale to CAR M.619, M.716 and M.905.	October 2014
Issue: 02 Revision: 00	Addition of root cause analysis requirement, and amendment of Level 1 and Level 2 definitions in CAR M.619, M.716 and M.905. Addition of some changes to EASA Part M in EASA ED Decision 2012/004/R. Clarification of requirements for the maintenance of aircraft, complete engines, and engine modules to be carried out by a GCAA approved maintenance organisation. Further clarification that all other components can be carried out by an organisation approved to issue an AW Form 1 or equivalent document. Amendment of CAR M.708 (b) to require maintenance contracts to be “approved” by the GCAA prior to them coming into force. Currently maintenance contract arrangements are only “accepted”. Clarification of qualification requirements for a type qualified person assisting an ARC signatory with the physical survey. Deletion of references to extension of airworthiness review certificate, including qualification of extension staff.	October 2014

	Amendment of definition of a controlled environment to better reflect UAE regulations. Amendment of Appendix II to CAR M instructions for completion of the AW Form 1 to reflect maintenance release requirements. Amendment of Appendix IV to CAR M to remove references to CAR 145 and update references to CAR M Subpart F. Addition of CVR/FDR and ELT requirements in Appendix II to AMC CAR M.302. Amendment of Appendix V to AMC CAR M.704 to reword some required paragraph titles. Amendment to Appendix XI to combine all maintenance contract requirements into one section in line with EASA Part M.	
Issue: 02 Revision: 00	Amendment of document in certain areas for consistency of presentation. Correction of formatting and typographical errors.	October 2014
Issue: 02 Revision: 01	Addition of 4.3.1 and 4.3.2 to AMC to M.402 (a) for clarification of Independent Inspection. CAR 708 (b) wording changed from “approved by the GCAA prior to entry into force” to “acceptable to the GCAA”.	November 2014
Issue:03 Revision: 00	Restructuring of the document to include AMC and GM below each regulation as applicable. Added or CAR Part V – Chapter 6 to CAR M.501(a) Added GCAA UAE Manufacturing Release Certificate Form 299 to AMC to CAR M.501 (a)(5)(d) Clarification of Appendix I to AMC to CAR M 302 regarding frequency of inspections related to CVR/DFDR/ELT. Addition of Appendix III to AMC to CAR M 302 (f)	December 2015
Issue 04	CAR M.001 revised for clarity. CAR M.201 (e), (f), (g), (h) and (i) revised to clarify the continuing airworthiness responsibilities in relation to Aircraft used by Air Carriers or for Commercial Air Transport, Complex motor-powered aircraft used for commercial specialised operations or commercial ATOs, complex motor-powered aircraft not use by Air Carriers or commercially, other than complex motor-powered aircraft …etc. CAR M.201 (j) revised to add GCAA required access to the	1st March 2019

	owner/operator subcontracted activities, CAR M.201 (k) Revised to mandate the capability for issue ARC by organization managing the continuing airworthiness of 10 or more aircraft. Added AMC CAR.201(e) Added GM CAR M.201(e) AMC to CAR M.201 (h)1 deleted, and AMC M.A.711(a)(3) added for provisions of subcontracting continuing airworthiness tasks, Appendix II to CAR M.201(h) deleted, and Appendix II to AMC to CAR M.711(a)(3) added for subcontracting continuing airworthiness tasks AMC to CAR M.201 (h) and AMC to CAR M.201 (h) 2 deleted, and AMC1 to CAR M.708(c) and AMC2 CAR M.708(c) added, CAR M.301 (2) revised to count for term complex motor powered aircraft and to remove terms (large aircraft or aircraft used for commercial air transport) from the provision, CAR M.301 (4) and (7) revised to count for term complex motor powered aircraft, AMCs to CAR M.301 were revised to count for the continuing responsibilities assignment in CAR M.201 and the terms, TYPO Error (AMC to CAR M.301(6)) in the issue 3 changed to AMC to CAR M.301(7)) CAR M.302 (c) (ii) revised to (Reserved) status, CAR M.302 (f), large aircraft changed to complex motor powered aircraft term, CAR M.302 (h) & (i) were added for paragraphs numbering requirements, AMC to CAR M.302, item (3), amended to include (…. or in accordance with any other equivalent regulation recognised by the GCAA…) Title change (AMC to CAR M.302(d) Aircraft Maintenance Programme Compliance) to (AMC to CAR M.302(d) Aircraft Maintenance Programme) AMC to CAR M.302 (d) item 7 amended for more clarity of the requirements, AMC to CAR M.302 (f) item 2 amended to change term large aircraft into complex motor powered aircraft AMC to CAR M.302 (f) items 5 and 6 in CAR M issue 3 were combined into one item 5, CAR M.305 (b) (2) amended for clarity CAR M.305 (e) (2) amended for clarity Added “AMC CAR M.305 (d) (4) and CAR M.305 (h) Aircraft continuing airworthiness record system” AMC to CAR M.305(h) amended to add a provision for acceptance of the reconstructed records,	

	AMC to CAR M.306(a), section-3, item (V), a provision added for acceptance of an alternate abbreviated certificate of release to service issued by CAR 145, CAR M.402 amended for clarity on the (Performance of Maintenance) performed by organization other than CAR 145 MO, AMC to CAR M.402(a) amended, GM to CAR M.402(a) added, AMC to CAR M.402 (b) deleted, AMC to CAR M.402(c) added, AMC to CAR M.402(d) amended, AMC to CAR M.402(e) amended, AMC to CAR M.402(f) added AMC to CAR M.402(g) added, AMC1 to CAR M 402(h) added, AMC2 to CAR M 402(h) added, GM to CAR M 402(h) added CAR M.403 (b) amended for more clarity, CAR M.403 (c) amended to add limits of the MEL, CAR M.501 (a) amended for more clarity on components required authorized release certificate, AMC to CAR M.501(a), item 5 (b), (c) and (d) amended to clarify when EASA form 1 and JAA form 1 are acceptable, AMC to CAR M.501(a), NOTE 1 added to clarify the PMA parts, which are eligible for installation on UAE registered aircraft AMC to CAR M.501 (b) editorial and no change was made. The words (Section A) was removed from item 2 and 3, AMC to CAR M.501 (d) editorial change, item -7 (reserved) was removed, CAR M.504 (b), the term large aircraft changed to complex motor powered aircraft, AMC to CAR M.504(b), item 3 added, AMC to CAR M.702 amended for correct application form number for CAR M Subpart G ORG application, CAR M.704, item 9 amended to give more clarity on the requirement, CAR M.704 (b) was split into two items CAR M.704 (b) and (c) for more clarity, AMC to CAR M.704 deleted and new AMC1 CAR M.704, AMC2 CAR M.704 and AMC CAR M.704(a)(2) were added CAR M.706 (k) amended for the term complex motor powered aircraft, AMC CAR M.706 (a) added, AMC CAR M.706(f) amended to include references to Fuel tank safety and EWIS training AMC to CAR M.706(k) added CAR M.707(b) amended to incorporate a requirement for a procedure approved by the GCAA, CAR M.708 paragraphs were re-numbered. Now CAR M.708 included (a), (b), (c) and (d). CAR M.708(c) and (d) cover the contractual maintenance arrangement,	

	CAR M.708 (b) (11) and (12) added to define the CAMO support for issuance of the CFFF, GM CAR M.708, GM CAR M.708(b)(4) and GM CAR M.708(c) added, AMC1 to CAR M.708(c), AMC2 CAR M.708(c) and AMC to CAR M.708 (d) were added. AMC to CAR M.708 (b) and AMC to CAR M.708 (b) (1) were deleted. CAR M.709 (b) amended for clarity, GM CAR-M.709 added, CAR M.710 (e) and CAR M.710 (h) amended for clarity, GM CAR M.710 added, AMC to CAR M.710(d) amended to add new paragraph, GM CAR M.710(h) added, AMC CAR M.711(a)(3) added and the equivalent AMC to CAR M.201 (h)1 deleted CAR M.715 amended, CAR M.716 amended, CAR M.901 (L) amended to read reserved, AMC to CAR M.901 amended to remove the unnecessary text, AMC to CAR M.901(b) amended, AMC to CAR M.904 (a) 2 revised to add item (3)	
Issue 05	- CAR M issue 4 “Summary of Changes” amended for clarity and sequential order, - Provisions added to “Definitions”; ATO means Approved Training Organization, - CAR M.201(i) amended to add provisions for other than complex motor-powered aircraft not included in CAR M.201(e) and CAR M.201(h), - GM to CAR M.402(a) amended to remove the incorrect reference made to “Annex I (Part-M) to Regulation (EU) No 1321/2014.]”, - Incorrect numbered CAR M.603 corrected. - Incorrectly numbered AMC to CAR M.704 corrected by introducing AMC1 CAR M.704, AMC2 CAR M.704 and AMC CAR M.704(a)(2) and deletion of the AMC CAR M.704 - CAR M.801 amended and numbering corrected, - Appendix VII to CAR M “Complex Maintenance Tasks” added, - CAR M.501 Installation changed to CAR M.501 Classification and installation - A reference was made to CAR MOA in CAR M.501 (a)(1) to refer to AW Form 299 requirement. AW Form 299 is specified as equivalent to AW Form 1 for eligible parts as specified in the AMC - Item (b) added to note (2) in AMC1 CAR M.501(a)(1) to address the release of the UAE engines. - AMCs CAR M.501(a), (b), (c) and (d) ‘Installation’ deleted.	

	- NOTE 3 added to AMC1 to CAR M.501(a)(1) to define certain commercial parts eligibility for installation on UAE registered aircraft, - GM1 CAR M.501(a)(2) Classification and installation, added, - AMC1 CAR M.501(a)(3) Classification and installation, added - AMC1 CAR M.501(a)(4) Classification and installation, added - AMC2 CAR M.501(a)(4) Classification and installation, added - AMC CAR M.501(a)(5) Classification and installation, added - GM1 CAR M.501(b) Classification and installation, added - GM2 CAR M.501(b) Classification and installation, added, - CAR M.503 (a) amended for consistency with the introduced changes in CAR M.504 - CAR M.504 Control of Unserviceable Components was replaced by the new CAR M.504 Segregation of components, - AMC1 CAR M.504 Segregation of components, added - GM1 CAR M.504 Segregation of components - CAR M.606 (g) changed - New AMC AMC to CAR M.606 (g)(2) Personnel requirement, introduced, - CAR M.608, item (c) changed, - CAR M.709(b) amended for clarity of the requirements, - AMC to CAR M.802 Component certificate of release to service, amended, - Note added to AMC CAR M.711(a)(3), item-8 to address the requirement for subcontracting storage of digital records/or data, records' storage facilities and maintenance management software tools, - AMC CAR M.711(a)(3), item (8) amended to address subcontracting support tasks for continuing airworthiness, - CAR M.901(b)(1) amended to replace; "…single continuing airworthiness …" by "… unique continuing airworthiness …", - GM to Appendix II to CAR-M Use of the AW Form 1 for maintenance, amended, - Appendix V to AMC CAR M.704, items; Part-4, 5.3 and 5.5 amended to cope with CAR M at Issue-4, - CAR M.801(b)(3) amended to make reference to CAR M.803, - Provisions added; CAR M.803 Pilot-owner authorization and AMC CAR M.803 Pilot-owner authorization.	

Issue 06	- CAR M, Foreword, Objective and Scope amended to add provision about Supplement S-1.CAMO applicability and effective date, - Standard changes and standard repairs definitions added, - CAR M Amendment History revised to include the list of changes introduced on issue 6, CAR M.001, point 3 amended to add provision about the Supplement S-1.CAMO, - CAR M.101, minor editing for clarity - CAR M.201 (e), (f), (g), (h) and (i) amended to clarify the airworthiness responsibilities for aircraft used by air carriers, CMPA, NCMPA, aircraft used for commercial specialized operations, aircraft used for CAT and aircraft used by commercial ATO, - CAR M.201(j) amended for clarity on the access to be given by the owner/operator to the GCAA authorized persons. - CAR M.201(k), new provisions added to address the applicable regulations when the air operator aircraft is used for non-commercial operations or specialised operations. - CAR M 201(l), introduced to mandate Subpart-I approval for Commercial Operations - New GM CAR M.201 Responsibilities; Quick summary table - AMC CAR M.201(e)(2) Responsibilities, amended to clarify when the CAMO shall hold Subpart I privilege - New GM CAR M.201(i) Aircraft maintenance programme - New AMC CAR M.201(i)(3) Responsibilities; LIMITED CONTRACT FOR THE DEVELOPMENT OF THE AMP - New GM1 CAR M.201(k) Responsibilities; USE OF AIRCRAFT INCLUDED IN AN AOC FOR NCO OR SPO - CAR M.202 amended to clarify the responsibilities for reporting and new provision CAR M.202(e) added to point out the responsibilities for follow up actions to prevent similar occurrences in the future. - CAR M.301 amended to give clarity on the continuing airworthiness tasks, adding the maintenance release requirements in CAR M.301(4) and the mass and balance statement requirement in CAR M.301(8), - AMC to CAR M.301(a) - Continuing Airworthiness Tasks, Pre-flight Inspections, minor changes to make reference to the Supplement S-1.CAMO.200 and numbering change to the AMC to CAR M.301(1) at issue-5. - AMC to CAR M.301(2) changed to AMC to CAR M.301(b), - AMC to CAR M.301(3) changed to AMC to CAR M.301(c), and adding a title MAINTENANCE IN ACCORDANCE WITH THE AMP - AMC to CAR M.301(4) changed to AMC to CAR M.301(e), - AMC to CAR M.301(5) changed to AMC to CAR M.301(f), and adding title OPERATIONAL DIRECTIVES and clarification on the implementation requirements, - AMC to CAR M.301(7) - Continuing Airworthiness Tasks deleted. - New GM CAR M.301(i) Continuing airworthiness tasks; MAINTENANCE CHECK FLIGHTS (MCFs). CFFF issuance requirements added to the GM,	13th February 2023

	- CAR M.302 amended for clarity on the requirements, the requirements in point CAR M.302(d)(iii) deleted and replaced by CAR M.302(e), - AMC to CAR M.302(f) Aircraft Maintenance Programme changed to read AMC to CAR M.302(g) Aircraft Maintenance Programme - CAR M.303 amended to clarify that the GCAA may issue additional instruction for compliance, - CAR M.304 amended to clarify the responsibilities for damage assessment, - CAR M.304(C) amended to refer to standard repairs and standard changes as specified in CAR 21, - CAR M.305 amended to comprehensively define the aircraft continuing airworthiness record system and its content. - CAR M.305(c) deleted and replaced with the comprehensive clauses in the amended CAR M.305(b), - New CAR M.305(c) has captured the old CAR M.305(d) with additional amendment for clarity - New CAR M.305(d) has specific provision for life-limited parts and the time- controlled components - CAR M.305(e) amended to clarify the documents keeping system that has to be established, - CAR M.305(f) updated to clarify the responsibilities for the continuing airworthiness records and presentation the records to the GCAA, - CAR M.305(h) deleted. Its provisions were added to the CAR M.305(e) documents keeping system. - New GM CAR M.305 Aircraft continuing airworthiness record system clarifying the content of the records and compliance status reports; LLPs, Time controlled components, in service history records …etc. - New AMC CAR M.305(a) Aircraft continuing airworthiness record system, CRS, - New AMC CAR M.305(b)1 Aircraft continuing airworthiness record system, IN-SERVICE LIFE FOR ENGINES, PROPELLERS AND APU'S - New AMC CAR M.305(c)1 Aircraft continuing airworthiness record system, ADs, - New AMC CAR M.305(c)2 Aircraft continuing airworthiness record system, MODIFICATIONS AND REPAIRS - New GM CAR M.305(c)(2) Aircraft continuing airworthiness record system, IMPACT OF MODIFICATIONS AND REPAIRS, - New AMC CAR M.305(c)3 Aircraft continuing airworthiness record system, AIRCRAFT MAINTENANCE PROGRAMME - New GM CAR M.305(d) Aircraft continuing airworthiness record system, LIFE-LIMITED PARTS AND TIME-CONTROLLED COMPONENTS - NEW GM CAR M.305(d)(2) Aircraft continuing airworthiness record system, TASKS CONTROLLED AT COMPONENT LEVEL	

	- New AMC CAR M.305(e) Aircraft continuing airworthiness record system, INFORMATION TECHNOLOGY (IT) SYSTEMS AND FORM OF RECORDS - New AMC CAR M.305(e)(1) Aircraft continuing airworthiness record system, ATL retention period. - New AMC CAR M.305(e)(2) Aircraft continuing airworthiness record system, component certificate of conformity and AD with several steps - New GM CAR M.305(e)(2) Aircraft continuing airworthiness record system, - New AMC CAR M.305(e)(3) Aircraft continuing airworthiness record system, in-service history records, - New AMC CAR M.305(f) Aircraft continuing airworthiness record system, responsibility for retention and transfer of records, - Deleted; AMC to CAR M.305(d) Aircraft Continuing Airworthiness Record System - Deleted; AMC CAR M.305(d)(4) and CAR M.305(h) Aircraft continuing airworthiness record system - Deleted; AMC to CAR M.305 Aircraft Continuing Airworthiness Record System - Deleted; AMC to CAR M.305 Aircraft Continuing Airworthiness Record System - CAR M.306 amended to clarify the system requirements for CAT, commercial specialised operations and commercial ATO or commercial DTO operations, as well as the approval and the subsequent amendment management. - CAR M.307 edited for clarity. - Update CAR M.401(b)(3) to clarify the applicable ICAs, - CAR M.403(b) simplified when the MEL is used by the pilot or the authorized certifying staff to defer defects. - CAR M.403(d) rearranged for more clarity. - CAR M.502(b) updated for clarity on maintenance of component while on the aircraft, - CAR M.502(c) updated for clarity on maintenance of component while it is fitted to an engine or APU. - CAR M.503 title changed to “Life-limited parts and time-controlled components”, amended for clarity. - CAR M.504(b) amended for more clarity. - CAR M.703(b) amended to clarify that a CAMO is part of the AOC for air carriers. - CAR M.704(a)(1)&(7) amended to extend its applicability to CAR-ML - CAR M.704(a)(9) amended to address the list of the approved AMP. - CAR M.706(a) amended to extend its applicability to CAR-ML, - CAR M.706(b), (d)&(k) amended to address the requirements applicable to the Commercial Air Operator - CAR M.706(c) amended to clarify the responsibilities and to extend the applicability to CAR-ML,	

	- CAR M.707(a) amended to extend the applicability to CAR-ML, - CAR M.707(a) amended to clarify the requirements in relation to aircraft used by commercial air operators, CMPA and NCMPA, - CAR M.708 (a)&(b) amended to add CAR-ML applicability requirements, - CAR M.708(c) amended to add applicability to CAR-ML, - CAR M.708(d) amended to add applicability to CAR-ML, - CAR M.710 amended to transfer the detailed airworthiness review process to CAR M.901, - CAR M.711 amended to address requirements applicable to commercial air operators, - CAR M.712 editorial changes and addressing the integrated QS for air carriers. - CAR M.714 amended to address documents retention in relation to CAR ML, - CAR M.801 rephrased for more clarity on who issues the CRS and the contents of the CRS, - New AMC CAR M.801 Aircraft certificate of release to service after embodiment of a Standard Change or a Standard Repair (SC/SR) - New AMC CAR M.801(c) Aircraft certificate of release to service; AIRCRAFT GROUNDED AT OTHER LOCATIONS - New AMC CAR M.801(e) Aircraft certificate of release to service; content, maintenance reference, issuance and records. (Note: This AMC is a replacement of the old AMC to CAR M.801(f) Aircraft certificate of release to service, which was deleted) - New AMC CAR M.801(f) Aircraft certificate of release to service; INCOMPLETE MAINTENANCE (Note: This new AMC replaces the old AMC to CAR M.801(g) Aircraft certificate of release to service regarding the incomplete maintenance. old AMC to CAR M.801(g) deleted) - New AMC CAR M.801(g) Aircraft certificate of release to service, meaning of 'Endangers flight safety'. (Note: This AMC replaces AMC to CAR M.801(h), which was deleted. - CAR M.802 editorial changes, - CAR M.803 editorial changes and changing the term logbooks into aircraft continuing airworthiness record system - CAR M.901(a) editorial changes - CAR M.901(b) editorial changes - CAR M.901(c)&(d) amended for clarity on the Airworthiness Review of aircraft used by commercial air operators, aircraft above 2730 KG MTOM, - CAR M.901(e) amended for clarity on the Airworthiness Review of aircraft not used by commercial air operators and aircraft below 2730 KG MTOM - Editorial changes to CAR M.901(h) and (CAR M.901(i) and clarification regarding when the GCAA inspector might carry out the airworthiness review and issue the ARC,	

	- CAR M.901 (j) and CAR M.901(s) amended to clarify when the ARC shall not be issued or extended, - CAR M.901(k), (l), (m), (n), (o), (p), (q), (r) and (s) contain the requirements which previously provided in CAR-M issue-5 at CAR M.710(a) through (h), - CAR M.901(p), provision clarifies the requirements for ARC endorsement by the GCAA, - Displacement of "GM CAR M.710 Airworthiness review" into GM CAR-M.901 Airworthiness review; Responsibilities of airworthiness review staff. - Changing "AMC to CAR M.901(a) Aircraft airworthiness review" to read GM CAR M.901(a) Aircraft airworthiness review - AMC to CAR M.901(b) revised to include provision regarding limited pilot-owner maintenance defined in CAR M.803(b), - AMC to CAR M.901(i) amended to make reference to CAR-66 and to remove the reference to CAR-M Subpart H or CAR 145, - AMC CAR M.901(k) Aircraft airworthiness review replaced the previous AMC to CAR M.710(a) Airworthiness review. - AMC CAR M.901(l) and (m) Aircraft airworthiness review replaced the previous AMC to CAR M.710(b) and CAR M.710(c). - AMC CAR M.901(n) Aircraft airworthiness review replaced the previous AMC to CAR M.710(d) Airworthiness review. - AMC CAR M.901(o) Airworthiness review replaced the previous AMC to CAR M.710(e) Airworthiness review. - CAR M.902(a)(5), CAR M.902(b)(2) and CAR M.902(b)(5) editorial change. - CAR M.904(b) amended to clarify that the organization who performed the airworthiness review shall send the recommendation to the GCAA, **Other amendments:** - AMC to CAR M.605(c), item 7 amended to remove reference to CAR M.504 (d)&(e) and to update the reference to CAR M.504 (c) and AMC1 CAR M.504, item (c). - Supplement S-1.CAMO added to supplement the continuing airworthiness management of any aircraft used by CAT Air Operators and the CMPA with additional requirements, - APPENDIX I - CONTINUING AIRWORTHINESS MANAGEMENT CONTRACT updated to match the regulation changes, renumbering (paragraphs 5.2, 5.3 and 5.4) to items 8, 9 and 10, renumbering owner obligations and adding items 11 and 12, adding paragraph 6 in respect of mandatory and voluntary occurrence reporting. - Added, GM to Appendix I to CAR M - Continuing airworthiness management contract, in relation to the required coordination between Flight Operations and CAMO - APPENDIX II - AUTHORISED RELEASE CERTIFICATE – AW FORM 1, editorial changes	

	- APPENDIX IV - CLASS AND RATINGS SYSTEM TO BE USED FOR THE APPROVAL OF MAINTENANCE ORGANISATIONS REFERRED TO IN CAR M SUBPART-F AND CAR-145, editorial changes and addition of point (8) regarding category A class ratings line and base approvals requirements. - APPENDIX VII Complex Maintenance Tasks, editorial changes, - New AMC added, **AMC to Appendix VII — Complex Maintenance Tasks** - New AMC added, **AMC to Appendix VIII — Limited Pilot Owner Maintenance** - APPENDIX I TO AMC CAR M.302; note added regarding references to CAMO or CAR 145, editorial changes, changes to cross reference to CAR-AIR-OPS, - Paragraph 6.4 Performance Standards in Appendix I to AMC M.A.302 was moved to GM 1 to Appendix I to AMC M.A.302 Performance Standards - Appendix I to AMC CAR M.302 updated with references to CAR AIR OPS and "Performance Standards" placed into new **GM 1 to Appendix I to AMC M.A.302,** - APPENDIX II TO AMC CAR M.711(a)(3) amended to provide more clarifications in the responsibilities, - APPENDIX V TO AMC1 CAR M.704 amended to add requirements for flight permit procedures (Conformity with approved flight conditions, issue of flight permit, Interface with the local authority for the flight and records retention); Procedures for the development of maintenance contracts, and for agreement between the CAMO and the operator. - APPENDIX XI TO AMC CAR M.708(c) updated to provide more clarity on the responsibilities	

CAR-M

CAR M.001

For the purpose of this CAR, the General Civil Aviation Authority of the United Arab Emirates (GCAA) undertakes the responsibilities for:

1. Oversight of the continuing airworthiness of individual aircraft and the issue of airworthiness review certificates for aircraft registered in the State.

2. Oversight of maintenance organisations as specified in Subpart F of CAR-M.

3. Oversight of continuing airworthiness management organisations as specified in Subpart G of CAR-M and the Supplement S-1.CAMO, where the supplement applies.

4. Approval of maintenance programmes for aircraft registered in the United Arab Emirates.

SECTION A: TECHNICAL REQUIREMENTS

SUBPART A - GENERAL

CAR M.101 Scope

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

SUBPART B – ACCOUNTABILITY

CAR M.201 Responsibilities

(a) The owner is responsible for the continuing airworthiness of an aircraft and shall ensure that no flight takes place unless:

1. the aircraft is maintained in an airworthy condition, and;

2. any operational and emergency equipment fitted is correctly installed and serviceable or clearly identified as unserviceable, and;

3. the certificate of airworthiness remains valid, and;

4. the maintenance of the aircraft is performed in accordance with the approved maintenance programme as specified in CAR M.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 shall be responsible for the tasks performed.

(d) The pilot-in-command or, in the case of operators conducting commercial operations, the operator shall be responsible for the satisfactory accomplishment of the pre-flight inspection. This inspection must be carried out by the pilot or another qualified person but need not be carried out by an approved maintenance organisation or by CAR-66 certifying staff.

(e) In the case of aircraft used by air carriers, the operator is responsible for the continuing airworthiness of the aircraft it operates and shall:

1. ensure that no flight takes place unless the conditions defined in point (a) are met;

2. be approved, as part of its air operator certificate, as a continuing airworthiness management organisation pursuant to CAR M Subpart G (CAMO) and the requirement in Supplement-1 CAMO for the aircraft it operates; and

3. be approved in accordance with CAR-145 or conclude a written contract in accordance with CAR M.708(c) and Supplement S-1.CAMO.315(c) with organization, which has been approved in accordance with CAR-145.

(f) For complex motor-powered aircraft used for commercial specialised operations, for CAT operations other than those performed by air carriers or by commercial Approved Training Organizations (ATO), the operator shall ensure that:

1. no flight takes place unless the conditions defined in paragraph (a) are met;
2. the tasks associated with continuing airworthiness are performed by a CAMO approved in accordance with CAR M Subpart G and Supplement-1 CAMO requirements as part of the air operator certificate, and
3. the CAMO referred to in (2) is approved in accordance with CAR-145 for the maintenance of the aircraft and components for installation thereon, or it has established a contract in accordance with CAR M.708(c) and Supplement S-1.CAMO.315(c) with such organisations.

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

1. no flight takes place unless the conditions defined in paragraph (a) are met;
2. the tasks associated with continuing airworthiness are performed by a CAMO approved in accordance with CAR M Subpart G and Supplement-1 CAMO requirements. When the owner is not CAMO approved itself then the owner shall establish a written contract in accordance with Appendix I with such organisation, and
3. the CAMO referred to in (2) is approved in accordance with CAR-145 for the maintenance of the aircraft and components for installation thereon, or it has established a contract in accordance with CAR M.708(c) and Supplement S-1.CAMO.315(c) with such organisations.

(h) For other than complex motor-powered aircraft used for commercial specialised operations or for CAT operations other than those performed by air carriers, or by commercial ATOs, the operator shall ensure that:

1. no flight takes place unless the conditions defined in point (a) are met;
2. the tasks associated with continuing airworthiness are performed by an approved CAMO in accordance with CAR M Subpart G as part of the air operator certificate, and
3. the CAMO referred to in point (2) is approved in accordance with CAR-145 or CAR-M Subpart-F or the CAMO has concluded a maintenance contract in accordance with CAR M.708(c) with organization approved in accordance with CAR-145 or CAR-M Subpart-F.

(i) For other than complex motor-powered aircraft not included in point (e) and (h), the owner shall ensure that flight takes place only if the conditions set out in point (a) are met. To that end, the owner shall:

(1) attribute the continuing airworthiness tasks referred to in CAR M.301 to a CAMO through a written contract concluded in accordance with Appendix I; or
(2) (Reserved)
(3) carry out those tasks as applicable by himself, except the tasks of the development of and the processing of the approval of the AMP which should be performed by a CAMO through a limited contract concluded in accordance with CAR M.302.

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

(k) Where an aircraft included in an air operator certificate is used for non-commercial operations or specialised operations under the applicable CAR OPS, the operator shall ensure that the tasks associated with continuing airworthiness are performed by the CAMO approved in accordance with CAR M Subpart G and Supplement S-1.CAMO requirements as applicable, of the air operator certificate holder.

(l) For all Commercial Operations (CAT & Other than CAT), the CAMO approved pursuant to requirements of CAR-M, shall establish a capability for airworthiness review and shall be approved in accordance with subpart I of CAR-M.

GM CAR M.201 Responsibilities

Summary table

Type of operation and your category of aircraft			**Complex motor-powered aircraft**		**Other-than-complex motor powered aircraft (aircraft subject to CAR ML are excluded here)**	
			CAMO requirement for the management of Continuing Airworthiness	Maintenance to be carried out by	CAMO requirement for the management of Continuing Airworthiness	Maintenance to be carried out by
Commercial operations	CAT	Air carriers	CAMO with Supplement S-1 and it shall be part of the AOC (CAR M.201(e))	Organization holding approval under CAR-145 (CAR M.201(e))	CAMO with supplement -S1 and it shall be part of the AOC (CAR M.201(e))	Organization holding approval under CAR-145 (CAR M.201(e))
		CAT other than Air Carriers	CAMO with Supplement S-1 and it shall be part of the AOC (CAR M.201(f))	Organization holding approval under CAR-145 (CAR M.201(f))	CAMO and it shall be part of the AOC. (CAR M.201(h))	Organization holding approval under CAR-M Subpart F or CAR-145 (CAR M.201(h))
	Commercial operations other than CAT	Commercial Specialized Operations	CAMO with Supplement S-1 and it shall be part of the AOC (CAR M.201(f))	Organization holding approval under CAR-145 (CAR M.201(f))	CAMO and it shall be part of the AOC. (CAR M.201(h))	Organization holding approval under CAR-M Subpart F or CAR-145 (CAR M.201(h))
		Commercial Training Organization (ATO)	CAMO with Supplement S-1 and it shall be part of the AOC (CAR M.201(f))	Organization holding approval under CAR-145 (CAR M.201(f))	CAMO and it shall be part of the AOC. (CAR M.201(h))	Organization holding approval under CAR-M Subpart F or CAR-145 (CAR M.201(h))
Other than commercial Operations, including limited			CAMO with supplement -S1 (CAR M.201(g))	Organization holding approval	CAMO function can be contracted to an approved CAMO or by Owner	Organization holding approval under CAR-M Subpart F or CAR-145 OR Pilot owner

operations		under CAR-145 (CAR M.201(g))	except development of AMP. It can be contracted (CAR M.201(i))	maintenance within the limit. (CAR M.201(i))

AMC CAR M.201 Responsibilities

1. Commercial Air Operators need 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 or equivalent.
2. CAR M does not provide for CAMOs to be independently approved to perform continuing airworthiness management tasks on behalf of Commercial Air Operator. 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 CAR M.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 de-icing and/or anti-icing fluid residues are considered maintenance. Such inspections may only be carried out by suitably authorised personnel.

GM CAR M.201(i) Responsibilities

The owner is fully responsible for the proper accomplishment of the continuing airworthiness tasks he/she performs. 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 CAR M.201(i)(3) Responsibilities

LIMITED CONTRACT FOR THE DEVELOPMENT OF THE AMP

The limited contract for the development and, when applicable, processing of the approval of the aircraft maintenance programme should cover the responsibilities related to CAR M.302(d), CAR M.302(f) and CAR M.302(h).

GM1 CAR M.201(k) Responsibilities

USE OF AIRCRAFT INCLUDED IN AN AOC FOR NCO OR SPO

As point (k) is not a derogation from the previous points of CAR M.201, points CAR M.201(f), (g), (h) and (i) are still applicable.

CAR M.202 Occurrence Reporting

(a) Without prejudice to the reporting requirements set out in CAR-145, any person or organisation responsible in accordance with CAR M.201 shall report to the GCAA, 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) The reports referred to in (a) shall be made in a manner determined by the GCAA and shall contain all pertinent information about the condition known to the person or organisation making the report.

(c) Where the maintenance or the airworthiness review of the aircraft is carried out on the basis of a written contract, the person or the organisation responsible for those activities shall also report any condition referred to in (a) to the owner and the operator of the aircraft and, when different, to the CAMO concerned.

(d) The person or organisation shall submit the reports referred to in (a) and (c) as soon as possible, but no later than 72 hours from the moment when the person or organisation identified the condition to which the report relates, unless exceptional circumstances prevent this.

(e) The person or organisation shall submit a follow-up report, providing details of actions which that person or organisation intends to take to prevent similar occurrences in the future, as soon as those actions have been identified. The follow-up report shall be submitted in a form and manner established by the GCAA.

AMC to CAR M.202(a) Occurrence reporting

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

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

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

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

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

In any case, AMC-22 should be consulted to determine if a particular case requires reporting to the GCAA.

AMC to CAR M.202(b) Occurrence reporting

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

Each report should contain at least the following information as per the ROSI form and in compliance with AMC-22:

- reporter or organisations 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.

SUBPART C - CONTINUING AIRWORTHINESS

CAR M.301 Continuing Airworthiness Tasks

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

(a) the accomplishment of pre-flight inspections;

(b) the rectification in accordance with the data specified in point CAR M.304 and CAR M.401, as applicable, of any defect and damage affecting safe operation, taking into account the Minimum Equipment List (MEL) and configuration deviation list, when they exist;

(c) the accomplishment of all maintenance, in accordance with the AMP referred to in CAR M.302;

(d) The release of all maintenance in accordance with Subpart H or CAR 145, as applicable;

(e) for all complex motor-powered aircraft or aircraft used for commercial operations, the analysis of the effectiveness of the approved AMP referred to in CAR M.302;

(f) the accomplishment of any applicable:

(1) airworthiness directive,
(2) operational directive with a continuing airworthiness impact,
(3) continued airworthiness requirement established by the GCAA,
(4) measures mandated by the GCAA in immediate reaction to a safety problem;

(g) the accomplishment of modifications and repairs in accordance with CAR M.304;

(h) delivering to the pilot-in-command, or to the operator in the case of commercial operations, the mass and balance statement reflecting the current configuration of the aircraft;

(i) maintenance check flights, when necessary.

AMC to CAR M.301(a) - Continuing Airworthiness Tasks

Pre-flight Inspections

1. With regard to the pre-flight inspection it is intended to mean all of the actions necessary to ensure that the aircraft is fit to make the intended flight. These should typically include but are not necessarily limited to:

   (a) a walk-around type inspection of the aircraft and its emergency equipment for condition including, in particular, any obvious signs of wear, damage or leakage. In addition, the presence of all required equipment including emergency equipment should be established.

(b) an inspection of the aircraft continuing airworthiness record system or the operators technical log as applicable to ensure that the intended flight is not adversely affected by any outstanding deferred defects and that no required maintenance action shown in the maintenance statement is overdue or will become due during the flight.

(c) a control that consumable fluids, gases etc. uplifted prior to flight are of the correct specification, free from contamination, and correctly recorded.

(d) a control that all doors are securely fastened.

(e) a control that control surface and landing gear locks, pitot/static covers, restraint devices and engine/aperture blanks have been removed.

(f) a control that all the aircraft's external surfaces and engines are free from ice, snow, sand, dust etc. and an assessment to confirm that, as the result of meteorological conditions and de-icing/anti-icing fluids having been previously applied on it, there are no fluid residues that could endanger flight safety. Alternatively to this pre-flight assessment, when the type of aircraft and nature of operations allow for it, the build-up of residues may be controlled through scheduled maintenance inspections/cleanings identified in the approved maintenance programme.

2. Tasks such as oil and hydraulic fluid uplift and tyre inflation may be considered as part of the pre-flight inspection. The related pre-flight inspection instructions should address the procedures to determine where the necessary uplift or inflation results from an abnormal consumption and possibly requires additional maintenance action by the approved maintenance organisation or certifying staff as appropriate.

3. The CAMO should publish guidance to maintenance and flight personnel and any other personnel performing pre-flight inspection tasks, as appropriate, defining responsibilities for these actions and, where tasks are contracted to other organisations, how their accomplishment is subject to the quality system of CAR M.712 or the management system required by Supplement S-1.CAMO.200, when applicable. It should be demonstrated to the GCAA that pre-flight inspection personnel have received appropriate training for the relevant pre-flight inspection tasks. The training standard for personnel performing the pre-flight inspection should be described in the operator's continuing airworthiness management exposition.

AMC to CAR M.301(b) - Continuing Airworthiness Tasks

1. the operator should have a system to ensure that all defects affecting the safe operation of the aircraft are rectified within the limits prescribed by the approved minimum equipment list (MEL) or configuration deviation list (CDL) as appropriate. Also that such defect rectification cannot be postponed unless agreed by the operator and in accordance with a procedure approved by the GCAA.

2. When deferring or carrying forward a defect rectification, the cumulative effect of a number of deferred or carried forward defects on a given aircraft and any restrictions contained in the MEL should be considered. Whenever possible, deferred defect rectification should be made known to the pilot/flight crew prior to their arrival at the aircraft

3. In the case of aircraft used by air carrier and commercial air transport or complex motor-powered aircraft, a system of assessment should be in operation to support the continuing airworthiness of an aircraft and to provide a continuous analysis of the effectiveness of the CAMO defect control system in use.

The system should provide for:

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

(b) repetitive incidents and defects: monitor on a continuous basis defects occurring in flight and defects found during maintenance and overhaul, highlighting any that are repetitive.

(c) deferred and carried forward defects: Monitor on a continuous basis deferred and carried forward defects. Deferred defects are defined as those defects reported in operational service which are deferred for later rectification. Carried forward defects are defined as those defects arising during maintenance which are carried forward for rectification at a later maintenance input.

(d) unscheduled removals and system performance: analyse unscheduled component removals and the performance of aircraft systems for use as part of the maintenance programme efficiency.

AMC to CAR M.301(3) - Continuing Airworthiness Tasks

MAINTENANCE IN ACCORDANCE WITH THE AMP

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

AMC to CAR M.301(e) - Continuing Airworthiness Tasks

The operator or CAMO as applicable should have a system to analyse the effectiveness of the maintenance programme, with regard to spares, established defects, malfunctions and damage, and to amend the maintenance programme accordingly.

AMC to CAR M.301(f) - Continuing Airworthiness Tasks

OPERATIONAL DIRECTIVES

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 continuing airworthiness requirement established by the GCAA, other competent authority, as applicable, includes TC-related requirements such as: certification maintenance requirements (CMR), 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.

The operator is responsible for the incorporation of operational directives (ODs) and in cases where there is an impact on the continuing airworthiness, the CAMO has to assess this and take appropriate actions to ensure the continuing airworthiness. The process to incorporate the ODs should be detailed in an arrangement or common procedure.

GM CAR M.301(i) Continuing airworthiness tasks

MAINTENANCE CHECK FLIGHTS (MCFs)

(a) The definition of and operational requirements for MCFs are laid down in the Air Operations Regulation and are carried out under the control and responsibility of the aircraft operator. During the flight preparation, the flight and the post-flight activities as well as for the aircraft handover, the processes requiring the involvement of the maintenance organisations or their personnel should be agreed in advance with the operator. The operator should consult as necessary with the CAMO in charge of the airworthiness of the aircraft.

(b) Depending on the aircraft defect and the status of the maintenance activity performed before the flight, different scenarios are possible and are described below:

(1) The aircraft maintenance manual (AMM), or any other maintenance data issued by the design approval holder, requires that an MCF be performed before completion of the maintenance ordered. In this scenario, a certificate after incomplete maintenance and a CFFF, when in compliance with CAR M.801(f) or CAR 145.50(e), should be issued by the maintenance organisation and the aircraft can be flown for this purpose under its airworthiness certificate. Due to incomplete maintenance, for aircraft used for commercial operations, it is advisable to open a new entry on the aircraft technical log system to identify the need for a MCF. This new entry should contain or refer to, as necessary, data relevant to perform the MCF, such as aircraft limitations and any potential effect on operational and emergency equipment due to incomplete maintenance, maintenance data reference and maintenance actions to be performed after the flight. After a successful MCF, the maintenance records should be completed, the remaining maintenance actions finalised and the aircraft released to service in accordance with the maintenance organisation's approved procedures.

(2) Based on its own experience and for reliability considerations and/or quality assurance, an operator or CAMO may wish to perform a MCF after the aircraft has undergone certain maintenance while maintenance data does not call for such a flight. Therefore, after the maintenance has been properly carried out, a certificate of release to service is issued and the aircraft airworthiness certificate remains valid for this flight.

(3) After troubleshooting of a system on the ground, a MCF is proposed by the maintenance organisation as confirmation that the solution applied has restored the normal system operation. During the maintenance performed, the maintenance instructions are followed for the complete restoration of the system and therefore a certificate of release to service is issued before the flight. The airworthiness certificate is valid for the flight. An open entry requesting this flight may be recorded in the aircraft technical log.

(4) An aircraft system has been found to fail, the dispatch of the aircraft is not possible in accordance with the maintenance data, and the satisfactory diagnosis of the cause of the fault can only be made in flight. The process for this troubleshooting is not described in the maintenance data and

therefore scenario (1) does not apply. Since the aircraft cannot fly under its airworthiness certificate because it has not been released to service after maintenance, a permit to fly issued in accordance with CAR 21 is required. After the flight and the corresponding maintenance work, the aircraft can be released to service and continue to operate under its original certificate of airworthiness.

(c) For certain MCFs the data obtained or verified in flight will be necessary for assessment or consideration after the flight by the maintenance organisation prior to issuing the maintenance release. For this purpose, when the personnel of the maintenance organisation cannot perform these functions in flight, the maintenance organisation may rely on the crew performing the flight to complete this data or to make statements about in-flight verifications. In this case, the maintenance organisation should appoint the crew personnel to play such a role on their behalf and, before the flight, brief appointed crew personnel on the scope, functions and the detailed process to be followed, including required reporting information after the flight and reporting means, in support of the final release to service to be issued by the certifying staff.

CAR M.302 Aircraft Maintenance Programme

(a) Maintenance of each aircraft shall be organised in accordance with an AMP.

(b) The aircraft maintenance programme and any subsequent amendments shall be approved by the GCAA.

(c) When the continuing airworthiness of the aircraft is managed by a CAMO, or when there is a limited contract between the owner and a CAMO concluded in accordance with CAR M.201(i)(3), The AMP and its amendments may be approved through an indirect approval procedure.

In that case, the indirect approval procedure shall be established by the CAMO as part of the Continuing Airworthiness Management Exposition (CAME) referred to in CAR M.704 and shall be approved by the GCAA.

(d) The AMP shall demonstrate compliance with:

(i) instructions issued by the GCAA;

(ii) instructions for continuing airworthiness:

- issued by the holders of the type certificate, restricted type certificate, supplemental type certificate, major repair design approval, ETSO authorisation or any other relevant approval issued under CAR-21, and
- included in the certification specifications referred to in point 21.90B or 21.431B of CAR-21, if applicable

(iii) additional or alternative instructions proposed by the owner or the continuing airworthiness management organisation once approved in accordance with CAR M.302, except for intervals of safety related tasks referred in paragraph (e), which may be escalated, subject to sufficient reviews carried out in accordance with paragraph (h) and only when subject to direct approval in accordance with CAR M.302(b).

(e) By derogation to point (d), the owner or the organisation managing the continuing airworthiness of the aircraft may deviate from the instruction referred to in point (d)(ii) and propose escalated

intervals in the AMP, based on data obtained from sufficient reviews carried out in accordance with point (h). Indirect approval is not permitted for the escalation of safety-related tasks, except due to MPD revision. The owner or the organisation managing the continuing airworthiness of the aircraft may also propose additional instructions in the AMP.

(f) The AMP shall contain details, including frequency, of all maintenance to be carried out, including any specific tasks linked to the type and the specificity of operations.

(g) For complex motor-powered aircraft, when the AMP is based on maintenance steering group logic or on condition monitoring, the AMP shall include a reliability programme.

(h) The AMP shall be subject to periodic reviews and be amended accordingly when necessary. Those reviews shall ensure that the AMP continues to be up to date and valid in light of the operating experience and instructions from the GCAA, while taking into account new or modified maintenance instructions issued by the type certificate and supplementary type certificate holders and any other organisation that publishes such data in accordance with CAR-21.

AMC to CAR M.302 Aircraft Maintenance Programme

(see Appendices to CAR M - Appendix I to AMC to CAR M.302)

1. The term “maintenance programme” is intended to include scheduled maintenance tasks the associated procedures and standard maintenance practises. The term “maintenance schedule” is intended to embrace the scheduled maintenance tasks alone.

2. The aircraft should only be maintained to one approved maintenance programme at a given point in time. Where an owner or operator wishes to change from one approved programme to other, a transfer check or inspection may need to be performed in order to implement the change.

3. The maintenance programme details should be reviewed at least annually. As a minimum revisions of documents affecting the programme basis need to be considered by the owner or operator for inclusion in the maintenance programme during the annual review. Applicable mandatory requirements for compliance with instructions promulgated by the type certificate and relevant supplementary type certificate holders and any other organisation that publishes such data in accordance with CAR-21 or in accordance with any other equivalent regulation recognised by the GCAA should be incorporated into the aircraft maintenance programme as soon as possible

4. The aircraft maintenance programme should contain a preface which will define the maintenance programme contents, the inspection standards to be applied, permitted variations to task frequencies and where applicable, any procedure to manage the evolution of established check or inspection intervals.

5. Repetitive maintenance tasks derived from modifications and repairs should be incorporated into the approved maintenance programme.

6. Appendix 1 to AMC CAR M.302 provides detailed information on the contents of an approved aircraft maintenance programme.

GM to CAR M.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 to CAR M.302(d) Aircraft Maintenance Programme

1. An aircraft maintenance programme should normally be based upon the maintenance review board (MRB) report where applicable, the maintenance planning document (MPD), the relevant chapters of the maintenance manual or any other maintenance data containing information on scheduling. Furthermore, an aircraft maintenance programme should also take into account any maintenance data containing information on scheduling for components.

2. Instructions issued by the GCAA 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 GCAA 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 should normally develop the initial aircraft maintenance programme based upon the MRB report.

4. Where an aircraft is maintained in accordance with an aircraft maintenance programme based upon the MRB report process, any associated programme for the continuous surveillance of the reliability, or health monitoring of the aircraft should be considered as part of the aircraft maintenance programme.

5. Aircraft maintenance programmes for aircraft types subjected to the MRB report process should contain identification cross reference to the MRB report tasks such that it is always possible to relate such tasks to the current approved aircraft maintenance programme. This does not prevent the approved aircraft maintenance programme from being developed in the light of service experience to beyond the MRB report recommendations but will show the relationship to such recommendations

6. Some approved aircraft maintenance programmes, not developed from the MRB process, utilise reliability programmes. Such reliability programmes should be considered as a part of the approved maintenance programme.

7. Alternate and/or additional instructions to those defined in paragraphs CAR M.302(d)(i) and M.302(d)(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 CAR-M.302 recommends that the maintenance programme contains the corresponding escalation procedures. The escalation of these tasks is directly approved by the GCAA, except in the case of ALIs (Airworthiness Limitations), which will only be approved by the state of design.

- 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 to CAR M.302(g) Aircraft Maintenance Programme

1. Reliability programmes should be developed for aircraft maintenance programmes based upon maintenance steering group (MSG) logic or those that include condition monitored components or that do not contain overhaul time periods for all significant system components.
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. Appendix I, section 6 (Reliability Programmes) AMC to CAR M.302 gives further guidance.

CAR M.303 Airworthiness Directives

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

AMC to CAR M.303 Applicable Airworthiness Directives

The applicable airworthiness directives are:

- Airworthiness Directives issued by the GCAA.
- Those issued by the issuing authority of the Type Certificate accepted by the GCAA.
- For aircraft registered in the UAE prior to January 2006, those AD's that are issued by the issuing authority of the Type Certificate.
- For aircraft registered between 01 January 2006 and prior to entry into force of this regulation, those AD's that are issued by the issuing authority of the Type Certificate based on which the UAE C of A was granted.
- If an aircraft Type Certificate was formally validated in the UAE, the model will follow AD's applicable to the foreign type certificate accepted by the GCAA. In case UAE C of A was issued to a model without formal type validation then the model will follow AD's applicable to State of Design type certificate.

CAR M.304 Data for Modifications and Repairs

A person or organisation repairing an aircraft or a component, shall assess any damage. Modifications and repairs shall be carried out using, as appropriate, the following data:

(a) approved by the GCAA, or

(b) approved by a design organisation complying with CAR-21, or

(c) contained in the requirements for standard changes and standard repairs as defined in this CAR.

AMC to CAR M.304 Data for Modifications and Repairs

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

CAR M.305 Aircraft Continuing Airworthiness Record System

(a) At the completion of any maintenance, aircraft certificate of release to service required by CAR M.801 or CAR 145.50, as applicable, shall be entered in the aircraft continuing airworthiness record system, as soon as practicable but not later than 30 days after the completion of any maintenance.

(b) The aircraft continuing airworthiness record system shall contain the following:

1. the date of the entry in to service, the total in-service life accumulated in the applicable parameter for aircraft, engine(s) and/or propeller(s);
2. the aircraft continuing airworthiness records described in points (c) and (d) below together with the supporting detailed maintenance records described in point (e) below;
3. if required by CAR M.306, the aircraft technical log.

(c) The aircraft continuing airworthiness records shall include the current mass and balance report and the current status of:

1. ADs and measures mandated by the GCAA in immediate reaction to a safety problem;
2. modifications and repairs;
3. compliance with the AMP;
4. deferred maintenance tasks and deferred defects rectification.

(d) The aircraft continuing airworthiness records shall include the current status specific to components of:

1. life-limited parts, including the life accumulated by each affected part in relation to the applicable airworthiness limitation parameter; and
2. time-controlled components, including the life accumulated by the affected components in the applicable parameter, since the last accomplishment of scheduled maintenance, as specified in the AMP.

(e) The owner or operator shall establish a system to keep the following documents and data in a form acceptable to the GCAA and for the periods specified below:

1. aircraft technical log system: the technical log or other data equivalent in scope and detail, covering the 36 months period prior to the last entry,
2. the CRS and detailed maintenance records:

    (i) demonstrating compliance with ADs and measures mandated by the GCAA in immediate reaction to a safety problem applicable to the aircraft, engine(s), propeller(s) and components fitted thereto, as appropriate, until such time as the information contained therein is superseded by new information equivalent in scope and detail but covering a period not shorter than 36 months;

    (ii) demonstrating compliance with the applicable data in accordance with CAR M.304 for current modifications and repairs to the aircraft, engine(s), propeller(s) and any component subject to airworthiness limitations; and

    (iii) of all scheduled maintenance or other maintenance required for continuing airworthiness of aircraft, engine(s), propeller(s), as appropriate, until such time as the information contained therein is superseded by new information equivalent in scope and detail but covering a period not shorter than 36 months.

3. data specific to certain components:

    (i) an in-service history record for each life-limited part based on which the current status of compliance with airworthiness limitations is determined;
    (ii) the CRS and detailed maintenance records for the last accomplishment of any scheduled maintenance and any subsequent unscheduled maintenance of all life-limited parts and time-controlled components until the scheduled maintenance has been superseded by another scheduled maintenance of equivalent scope and detail but covering a period not shorter than 36 months;
    (iii) (Reserved)

4. Record-keeping periods when the aircraft is permanently withdrawn from service:

    (i) the data required by point (b)(1) of CAR M.305 in respect of aircraft, engine(s), and propeller(s) which shall be retained for at least 12 months;
    (ii) the last effective status and reports as identified under points (c) and (d) of CAR M.305 which shall be retained for at least 12 months; and
    (iii) the most recent CRS(s) and detailed maintenance records as identified under points (e)(2)(ii) and (e)(3)(i) of CAR M.305 which shall be retained for at least 12 months.

(f) The person responsible for the management of continuing airworthiness tasks pursuant to CAR M.201, shall comply with the requirements regarding the aircraft continuing airworthiness record system and present the records to the GCAA upon request.

(g) All entries made in the aircraft continuing airworthiness record system shall be clear and accurate. When it is necessary to correct an entry, the correction shall be made in a manner that clearly shows the original entry.

GM CAR M.305 Aircraft continuing airworthiness record system

(a) The aircraft continuing airworthiness records are the means to assess the airworthiness status of a product and its components. An aircraft continuing airworthiness record system includes the processes to keep and manage those records and should be proportionate to the subject aircraft. Aircraft continuing airworthiness records should provide the owner/CAMO of an aircraft with the information needed:
   (1) to demonstrate that the aircraft is in compliance with the applicable airworthiness requirements; and
   (2) to schedule all future maintenance as required by the aircraft maintenance programme based, if any, on the last accomplishment of the specific maintenance as recorded in the aircraft continuing airworthiness records.

(b) 'Applicable airworthiness limitation parameter' and 'applicable parameter' refer to 'flight hours' and/or 'flight cycles' and/or 'landings' and/or 'calendar time', and/or any other applicable utilisation measurement unit, as appropriate.

(c) A 'life-limited part' is a part for which the maintenance schedule of the aircraft maintenance programme requires the permanent removal from service when, or before, the specified mandatory life limitation in accordance with CAR 21 if any of the applicable parameters is reached.

(d) The 'current status' when referring to components of life-limited parts should indicate, for each affected part, the life limitation, the total life accumulated in any applicable parameter (as appropriate) and the remaining life in any applicable parameter before the life limitation is reached.

(e) The term 'time-controlled components' embraces any component for which the maintenance schedule of the aircraft maintenance programme requires periodically the removal for maintenance to be performed in an appropriate approved organisation for maintenance in components (workshop) to return the component to a specified standard, the replacement of sub-components of the assembly by new ones, or the inspection or test of component's performance, after a service period controlled at component level in accordance with the specified airworthiness limitation defined in accordance with CAR 21, in any of the applicable parameters.

(f) The 'current status' when referring to time controlled components refers to the current status of compliance with the required periodic maintenance task(s) from the maintenance schedule of the aircraft maintenance programme specific to the time-controlled components. It should include the life accumulated by the affected components in the applicable parameter, as appropriate, since the last accomplishment of scheduled maintenance specified in the maintenance schedule of the aircraft maintenance programme. Any action that alters the periodicity of the maintenance task(s) or changes the parameter of this periodicity should be recorded.

(g) 'Detailed maintenance records' in this part refers to those records required to be kept by the person or organisation responsible for the aircraft continuing airworthiness in accordance with CAR M.201 in order that they may be able to fulfil their obligations under CAR M. These are only a part of the detailed maintenance records required to be kept by a maintenance organisation under CAR M.614 or CAR 145.55(c). Maintenance organisations are required to retain all detailed records to demonstrate that they worked in compliance with their respective requirements and quality procedures.

   Not all records need to be transferred from the maintenance organisation to the person or organisation responsible for the aircraft continuing airworthiness in accordance with CAR M.201 unless they specifically contain information relevant to aircraft configuration and future maintenance.

Thus, incoming certificates of conformity, batch number references and individual task card sign-offs verified by and/or generated by the maintenance organisation are not required to be retained by the person or organisation responsible in accordance with CAR M.201. However, dimensional information contained in the task card sign-off or work pack may be requested by the owner/CAMO in order to verify and demonstrate the effectiveness of the aircraft maintenance programme.

Information relevant to future maintenance may be contained in specific documents related to:
- modifications;
- airworthiness directives;
- repaired and non-repaired damage;
- components referred in CAR M.305(d); and
- measurements relating to defects.

(h) 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 (are) complied with.

(i) Other maintenance required for continuing airworthiness' refers to unscheduled or out of phase maintenance due to abnormal or particular conditions or events with an impact on the continuing airworthiness of the aircraft at the time of its return to service. It is not intended to request every single condition described in the maintenance data, e.g. Aircraft Maintenance Manual Chapter 5, but just those that cannot be captured by other means; for example, when they are not included in the records for repairs. Some abnormal or particular conditions or events that could be kept under this requirement could be lightning strikes, hard landings, long-term storage, propeller or rotor over-speed, over-torque, impact on a main rotor blade, etc.

(j) The term 'in-service history record' embraces records from which the current status of life limited parts can be determined. The 'in-service history record' template could be adjusted to the relevant characteristics of the life-limited part, e.g. an engine disk being different from a fire extinguisher squib or landing gear sliding tube. Such records document each time a life-limited part is placed in service or removed from service. They should clearly:

(1) identify the part by its part number and serial number,
(2) show the date of installation and removal (i.e. date on/date off),
(3) show the details of the installation and removal (i.e. type, serial number, weight variant, thrust rating, as appropriate, of the aircraft, engine, engine module, or propeller) at installation and removal of the part when this is necessary to appropriately control the life limitation.
(4) Show the total in-service life accumulated in any applicable parameter, as appropriate, corresponding to the dates of installation and removal of the part.

Any other events that would affect the life limitation, such as an embodied modification (in accordance with airworthiness directives, service bulletins or any product improvements) that affects the life limitation or changes the limitation parameter, should also be included in the in-service history record. Not all modifications would necessarily be pertinent to the life limitation of the component. Additionally, if a parameter is not relevant to the life of the part, then that parameter does not need to be recorded.

(k) The term 'permanently withdrawn from service' refers to moving the aircraft or component to a location that is not used for storage and/or future return to service.

(l) The term 'current status' refers to the data which accurately establishes the level of compliance of an aircraft, engine, propeller or component thereof, with a requirement. Each status should:
  (1) identify the aircraft, the engine, the propeller or the component it applies to;
  (2) be dated; and
  (3) include the relevant total in-service life accumulated in the applicable parameter on the date of the status.

AMC CAR M.305(a) Aircraft continuing airworthiness record system

CERTIFICATE OF RELEASE TO SERVICE

(a) The inclusion of the certificate of release to service in the aircraft continuing airworthiness record system means that the date and/or any applicable parameter at which the maintenance was performed, including a unique reference to the certificate of release to service, should be processed in the record system.
(b) For components with airworthiness limitations, this information should be found on the authorised release certificate (AW Form 1 or equivalent). For life-limited parts, some relevant information required by CAR M.305 may need to be introduced in the in-service history records.

AMC CAR M.305(b)1 Aircraft continuing airworthiness record system

IN-SERVICE LIFE FOR ENGINES, PROPELLERS AND APU'S

(a) Some gas turbine engines and propellers are assembled from modules and the total life accumulated in service for the complete engine or propeller may not be kept. When owners and operators wish to take advantage of the modular design, then the total life accumulated in service for each module, as well as in-service history if applicable, and detailed maintenance records for each module, should be maintained. The continuing airworthiness records as specified should be kept with the module and should show compliance with any mandatory requirements pertaining to that module.
(b) The recording of in-service life accumulation may be necessary also in other measurement units to ensure the continuing airworthiness of the aircraft. For example, a mandatory life limitation measured in cycles of auxiliary power unit (APU) usage may apply to some rotating parts. In such a case, APU cycles need to be recorded.

AMC CAR M.305(c)1 Aircraft continuing airworthiness record system

AIRWORTHINESS DIRECTIVES

(a) The current status of ADs, and measures mandated by the GCAA and the State of Design authority in immediate reaction to a safety problem, should identify the product/component, the applicable ADs including revision or amendment numbers and the date on which the status was updated. For the purpose of assessing the AD status, there is no need to list those ADs which are superseded or cancelled.

(b) If the AD is generally applicable to the aircraft or component type but is not applicable to the particular aircraft, engine, propeller or component, then this should be identified with the reason why it is not applicable.
(c) The current status of ADs should include the release to service date on which the AD or measure was accomplished (the date the certificate of release to service was issued), and where the AD or measure is controlled by flight hours and/or flight cycles and/or landings and/or any other applicable parameter, as appropriate, it should include the corresponding total life on that parameter accumulated in service on the date when the AD or measure was accomplished and/or the due limit in the appropriate parameter. For repetitive ADs or measures, only the last and next applications with the reference to the applicable parameter should be recorded in the current status.
(d) The status should also specify the method of compliance and which part of a multi-part AD or measure has been accomplished, where a choice is available in the AD or measure.
(e) The current status of AD should be sufficiently detailed to identify any loadable software aircraft part which is used for operating or controlling the aircraft.
(f) When the AD is multi-part or requests assessments of certain inspections, this information should be shown as well.

AMC CAR M.305(c)2 Aircraft continuing airworthiness record system

MODIFICATIONS AND REPAIRS

(a) Status of current modifications and repairs means a list compiled at aircraft level of modifications and repairs currently embodied. It should include the identification of the aircraft, engine(s) or propeller(s), as appropriate, and the date of the certificate of release to service when the modification or repair was accomplished. Where a modification or repair creates the need for the accomplishment of scheduled maintenance tasks, the reference to the applicable tasks should be added to the aircraft maintenance programme. The status should include the reference to the data in accordance with CAR M.304 that provides the accomplishment procedure for the modification or repair. It should also specify which part of a multi-part modification or repair has been accomplished and the method of compliance, where a choice is available in the data.
(b) In addition to the previous applicable information, in respect to structure, the status of the current repairs should contain the description of the repair (e.g. doubler, blend, crack, dent, etc.), its location (e.g. reference to stringers, frames, etc.) and the dimensions. In the case of blend-out repairs, the remaining material should be recorded too.
(c) The status of modifications should be sufficiently detailed to identify any installed loadable software aircraft part used for operating or controlling the aircraft, the part number of which evolves independently of its associated aircraft hardware component, as identified in the maintenance data of the relevant design approval holders. Other loadable software parts, such as navigational data bases or entertainment systems, are not considered under this recording requirement.
(d) For the purpose of this paragraph, a component replaced by a fully interchangeable alternate component is not considered a modification if this condition is published by the design approval holder.
(e) The status of modifications and repairs should include engine(s), propeller(s) and components subject to mandatory instructions and associated airworthiness limitations, and it is not intended that it should be retained for other components.

GM CAR M.305(c)(2) Aircraft continuing airworthiness record system

IMPACT OF MODIFICATIONS AND REPAIRS

(a) The status of modifications and repairs may include the impact of a specific modification or repair in:
  (1) embodiment instructions;
  (2) mass and balance change data;
  (3) maintenance and repair manual supplements;
  (4) maintenance programme changes and instructions for continuing airworthiness; and/or
  (5) aircraft flight manual supplements.

(b) When aircraft require a specific loadable software aircraft part configuration in order to operate correctly, a specific listing with this information may be necessary too.

AMC CAR M.305(c)3 Aircraft continuing airworthiness record system

AIRCRAFT MAINTENANCE PROGRAMME

(a) The current status of compliance with the aircraft maintenance programme means the last and next accomplishment data (referring to the applicable parameter) for the tasks specified in the maintenance schedule of the aircraft maintenance programme. It should include:

  (1) an identifier specific enough to allow an easy and accurate identification of the task to be carried out, such as a task reference combined with a task title or short description of the work to be performed;
  (2) the engine, propeller or component identification when the task is controlled at engine, propeller, or component level; and
  (3) the date when the task was accomplished (i.e. the date the certificate of release to service was issued) and for repetitive tasks when it is next due time, as well as when the terminating action is performed.

(b) Where the task is controlled by flight hours and/or flight cycles and/or landings and/or calendar time and/or any other applicable parameter, the total in-service life accumulated by the aircraft, engine, propeller or component (as appropriate) in the suitable parameter(s) should also be included.

GM CAR M.305(d) Aircraft continuing airworthiness record system

LIFE-LIMITED PARTS AND TIME-CONTROLLED COMPONENTS

(a) A part is to be considered a life-limited part and a time-controlled component when it complies with both definitions given in paragraphs (c) and (e) of GM CAR M.305. For example, the maintenance schedule of the aircraft maintenance programme may include both a mandatory permanent removal

for a landing gear sliding tube and a periodic removal for overhaul of the landing gear (including the sliding tube).

(b) The following table provides a summary of the records' requirements related to life-limited parts and time-controlled components:

Maintenance task from the maintenance schedule of the AMP		**Type of component**	**Continuing airworthiness records**
Mandatory instructions (and associated airworthiness limitations) in accordance with CARt 21 affecting a component	Permanent removal (replacement)	Life-limited part e.g.: engine HPT disc, landing gear sliding tube	- Current status (CAR M.305(d)(1)); - In-service history record (CAR M.305(e)(3)(i)); - AW Form 1 and detailed maintenance records for last scheduled maintenance and subsequent unscheduled maintenance (CAR M.305(e)(3)(ii)); - AW Form 1 and detailed maintenance records for modifications and repairs (CAR M.305(e)(2)(ii))
	Periodic removal for maintenance in an appropriate approved workshop, e.g.: - Overhaul of horizontal stabilizer actuator or of a landing gear - Replacement of a U-joint (of a gearbox)	Time-controlled component e.g.: horizontal stabilizer actuator, landing gear Gearbox	- Current status (CAR M.305(d)(2)); - AW Form 1 and detailed maintenance records for last scheduled maintenance and subsequent unscheduled maintenance (CAR M.305(e)(3)(ii)); and - AW Form 1 and detailed maintenance records for modifications and repairs (CAR M.305(e)(2)(ii)).

GM CAR M.305(d)(2) Aircraft continuing airworthiness record system

TASKS CONTROLLED AT COMPONENT LEVEL

(f) The maintenance schedule of the aircraft maintenance programme may include tasks controlled at component level coming from a mandatory requirement in accordance with CAR 21 and to be performed in a workshop, such as:

(1) the removal of a component for periodic restoration to return the component to a specified standard (e.g. removal of the landing gear for overhaul);
(2) the periodic removal of a component for replacement of a sub-component by a new one when it is not possible to restore the item to a specific standard of failure resistance (e.g. discarding of universal joints of a gearbox, batteries of the escape slide/raft, discharge cartridges of fire extinguishers, etc.); and
(3) a periodic inspection or test to confirm that a component meets specified performance standards (e.g. functional check of the portable emergency locator transmitter, etc.). The component is left in service (no further maintenance action taken) on the condition that it continues to fulfil its intended purpose within specified performance limits until the next scheduled inspection.

The above tasks apply to 'time-controlled components' as defined in paragraph (e) of GM CAR.M.305. If a component affected by a task in accordance with (2) and (3) above is controlled at aircraft level by the aircraft maintenance programme and it has not been removed since the task was last accomplished, then its status of compliance with CAR M.305(d)2 is already demonstrated by the aircraft records.

Note: The maintenance in accordance:
- with (1) and (2) above assumes a predictable deterioration of the component: the overall reliability invariably decreases with age; and
- with (3) assumes a gradual deterioration of the component: failure resistance can reduce and drop below a defined level.

(g) When a component is affected by a maintenance task contained the aircraft maintenance programme (AMP) that is recommended by the design approval holder (DAH) and controlled at component level, although such component does not qualify as a time-controlled component, the status of the component may be needed to show that all the maintenance due on the aircraft according to the aircraft maintenance programme has been carried out.
(h) For aircraft maintenance programmes developed under a primary maintenance process oriented methodology (e.g. Maintenance Steering Group), the term 'time-controlled component' pertains to 'Hard Time' and 'On-Condition'. The primary maintenance processes are:

(1) Hard Time
This is a preventive process in which known deterioration of a component is limited to an acceptable level by the maintenance actions which are carried out at periods related to time in service (e.g. calendar time, number of cycles, number of landings). The prescribed actions restore the component utility margin to the applicable time limitation.

(2) On-Condition
It is a preventive process in which the component is inspected or tested, at specified periods, to an appropriate standard in order to determine whether it can continue in service. The purpose is to remove the component before its failure in service.

(3) Condition Monitoring
This is a process in which a parameter of a condition in a component (vibration, temperature, oil consumption, etc.) is monitored to identify the development of a fault. The purpose is to remove the component before its failure in service (e.g. due to related repair costs), but they are permitted to remain in service without preventive maintenance until a functional failure occurs.

Note: For components that are not subject to any of these primary maintenance processes, corrective maintenance is carried out after failure detection and is aimed at restoring components to a condition in which they can perform their intended function ('fly-to failure').

(i) The following table provides a summary of the records' requirements related to components subjected to primary maintenance process: -

	Primary maintenance process	**Continuing airworthiness records**
Life-limited part		- Current status (CAR M.305(d)(1)); - In-service history record (CAR M.305(e)(3)(i)); - AW Form 1 and detailed maintenance records for last scheduled maintenance and subsequent unscheduled maintenance (CAR M.305(e)(3)(ii)), including modifications and repairs (CR M.305(e)(2)(ii)).
Time controlled component	**Hard time**	- Current status (CAR M.305(d)(2)); - AW Form 1 and detailed maintenance records for last scheduled maintenance and subsequent unscheduled maintenance (CAR M.305(e)(3)(ii)), including modifications and repairs (CAR M.305(e)(2)(ii)).
	On condition	- Current status (CAR M.305(d)(2)); and - AW Form 1 and detailed maintenance records for last scheduled maintenance and subsequent unscheduled maintenance (CAR M.305(e)(3)(ii)). If the task is controlled at aircraft level, the above information could be already contained in the records related to the aircraft maintenance programme (CAR M.305(c)(3) and CAR M.305(e)(2)(iii)). If the maintenance was performed off wing, the AW Form 1 needs to be kept.
Condition monitoring		The AW Form 1 is required when needed to show compliance with CAR M.305(e) for determining the continuing airworthiness and configuration of the aircraft, for example AD, modifications, repairs, …..etc.

AMC CAR M.305(e) Aircraft continuing airworthiness record system

INFORMATION TECHNOLOGY (IT) SYSTEMS AND FORM OF RECORDS

(a) The information that constitutes the aircraft continuing airworthiness records may be entered in an information technology (IT) system and/or documents equivalent in scope and detail. IT systems acceptable for supporting the aircraft continuing airworthiness records should:

(1) include functions so that search of data and production of status is possible;
(2) allow a transfer of the aircraft continuing airworthiness records data from one system to another using an industry-wide/worldwide data format or allow printing information;
(3) contain safeguards which prevent unauthorised personnel from altering data; and
(4) ensure the integrity of the data, including traceability of amendments.

(b) 'Data equivalent in scope and detail' are included in the airworthiness record system and could be an aircraft logbook, engine logbook(s) or engine module log cards, propeller logbook(s) and log cards for life-limited parts.

Any logbook/log card should contain:
(1) identification of the product or component it refers to;
(2) type, part number, serial number and registration, as appropriate, of the aircraft, engine, propeller, engine module, or component to which the component has been fitted in, along with the reference to the installation and removal;
(3) the date and the corresponding total in-service life accumulated in any applicable parameter unit, as appropriate; and
(4) any AD, modification, repair, maintenance or deferred maintenance tasks applicable.

When fulfilling the applicable requirements, a logbook/log card as described above could be a means to comply with the current status and the in-service history record for each life-limited part.

(c) Form of records

Producing and/or keeping continuing airworthiness records in a form acceptable to the GCAA normally means in either material/physical or electronic state, or a combination of both.

Retention of records should be done in one of the following formats:
(1) original paper document or electronic data (via an approved electronically signed form);
(2) a paper reproduction of a paper document (original or copy); or
(3) an electronic reproduction of electronic data (original or copy); or
(4) a printed reproduction of electronic data (original or copy); or
(5) an electronically digitised reproduction of a paper document (original or copy); or
(6) a microfilm or scanned reproduction copy of a paper document (original or copy).

Where IT systems are used to retain documents and data, it should be possible to print a paper version of the documents and data kept.

(d) Physical (non-digitised) records

All physical records should remain legible throughout the required retention period. Physical records on either paper or microfilm systems should use robust material, which can withstand normal handling, filing and ageing. They should be stored in a safe way with regard to damage, alteration and theft.

(e) Digitised records

Digitised records may be created from a paper document (original or copy) or from electronic data.

When created from a paper document:

(1) the creation date of the digitised record should be stored with the digitised record;
(2) it is advisable to create an individual digitised record for each document;
(3) if an organisation creates a large number of digitised records, the use of database technology should ease the future retrieval of the record; and
(4) digitised records should be legible, including details such as, but not limited to, the date of signature, names, stamps, notes, or drawings.

(f) Digitised record retention

Digitised records when created from an original paper record, or as a digital electronic original, should be stored on a system which is secured and kept in an environment protected from damage (e.g. fire, flooding, excessive temperature or accidental erasing). IT systems should have at least one backup system, which should be updated at least within 24 hours of any entry in the primary system. Access to both primary and backup systems is required to be protected against the ability of unauthorised personnel to alter the database and they should preferably be located remotely from the main system.

The system used for retention of digitised records should:

(1) ensure the integrity, accuracy and completeness of the record;
(2) ensure that access to the digitised record has safeguards against alteration of the data;
(3) ensure the authenticity of the record including assurance that the date has not been modified after creation;
(4) be capable of retrieving individual records within a reasonable time period; and
(5) be maintained against technological obsolescence which would prevent printing, displaying or retrieval of the digitised records.

Computer backup discs, tapes etc. should be stored in a different location from that containing the current working discs, tapes, etc. and in a safe environment.

Where the GCAA has accepted a system for digitised record-keeping satisfying the above, the paper document may be permanently disposed of.

(g) Lost or destroyed records

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 maintenance organisations and reference to records maintained by individual mechanics, etc. When reconstruction has been done and the record is still incomplete, the owner/operator may make a statement in the new record describing the loss and establishing the time in service based on the research and the best estimate of time in service. The reconstructed records should be submitted to the GCAA for acceptance. The GCAA may require the performance of additional maintenance if not satisfied with the reconstructed records.

AMC CAR M.305(e)(1) Aircraft continuing airworthiness record system

This retention period of 36 months could be extended in the case of an entry in the technical log system requiring an additional period of retention as defined in CAR M.

AMC CAR M.305(e)(2) Aircraft continuing airworthiness record system

(a) AW Form 1 and the Certificate of Conformity of the components used to perform a modification/repair are not part of the substantiation data for a modification/repair. These certificates are retained by the maintenance organisation.
(b) In the case of an AD with several steps or with intermediate assessments during its application, these intermediate steps should be part of the detailed maintenance records.

'Until such time as the information contained therein is superseded by new information equivalent in scope and detail but not shorter than 36 months' means that during a maximum of 36 months the information and the one superseding it will be kept but, after these 36 months, only the new information must be kept.

For example, for a maintenance task with an interval shorter than 36 months, more than one set of information equivalent in scope and detail should be retained. If the maintenance task interval is longer than 36 months, the last set of information equivalent in scope and detail is retained.

AMC CAR M.305(e)(3) Aircraft continuing airworthiness record system

(a) An AW Form 1 and detailed maintenance records are not required to be kept to support every installation/removal shown in the in-service history records.
(b) Conservative methods to manage missing historical periods are acceptable to establish the current status of the life-limited part. In case of use of a conservative method, the supporting documents should be endorsed. Recommendations from the design approval holder on the procedures to record or reconstruct the in-service history should be considered.

GM CAR M.305(e)(3) Aircraft continuing airworthiness record system

(Reserved)

AMC CAR M.305(f) Aircraft continuing airworthiness record system

When the owner or organisation responsible for the aircraft continuing airworthiness arranges for the relevant maintenance organisation to retain copies of the continuing airworthiness records on their behalf, the owner or organisation responsible for the aircraft continuing airworthiness will continue to be responsible for the retention of records. If they cease to be the owner or organisation responsible for the aircraft continuing airworthiness of the aircraft, they also remain responsible for transferring the records to the new owner or organisation.

CAR M.306 Aircraft Technical Log System

(a) In addition to the requirements of CAR M.305, for CAT, commercial specialised operations and commercial ATO, the operator shall use a technical log system containing the following information for each aircraft:

1. information about each flight, necessary to ensure continued flight safety, and;
2. the current aircraft certificate of release to service, and;
3. the current maintenance statement giving the aircraft maintenance status of what scheduled and out of phase maintenance is next due except that the GCAA may agree to the maintenance statement being kept elsewhere, and;
4. all outstanding deferred defects rectification that affect the operation of the aircraft, and;
5. any necessary guidance instructions on maintenance support arrangements.

(b) The initial issue of aircraft technical log system shall be approved by the GCAA. Any subsequent amendment to that system shall be managed in accordance with CAR M.704(b) and (c), and the supplement S-1.CAMO.

AMC to CAR M.306(a) Aircraft Technical Log System

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

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

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

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

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

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

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

(i) the aircraft type and registration mark.

(ii) the date and place of take-off and landing.

(iii) the times at which the aircraft took off and landed.

(iv) the running total of flying hours, such that the hours to the next schedule maintenance can be determined. The flight crew does not need to receive such details if the next scheduled maintenance is controlled by other means acceptable to the GCAA.

(v) details of any failure, defect or malfunction to the aircraft affecting airworthiness or safe operation of the aircraft including emergency systems, and any failure, defect or malfunctions in the cabin or galleys that affect the safe operation of the aircraft or the safety of its occupants that are known to the commander. Provision should be made for the commander to date and sign such entries, including, where appropriate, the nil defect state for continuity of the record. Provision should be made for a CRS following rectification of a defect or any deferred defect or maintenance check carried out. Such a certificate appearing on each page of this section should readily identify the defect(s) to which it relates or the particular maintenance check as appropriate.

In the case of maintenance performed by a 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 145.50(b) paragraph 1. When the alternate abbreviated certificate of release to service is used, the introductory section of the technical log should include an example of the full certification statement from AMC 145.50(b) paragraph 1.

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

(vii) the pre-flight inspection signature.

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

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

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

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

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

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

(i) a cross reference for each deferred defect such that the original defect can be identified in the particular section 3 sector record page.

(ii) the original date of occurrence of the defect deferred.

(iii) brief details of the defect.

(iv) details of the eventual rectification carried out and its CRS or a clear cross-reference back to the document that contains details of the eventual rectification.

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

AMC to CAR M.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 the GCAA.

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

CAR M.307 Transfer Of Aircraft Continuing Airworthiness Records

(a) When an aircraft is permanently transferred from one owner or operator to another, the transferring owner or operator shall ensure that the continuing airworthiness records referred to in CAR M.305 and, if applicable the technical log system referred to in CAR M.306, are also transferred.

(b) When the owner contracts the continuing airworthiness management tasks to a CAMO, the owner shall ensure that the continuing airworthiness records referred to in CAR M.305 are transferred to that contracted organisation.

(c) The time periods for the retention of records set out in point (e) of CAR M.305 shall continue to apply to the new owner, operator or CAMO.

AMC to CAR M.307(a) Transfer Of Aircraft Continuing Airworthiness Records

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

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

SUBPART D - MAINTENANCE STANDARDS

CAR M.401 Maintenance Data

(a) The person or organisation maintaining an aircraft shall have access to and use only applicable current maintenance data in the performance of maintenance including modifications and repairs.

(b) For the purposes of this CAR, applicable maintenance data is:

1. any applicable requirement, procedure, standard or information issued by the GCAA,
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 CAR 21.
4. any applicable data issued in accordance with CAR 145.45(d).

(c) The person or organisation maintaining an aircraft shall ensure that all applicable maintenance data is current and readily available for use when required. The person or organisation shall establish a work card or worksheet system to be used and shall either transcribe accurately the maintenance data onto such work cards or worksheets or make precise reference to the particular maintenance task or tasks contained in such maintenance data.

AMC to CAR M.401(b) Maintenance Data

1. Except as specified in sub-paragraph 2, each person or organisation performing aircraft maintenance should have access to and use:

   (a) the continuing airworthiness related GCAA publications and associated AMC's, together with the continuing airworthiness related guidance material,

   (b) all applicable maintenance requirements and notices such as GCAA standards and specifications that have not been superseded by a requirement, procedure or directive,

   (c) all applicable airworthiness directives,

   (d) the appropriate sections of the aircraft maintenance programme, aircraft maintenance manual, repair manual, supplementary structural inspection document, corrosion control document, service bulletins, service sheets modification leaflets, non-destructive inspection manual, parts catalogue, type certificate data sheets as required for the work undertaken and any other specific document issued by the type certificate or supplementary type certificate holder's maintenance data, except that in the case of operator or customer provided maintenance data it is not necessary to hold such provided data when the work order is completed.

2. In addition to sub-paragraph 1, for components each organisation performing aircraft maintenance should hold and use the appropriate sections of the vendor maintenance and repair manual, service bulletins and service letters plus any document issued by the type certificate holder as maintenance data on whose product the component may be fitted when

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

AMC to CAR M.401(c) Maintenance data

1. Data being made available to personnel maintaining aircraft means that the data should be available in close proximity to the aircraft or component being maintained, for mechanics and certifying staff to perform maintenance.

2. Where computer systems are used, the number of computer terminals should be sufficient in relation to the size of the work programme to enable easy access, unless the computer system can produce paper copies. Where microfilm or microfiche readers/printers are used, a similar requirement is applicable.

3. Maintenance tasks should be transcribed onto the work cards or worksheets and subdivided into clear stages to ensure a record of the accomplishment of the maintenance task. Of particular importance is the need to differentiate and specify, when relevant, disassembly, accomplishment of task, reassembly and testing. In the case of a lengthy maintenance task involving a succession of personnel to complete such task, it may be necessary to use supplementary work cards or worksheets to indicate what was actually accomplished by each individual person. A worksheet or work card system should refer to particular maintenance tasks.

4. The workcard/worksheet system may take the form of, but is not limited to, the following:

   - a format where the mechanic writes the defect and the maintenance action taken together with information of the maintenance data used, including its revision status,
   - an aircraft log book that contains the reports of defects and the actions taken by authorised personnel together with information of the maintenance data used, including its revision status,
   - for maintenance checks, the checklist issued by the manufacturer (i.e., 100H checklist, Revision 5, Items 1 through 95)

5. Maintenance data should be kept up to date by:

   - subscribing to the applicable amendment scheme,
   - checking that all amendments are being received,
   - monitoring the amendment status of all data.

CAR M.402 Performance of Maintenance

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

(a) be qualified for the tasks performed, as required by this CAR;

(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.401 maintenance data;

(d) use the tools, equipment and material specified in the CAR M.401 maintenance data. If necessary, tools and equipment shall be controlled and calibrated to an officially recognised standard;

(e) ensure that maintenance is performed within any environmental limitations specified in the CAR M.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;

(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 to CAR M.402(a) Performance of maintenance

1. Maintenance should be performed by persons authorised to issue a certificate of release to service or under the supervision of persons authorised to issue a certificate of release to service. Supervision should be to the extent necessary to ensure that the work is performed properly and the supervisor should be readily available for consultation.

2. The person authorised to issue a certificate of release to service should ensure that:

   (a) each person working under his/her supervision has received appropriate training or has relevant previous experience and is capable of performing the required task; and

   (b) each person who performs specialised tasks, such as welding, is qualified in accordance to an officially recognised standard

GM to CAR M.402(a) Performance of maintenance

In the case of limited Pilot-owner maintenance, as specified in CAR M.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 to CAR M.402(c) Performance of maintenance

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

AMC to CAR M.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 should be performed in accordance with the equipment manufacturers' instructions. All tools requiring calibration should be traceable to an acceptable standard.

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

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

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

AMC to CAR M.402(e) Performance of maintenance

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

(a) Temperature should be maintained such that personnel can perform the required tasks without undue discomfort.

(b) Airborne contamination (e.g. dust, precipitation, paint particles, filings) should be kept to a minimum to ensure aircraft/components surfaces are not contaminated, if this is not possible all susceptible systems should be sealed until acceptable conditions are re- established.

(c) Lighting should be adequate to ensure each inspection and maintenance task can be performed effectively.

(d) Noise levels should not be allowed to rise to the level of distraction for inspection staff or if this is not possible inspection staff should be provided with personnel equipment to reduce excessive noise.

AMC to CAR M.402(f) Performance of maintenance

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

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

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

AMC to CAR M.402(g) Performance of maintenance

(a) To minimise the risk of multiple errors and to prevent omissions, the person or organisation performing maintenance should ensure that:

(1) every maintenance task is signed off only after completion;

(2) the grouping of tasks for the purpose of sign-off allows critical steps to be clearly identified; and

(3) any work performed by personnel under supervision (i.e. temporary staff, trainees) is checked and signed off by an authorised person

(b) To minimise the possibility of an error being repeated in identical tasks that involve removal/installation or assembly/disassembly of several components of the same type fitted to more than one system, whose failure could have an impact on safety, the person or organisation performing maintenance should plan different persons to perform identical tasks in different systems. However, when only one person is available, then this person should perform re-inspection of the tasks as described in AMC2 to CAR M.402(h)

AMC1 to CAR M 402(h) Performance of maintenance

CRITICAL MAINTENANCE TASKS

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

(a) tasks that may affect the control of the aircraft, flight path and attitude, such as installation, rigging and adjustments of flight controls;

(b) aircraft stability control systems (autopilot, fuel transfer);

(c) tasks that may affect the propulsive force of the aircraft, including installation of aircraft engines, propellers and rotors;

(d) overhaul, calibration or rigging of engines, propellers, transmissions and gearboxes.

AMC2 to CAR M 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 should record the identification of each person, the date and the details of the independent inspection, as necessary, before the certificate of release to service is issued.

(b) Qualifications of personnel performing independent inspections

1) When the work is performed by a CAR-M Subpart F organisation, then the organisation should have procedures to demonstrate that the 'independent qualified person' has been trained and

has gained experience in the specific control systems to be inspected. This training and experience could be demonstrated, for example, by:

(i) holding a 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' should hold:

(A) a CAR-66 licence in any category or an equivalent national qualification when national regulations apply; or

(B) a valid pilot licence for the aircraft type.

(ii) additionally, the 'authorised person' should assess the qualifications and experience of the 'independent qualified person' taking into account that the 'independent qualified person' should have received training and have experience in the particular task. It should not be acceptable that the 'authorised person' shows to the 'independent qualified person' how to perform the inspection once work has been already finalised.

(c) How should independent inspection be performed

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

1) all those parts of the system that have actually been disconnected or disturbed should be inspected for correct assembly and locking;
2) the system as a whole should be inspected for full and free movement over the complete range;
3) cables should be tensioned correctly with adequate clearance at secondary stops;
4) the operation of the control system as a whole should be observed to ensure that the controls are operating in the correct sense;
5) if different control systems are interconnected so that they affect each other, all the interactions should be checked through the full range of the applicable controls; and
6) software that is part of the critical maintenance task should be checked, for example version and compatibility with the aircraft configuration.

(d) What to do in unforeseen cases when only one person is available

REINSPECTION:

(1) Re-inspection 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, re-inspection should only be used in unforeseen circumstances when only one person is available to carry out the task and perform the independent inspection. The circumstances cannot be considered unforeseen if the person or organisation has not assigned a suitable 'independent qualified person' to that particular task.

(3) The certificate of release to service is issued by the 'authorised person' after the re-inspection has been performed satisfactorily.

(4) The work card system should record the identification of the 'authorised person' and the date and the details of the re-inspection, as necessary, before the certificate of release to service is issued.

GM to CAR M 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.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 CAR M.801(b)(1), CAR M.801(b)(2), CAR M.801(d) or CAR-145 can decide, using CAR M.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 authorized 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 aircraft continuing airworthiness record system referred to in CAR M.305 or, if applicable in the aircraft technical log system referred to in CAR M.306.

AMC to CAR M.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 should be made in order to initiate any necessary further investigation and analysis necessary to identify the root cause of the defect.

AMC to CAR M.403(d) Aircraft defects

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

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

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

SUBPART E - COMPONENTS

CAR M.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 AW Form 1 or equivalent and marked in accordance with Subpart Q of CAR- 21, unless otherwise specified in this regulations, CAR MOA or CAR 21.

(2) 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.

AMC1 to CAR M.501(a)(1) Classification and Installation

AW FORM 1 OR EQUIVALENT

An equivalent document to an AW Form 1 may be:

(1) a release document issued by an organisation under the terms of a bilateral agreement signed by the GCAA; or

(2) an EASA Form 1 issued by a Part 145 organisation approved by an EASA Member State or EASA;

(3) a JAA Form One issued prior to 28 November 2004 by a JAR 145 organisation approved by a JAA Full member state;

(4) a JAA Form One issued prior to 28 September 2004 by a production organisation

(5) FAA Form 8130-3;

(6) Transport Canada Form 24-0078 or TCCA FORM ONE; or

(7) For new parts, an authorised release certificate issued by Type Certificate holder under Authority of the State of Design; or

(8) GCAA UAE Manufacturing Release Certificate Form 299; or

(9) Any other equivalent certification acceptable to the GCAA.

(b) Any item in storage without an AW Form 1 or equivalent cannot be installed on aircraft registered in UAE unless an AW Form 1 or equivalent is issued for such item by an appropriately approved maintenance organisation in accordance with AMC CAR M.613(a) or AMC1 CAR 145.50(d) and AMC2 CAR 145.50(d), as applicable.

NOTE 1: The following PMA are eligible for installation on UAE registered aircraft:

a. Parts designed and manufactured in the United States of America under the Parts Manufacturer Approval (PMA parts) system of the FAA can be accepted if the PMA part is released on a FAA Form 8130-3 and specified in the Type Certificate (TC) Holder's illustrated parts catalogue and/or the maintenance data or specified in a FAA Supplementary Type Certificate (STC) approved by the GCAA; and
b. Parts designed and manufactured in the United States of America under the Parts Manufacturer Approval (PMA parts) system of the FAA can be accepted if all the following conditions are met:
    i. The PMA part is released on a FAA Form 8130-3;
    ii. The PMA part is a non-critical component (as referred in the “Remarks” Block of the accompanying FAA Form 8130-3). A "critical component" is a part identified as critical by the design approval holder during the GCAA validation process, or otherwise by the FAA as exporting authority. Typically, such components include parts for which a replacement time, inspection interval, or related procedure is specified in the Airworthiness Limitations Section or Certification Maintenance requirements of the manufacturer’s maintenance manual or Instructions for Continued Airworthiness; and
    iii. A system acceptable to the GCAA should be established by the Operator to allow utilization of such PMA part. The system should include:
        1. Engineering / Technical:
        The operator’s technical / engineering section should consider the following points:
            - PMA Part meets the regulatory and technical requirements and is acceptable. The operator may request supporting / substantiating data from the PMA holder for ensuring that the PMA parts are acceptable.
            - Issue an internal authorization for the use of PMA parts. If the review identifies any issues, the PMA part may be rejected or the PMA supplier may be requested to provide additional documentation.
            - Initiating necessary documentation / manual changes.
        2. Data Package:
        A typical data package should have the following:

- FAA PMA Supplement.
- OEMs IPC references.
- Identification of Next Higher assemblies (components or engines).
- Copy of FAA Notification of Design Approval Letter.
- Part top level drawing and revision history.
- Design Compliance Substantiation (Test and Computation summary), if available.
- Instructions for Continued Airworthiness if applicable (or a statement that specific ICA is not required).
- In service history and list of other users if available.
- A sample part may be required by the engineer during the review.

3. Engineering Review:
   The operator's technical / engineering should:
   - Confirm that the part is equivalent to the OEM part in form, fit and function and is applicable to the aircraft type certificate in question.
   - Confirm that the PMA supplement shows that the part has FAA approval for use on the airline's specific aircraft fleet type (effectivity).
   - Confirm that the part is suitably identified and the part number is marked appropriately.
   - If a sample part was requested and provided, examine the sample part to confirm that it satisfies the specifications and airline requirements.
   - Consider the function performed by the part.
   - Consider the reliability experienced with the OEM part and the expected reliability of the PMA part. If the PMA part has characteristics that would improve reliability this should be included in the evaluation.
   - Would use of the part require any changes to the maintenance manuals?
   - Does the part require tracking by serial number?
   - Is the OEM part subject to an Airworthiness Directive (AD)? If so, authorization to use the PMA part should be delayed until completion of actions to comply with the AD, and it will be important to confirm that the PMA satisfies the post-AD requirements.
   - If the part is relatively new on the PMA market and is to be used in an important application, the Engineering department may decide on the need for an in-service evaluation before full acceptance of the PMA part.
   - Consider whether to monitor PMA parts specifically in terms of the airline's reliability program.
   - If additional documentation is required, the request should be directed to the PMA part manufacturer.

- The Engineering department should record the conclusions reached during the review and retain a record of these conclusions along with a copy of the evaluation package.
- If the review demonstrates that all requirements are satisfied, the Engineering department authorizes use of the PMA part by issuing the appropriate engineering document. This document is usually a revision or supplement to the IPC showing the new part as an authorized substitute for the OEM part. Of course, this revision or supplement can be in digital/electronic format if the airline maintenance is accomplished in a paperless environment.
- If the review concludes that some requirements are not satisfied, airline use of the PMA part is rejected and the package is returned to the purchasing department.

4. Airworthiness Directive / Continued Airworthiness:
   - Operators that use a PMA part must ensure that they receive continued airworthiness information from the PMA supplier for as long as the part is in service.
   - Under the GCAA regulations an operator is responsible for continued airworthiness of the aircraft hence the Operator is responsible for compliance with the ADs. The Operator will have a system for tracking ADs issued for PMA parts under their use.
5. Reliability:
   Any reliability problems with a PMA part should be detected by the operator's normal reliability monitoring process just as for OEM parts. The reliability system should distinguish between OEM parts and related PMA parts.
6. Reporting Requirements:
   - The Operator that uses the PMA parts shall provide feedback on in service problems like failures, malfunctions and defects to the PMA approval holder.
   - ROSI Reporting shall be made as per the existing GCAA regulations and policy. The reports should highlight the fact that the part was a PMA part.

NOTE 2:

a. In the case of restoration of complete engines, the work should be carried out in accordance with CAR M subpart F or CAR 145 by an organisation approved by the GCAA. The restoration of all other components may be carried out by an organisation appropriately approved to issue a release to service on any of the above listed forms.
b. Restored UAE complete engine should be released on an AW Form 1 by an appropriately rated GCAA AMO.
c. Certificates of release to service and authorised release certificates issued before the date of entry into force of this Regulation CAR M by a maintenance organisation approved by the GCAA should be deemed equivalent to those required under points CAR M.801 and CAR M.802 of CAR-M respectively.

NOTE 3: Certain commercial parts are eligible for installation on UAE registered aircraft when that part is found to conform to the definition, criteria and conditions specified below.

a. Definition;

"Commercially available part", in respect of aircraft/components, means a part, which:

- Has a part number that is listed in the relevant design data, e.g. AMM, IPC, FAA Approved Commercial Parts List (CPL), STC Parts List or similar,
- Has been approved by the GCAA by issuance of a modification approval, or by a UAE approved Design Organization, or by the TC holder, or approved by the TC holder and accepted under the GCAA Type Acceptance provisions.

b. Criteria and Conditions;

Where the function of above defined commercially available part is not critical to the safety of flight, the operators may install such part as a replacement part, provided the following conditions are met:

1. There is no option available for procuring the same part with a release certificate AW Form 1 or equivalent.
2. The part conforms to the above noted definition of a commercially available part.
3. Prior to the installation, it has been determined that the part would not adversely affect flight safety, and the safety of persons onboard or on ground.
   - The determination of adverse safety effects should be made by:
     i. Design Approval Holder, or
     ii. The GCAA approved Design Organization when within its scope of approval.
   - The determination must be supported by justification and evidence. The examples of evidence could be supporting data from the Design Approval Holder / TC holder, risk assessment, or a report by a Design Organization, etc.
4. The part is accompanied with shipping document and Statement/Certificate of Conformity or any certificate/documentation confirming the manufacturing conformity with the approved design data.
5. The part is new that has never been used or the original commercial part removed from the aircraft is repaired by the OEM who hold maintenance organization approval.
6. Prior to the utilization of such part(s), a system established by the operator and acceptable to the GCAA is in place. The system should ensure that:
   - The above noted instructions have been complied with.
   - risk and reliability assessment are made by competent staff.
   - relevant information, documents, assessment and acceptance are made part of the aircraft records.
   - appropriate reporting systems are in place. The ROSIs or equivalent reports should clearly indicate that the failed / affected part was a commercially available part
7. The privilege of commercial part can only be exercised by the UAE operators, by defining the system and procedures of acceptance of such parts in accordance with the requirements of this Regulations, in the CAMO Exposition. Subsequently, the CAR-145 or CAR-M Subpart-F organisation shall include the Exposition, defined procedures on the acceptance of the commercial parts for used on their aircraft, based on the terms and conditions agreed by the CAMO.

GM1 CAR M.501(a)(2) Classification and installation

UNSERVICEABLE COMPONENTS

(a) The person or organisation that performs maintenance should ensure the proper identification of any unserviceable components. The unserviceable status of the component should 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 should 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. Means should be provided to prevent unintentional separation of this tag from the component.

(b) Unserviceable components should 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 GCAA or the Authority of the State of Design;
(3) absence of the necessary information to determine the airworthiness status or eligibility for installation;
(4) evidence of defects or malfunctions;
(5) being installed on an aircraft that was involved in an incident or accident likely to affect the component's serviceability.

AMC1 CAR M.501(a)(3) Classification and installation

UNSALVAGEABLE COMPONENTS

The following types of components should typically be classified as unsalvageable:

(a) components with non-repairable defects, whether visible or not to the naked eye;
(b) components that do not meet design specifications, and cannot be brought into conformity with such specifications;
(c) components subjected to unacceptable modification or rework that is irreversible;
(d) certified life-limited parts that have reached or exceeded their certified life limits, or have missing or incomplete records;
(e) components 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 be retrieved.

AMC1 CAR M.501(a)(4) Classification and Installation

Standard Parts

(e) Standard Parts are parts that are manufactured in complete compliance with an established industry, the GCAA or other Government specification which includes design, manufacturing, test and acceptance criteria, and uniform identification requirements. The specification should include all information necessary to produce and verify conformity of the part. It should be

published so that any party may manufacture the part. Examples of specifications are National Aerospace Standards (NAS), Army-Navy Aeronautical Standard (AN), Society of Automotive Engineers (SAE), SAE Sematec, Joint Electron Device Engineering Council, Joint Electron Tube Engineering Council, and American National Standards Institute (ANSI), EN Specifications etc.

(f) To designate a part as a standard part, the TC holder may issue a standard parts manual accepted by the Authority of the original TC holder or may make reference in the parts catalogue to the specification to be met by the standard part. Documentation that accompanies standard parts should clearly relate to the particular parts and contain a conformity statement plus both the manufacturing and supplier source. Some materials are subject to special conditions, such as storage conditions or life limitation, etc., and this should be included in the documentation and/or the material's packaging.

(g) An AW FORM 1 or equivalent is not normally issued and therefore none should be expected.

AMC2 CAR M.501(a)(4) Classification and installation

STANDARD PARTS

For sailplanes and powered sailplanes, non-required instruments and/or equipment that are certified under the provision of CS 22.1301(b), if those instruments or equipment, when installed, functioning, functioning improperly or not functioning at all, do not in themselves, or by their effect upon the sailplane and its operation, constitute a safety hazard.

'Required' in the term 'non-required', as used above, means required by the applicable airworthiness code (CS 22.1303, 22.1305 and 22.1307) or required by the relevant regulations for air operations and the applicable Rules of the Air or as required by air traffic management (e.g. a transponder in certain controlled airspace). Examples of non-required equipment which can be considered to be standard parts may be electrical variometers, bank/slip indicators ball-type, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger/barograph/turnpoint camera, bug-wipers and anti-collision systems. Equipment which must be approved in accordance with the airworthiness code shall comply with the applicable TSO or equivalent and it is not considered to be a standard part (e.g. oxygen equipment).

AMC to CAR M.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 should only be accepted when satisfied that it is to the required specification. To be satisfied, the material and or its packaging should be marked with the specification and where appropriate the batch number.

(d) Documentation accompanying all material should clearly relate to the particular material and contain a conformity statement plus both the manufacturing and supplier source. Some material is subject to special conditions such as storage condition or life limitation etc. and this should be included on the documentation and/or material packaging.

(e) AW FORM 1 or equivalent is not normally issued for such material and therefore none should be expected. The material specification is normally identified in the (S)TC holder's data except in the case where the GCAA has agreed otherwise.

GM1 CAR M.501(b) Classification and installation

(a) To ensure that components, standard parts and materials are in satisfactory condition, the persons referred to under CAR M.801(b)(2), CAR M.801(b)(3), CAR M.801(c) or CAR M.801(d), or the approved maintenance organisation should perform an incoming physical inspection.

(b) The incoming physical inspection should 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 should 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 should be supplied in a package. The packaging should state the applicable specification/standard, P/N, batch number, and the quantity of the items. The documentation that accompanies the material should contain the applicable specification/standard, P/N, batch number, supplied quantity, and the manufacturing sources. If the material is acquired from different batches, acceptance documentation for each batch should be provided.

GM2 CAR M.501(b) Classification and installation

INSTALLATION OF COMPONENTS

Components, standard parts and materials should 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 and material can only be installed after having checked the applicable maintenance data. This check should 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. When the installation is performed outside a maintenance organisation, that is by the persons referred to in CAR M.801(b)(2), CAR M.801(b)(3), CAR M.801(c) or CAR M.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.502 Component Maintenance

(a) The maintenance of components shall be performed by maintenance organisations appropriately approved in accordance with Subpart F of CAR-M or with CAR 145 or by an organisation approved to issue equivalent release document as specified in CAR M.501(a).

(b) By derogation from point (a), where a component is fitted to the aircraft, the maintenance of such component may be performed by an aircraft maintenance organisation approved in accordance with Subpart F of CAR M or with CAR 145 or by certifying staff referred to in CAR M.801(b)(1). Such maintenance shall be performed in accordance with aircraft maintenance data or in accordance with component maintenance data, if agreed by the GCAA. Such aircraft maintenance organisation or certifying staff may temporarily remove the component for maintenance if this is necessary to improve access to the component, except where additional maintenance is required due to the removal. Component maintenance performed in accordance with this paragraph shall not be eligible for the issuance of an AW Form 1 and shall be subject to the aircraft release requirements provided for in CAR M.801.

(c) By derogation from paragraph (a), where a component is fitted to the engine or Auxiliary Power Unit (APU), the maintenance of such component may be performed by an engine maintenance organisation approved in accordance with Subpart F of CAR-M or with CAR-145. Such maintenance shall be performed in accordance with engine or APU maintenance data or in accordance with component maintenance data if agreed by the GCAA. Such B-rated organisation may temporarily remove the component for maintenance if this is necessary to improve access to the component, except where additional maintenance is required due to the removal.

(d) Reserved

AMC to CAR M.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.502 requirements do not apply to this case.

AMC to CAR M.502(b) and (c) Component maintenance

CAR M.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, subject to the agreement of the GCAA.

This should only be permitted by the GCAA in the case of simple component maintenance, where the GCAA 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 CAR M.502 (d)

(Reserved)

CAR M.503 Life-limited parts and time-controlled components

(a) Installed life-limited parts and time-controlled components shall not exceed the approved limitation as specified in the approved maintenance programme and airworthiness directives, except as provided for in CAR M.504(b).

(b) When the approved limitation expires, the component shall be removed from the aircraft for maintenance, or for disposal in the case of life-limited parts.

CAR M.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 the mandatory life limitation has been extended or a repair solution has been approved in accordance with CAR 21.

AMC1 CAR M.504 Segregation of components

(a) Unserviceable components should 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.801(b)(2), CAR M.801(c) or CAR M.801(d)) that release aircraft maintenance should 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 should be identified in the relevant procedures of the organisation.

(c) In the case of unsalvageable components, the person or organisation should:

(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.

GM1 CAR M.504 Segregation of components

MUTILATION OF COMPONENTS

(a) Mutilation should be accomplished in such a manner that the components become permanently unusable for their originally intended use. Mutilated components should 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 the GCAA.

(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.

SUBPART F - MAINTENANCE ORGANISATION

CAR M.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 and components not listed in CAR M.201(g).

CAR M.602 Application

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

AMC to CAR M.602 Application

An application should be made on an AWF-AMO-001(Appendix IX) or equivalent acceptable to the GCAA.

The AWF-AMO-001 is valid for the application for both Section A, Subpart F and CAR-145. Organisations applying for both approvals may do so using a single AWF-AMO-001.

CAR M.603 Extent Of Approval

(a) The grant of approval is indicated by the issue of a certificate by the GCAA. The CAR M. 604 approved maintenance organisation manual must specify the scope of work deemed to constitute approval.

(b) The Appendix IV to this CAR 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 their own use in the course of work undertaken within its own facilities, as identified in the maintenance organisation manual.

AMC to CAR M.603 (a) Extent of Approval

The following table identifies the ATA specification 100 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	C1 Air Cond & Press	21
THAN COMPLETE	C2 Auto Flight	22
ENGINES OR APUs	C3 Comms & Nav	23 – 34
	C4 Doors – Hatches	52
	C5 Electrical Power & Lights	24 – 33 – 85
	C6 Equipment	25 – 38 – 44 – 45 – 50
	C7 Engine – APU	49 – 71 – 72 – 73 – 74 – 75 –- 76 – 77 – 78 – 79 – 80 – 81 – 82 – 83
	C8 Flight Controls	27 - 55 – 57.40 – 57.50 – 57.60 – 57.70
	C9 Fuel – Airframe	28 – 47
	Helicopter – Rotors	62 – 64 – 66 – 67
	C11 Helicopter – Trans	63 – 65
	C12 Hydraulic Power	29
	C13 Indicating – Recording Systems	31 – 42 – 46
	C14 Landing Gear	32
	C15 Oxygen	35
	C16 Propellers	61
	C17 Pneumatic & Vacuum	36 – 37
	C18 Protection ice/rain/fire	26 – 30
	C19 Windows	56
	C20 Structural	53 – 54 – 57.10 – 57.20 – 57.30
	C21 Water Ballast	41
	C22 Propulsion Augmentation	84

AMC to CAR M.603(c) Extent of approval

1. The agreement by the GCAA for the fabrication of parts by the approved maintenance organisation should be formalised through the approval of a detailed procedure in the maintenance organisation manual. This AMC contains principles and conditions to be taken into account for the preparation of an acceptable procedure.

2. Fabrication, inspection, assembly and test should be clearly within the technical and procedural capability of the approved maintenance organisation.

3. The approved data necessary to fabricate the part are those approved either by the GCAA, the TC holder, CAR-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 AW 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 Section 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 must be taken to ensure that the data include details of part numbering, dimensions, materials, processes, and any special manufacturing techniques, special raw material specification or/and incoming inspection requirement and that the approved organisation has the necessary capability. That capability should be defined by way of maintenance organisation manual content. Where special processes or inspection procedures are defined in the approved data which are not available at the approved maintenance organisation, that organisation cannot fabricate the part unless the TC/STC-holder gives an approved alternative.

7. Examples of fabrication under the scope of a Section 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 acceptable to the GCAA.

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 a Section A, Subpart F approval unless agreed otherwise by the GCAA in accordance with a procedure specified in the maintenance organisation manual.

9. Inspection and Identification.

   Any locally fabricated part should be subject to an inspection stage before, separately, and preferably independently from, any inspection of its installation. The inspection should establish full

compliance with the relevant manufacturing data, and the part should be unambiguously identified as fit for use by stating conformity to the approved data. Adequate records should be maintained of all such fabrication processes including heat treatment and the final inspections. All parts, excepting those with inadequate space, should carry a part number which clearly relates it to the manufacturing/inspection data. Additional to the part number the approved maintenance organisation's identity should be marked on the part for traceability purposes.

CAR M.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. When the accountable manager is not the chief executive officer of the organisation then such chief executive officer shall countersign the statement, and;
2. the organisation's scope of work, and;
3. the title(s) and name(s) of person(s) referred to in CAR M.606(b), and;
4. an organisation chart showing associated chains of responsibility between the person(s) referred to in CAR M.606(b), and;
5. a list of certifying staff 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 CAR, and;
8. the maintenance organisation manual amendment procedure(s).

(b) The maintenance organisation manual and its amendments shall be approved by the GCAA.

(c) Notwithstanding paragraph (b) minor amendments to the manual may be approved through a procedure (hereinafter called indirect approval).

AMC to CAR M.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.605 Facilities

The organisation shall ensure that:

(a) Facilities are provided for all planned work, specialised workshops and bays are segregated as appropriate, to ensure protection from contamination and the environment.

(b) Office accommodation is provided for the management of all planned work including in particular, the completion of maintenance records.

(c) Secure storage facilities are provided for components, equipment, tools and material. Storage conditions shall ensure segregation of unserviceable components and material from all other components, material, equipment and tools. Storage conditions shall be in accordance with the manufacturers' instructions and access shall be restricted to authorised personnel.

AMC to CAR M.605(a) Facilities

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

   For 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.402. For complex repairs or component maintenance requiring an AW FORM 1, suitable approved workshops should be provided. The facilities and environmental conditions required for inspection and maintenance should be defined in the Maintenance Organisation Manual.

2. Protection from the weather elements relates to the normal prevailing local weather elements that are expected throughout any twelve-month period. Aircraft hangar and aircraft component workshop structures should be to a standard that prevents the ingress of rain, hail, ice, snow, wind and dust etc. Aircraft hangar and aircraft component workshop floors should be sealed to minimise dust generation.

3 Aircraft maintenance staff should be provided with an area where they may study maintenance instructions and complete continuing airworthiness records in a proper manner.

AMC to CAR M.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 to CAR M.605(c) Facilities

1. Storage facilities for serviceable aircraft components should be clean, well-ventilated and maintained at an even dry temperature to minimise the effects of condensation. Manufacturer’s storage recommendations should be followed for those aircraft components identified in such published recommendations.

2. Adequate storage racks should be provided and strong enough to hold aircraft components and provide sufficient support for large aircraft components such that the component is not damaged during storage.

3. All aircraft components, wherever practicable, should remain packaged in their protective material to minimise damage and corrosion during storage. A shelf life control system should be utilised and identity tags used to identify components.

4. Segregation means storing unserviceable components in a separate secured location from serviceable components.

5. Segregation and management of any unserviceable component should be ensured according to the pertinent procedure approved to that organisation.

6. Procedures should be defined by the organisation describing the decision process for the status of unserviceable components. This procedure should identify at least the following:

   - role and responsibilities of the persons managing the decision process;
   - description of the decision process to choose between maintaining, storing or mutilating a component;
   - traceability of decision

7. Once unserviceable components or materials have been identified as unsalvageable in accordance with CAR M.504 (c), the organisation should establish secure areas in which to segregate such items and to prevent unauthorised access. Unsalvageable components should be managed through a procedure to ensure that these components receive the appropriate final disposal according to CAR M.504 (c) and AMC1 CAR M.504, item (c). The person responsible for the implementation of this procedure should be identified.

CAR M.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) shall 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 shall be demonstrated and recorded.

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

(g) The maintenance organisation shall have sufficient certifying staff to issue certificates of release to service for aircraft and components provided for in CAR M.612 and CAR M.613. The staff shall comply with the following requirements:
   1. CAR-66 in the case of aircraft,
   2. Appropriately qualified in case of components.

(h) By derogation from paragraph (g), the organisation may use certifying staff qualified in accordance with the following provisions when providing maintenance support to operators involved in

commercial operations, subject to appropriate procedures to be approved as part of the organisation's manual:

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

2. In the case of aircraft operating away from a supported location the organisation may issue a limited certifying staff authorisation to the aircraft commander on the basis of the flight crew licence, provided that the organisation ensures that sufficient practical training has been carried out to ensure that such person can accomplish the task to the required standard.

(i) Reserved.

(j) Reserved.

AMC to CAR M.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 Section 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 GCAA 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 to CAR M.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 should have, dependent upon the extent of approval, an aircraft maintenance manager, a workshop manager all of whom should report to the accountable manager. In small maintenance organisations any manager may also be the accountable manager, and may also be the aircraft maintenance manager or the workshop manager.

3. The aircraft maintenance manager is responsible for ensuring that all maintenance required to be carried out, plus any defect rectification carried out during aircraft maintenance, is carried out to the design and quality standards specified in this CAR. The aircraft maintenance manager is also responsible for any corrective action resulting from the CAR M.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.616 organisational review.

5. Notwithstanding the example sub-paragraphs 2 - 4 titles, the organisation may adopt any title for the foregoing managerial positions but should identify to the GCAA the titles and persons chosen to carry out these functions.

AMC to CAR M.606(c) Personnel requirements

1. All nominated persons should, in the normal way, be expected to satisfy the GCAA that they possess the appropriate experience and qualifications which are listed in paragraphs 2.1 to 2.5 below.

2. All nominated persons should have:

   2.1. practical experience and expertise in the application of aviation safety standards and safe maintenance practices;

   2.2. comprehensive knowledge of:

   (a) 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 should be practical maintenance experience;

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

   Training courses should be as a minimum at a level equivalent to CAR 66 Appendix III Level 1 General Familiarisation, and could be imparted by a CAR 147 organisation, by the manufacturer, or by any other organisation accepted by the GCAA.

   2.5. knowledge of maintenance standards.

AMC to CAR M.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 to CAR M.606(e) Personnel requirements

1. Personnel involved in maintenance should be assessed for competence by 'on the job' evaluation and/or by examination relevant to their particular job role within the organisation before unsupervised work is permitted.

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

AMC to CAR M.606(f) Personnel requirements

1. Continued airworthiness non-destructive testing means such testing specified by the type certificate holder of the aircraft, engine or propeller in the CAR M.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 4179:2000 (EN 4179), MIL-STD-410E, ATA Specification 105, or any other equivalent standard acceptable to the GCAA 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, MIL-STD-410E and ATA Specification 105 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 NDI board, all examinations should be conducted by personnel or organisations under the general control of such a board. In the absence of a national aerospace NDI board, examinations should be conducted by personnel or organisations under the general control of the NDI board of a State designated by the GCAA.

5. Particular non-destructive test means any one or more of the following: dye penetrant, magnetic particle, eddy current, ultrasonic and radiographic methods including X ray and gamma ray.

6. In addition it should be noted that new methods are and will be developed, such as, but not limited to thermography and shearography, which are not specifically addressed by EN 4179. Until such time as an agreed standard is established such methods should be carried out in accordance with the particular equipment manufacturers' recommendations including any training and examination process to ensure competence of the personnel with the process.

7. Any approved maintenance organisation that carries out continued airworthiness non-destructive testing should establish qualification procedures for non-destructive testing.

8. Boroscoping and other techniques such as delamination coin tapping are non-destructive inspections rather than non-destructive testing. Notwithstanding such differentiation, approved maintenance organisation should establish a procedure to ensure that personnel who carry out and interpret such inspections are properly trained and assessed for their competence with the process. Non-destructive inspections, not being considered as non-destructive testing by Section A, Subpart F are not listed in Appendix IV to CAR M under class rating D1.

9. The referenced standards, methods, training and procedures should be specified in the maintenance organisation manual.

10. Any such personnel who intend to carry out and/or control a non-destructive test for which they were not qualified prior to the effective date of CAR-M should qualify for such non-destructive test in accordance with EN 4179.

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

AMC to CAR M.606 (g)(2) Personnel requirement

Appropriately qualified means:

a) A holder of GCAA CAR 66 basic licence, or a holder of a relevant technical degree, or a holder of a recognized technical training certificate,

b) Can demonstrate sufficient experience on the intended component maintenance that meets the standards in this regulations,

c) Successfully completed the relevant component maintenance training, and

d) Shall be conversant with the applicable GCAA regulations.

AMC to CAR M.606(h)(2) Personnel requirements

1. For the issue of a limited certification authorisation the commander should hold either a valid air transport pilot licence (ATPL), or commercial pilot licence (CPL), or a national equivalent acceptable to the GCAA on the aircraft type. In addition, the limited certification authorisation is subject to the maintenance organisation manual containing procedures to address the following:

   (a) Completion of adequate maintenance airworthiness regulation training.

   (b) Completion of adequate task training for the specific task on the aircraft. The task training should be of sufficient duration to ensure that the individual has a thorough understanding of the task to be completed and should involve training in the use of associated maintenance data.

   (c) Completion of the procedural training.

   The above procedures should be specified in the maintenance organisation manual and be accepted by the GCAA.

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 GCAA.

3. The authorisation should have a finite life of twelve months subject to satisfactory recurrent training on the applicable aircraft type.

CAR M.607 Certifying Staff

(a) In addition to CAR M.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 CAR 66.20(b), 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 licence 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 GCAA within seven days of the issuance of such certification authorisation. The approved maintenance organisation issuing the one-off certification authorisation shall ensure that any such maintenance that could affect flight safety is re-checked.

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

AMC to CAR M.607 Certifying staff

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

AMC to CAR M.607(c) Certifying staff

1. The following minimum information as applicable should be kept on record in respect of each certifying person:

   (a) name;

   (b) date of birth;

   (c) basic training;

   (d) type training;

   (e) recurrent training;

   (f) specialised training;

   (g) experience;

   (h) qualifications relevant to the approval;

   (i) scope of the authorisation and personal authorisation reference;

   (j) date of first issue of the authorisation;

   (k) if appropriate - expiry date of the authorisation.

2. Reserved

3. Persons authorised to access the system should be maintained at a minimum to ensure that records cannot be altered in an unauthorised manner or that such confidential records become accessible to unauthorised persons.

4. The GCAA should be granted access to the records upon request.

CAR M.608 Components, Equipment And Tools

(a) The organisation shall:

   1. hold the equipment and tools specified in the maintenance data described in CAR M.609 or verified equivalents as listed in the maintenance organisation manual as necessary for day-to-day maintenance within the scope of the approval; and,

   2. demonstrate that it has access to all other equipment and tools used only on an occasional basis.

(b) Tools and equipment shall be controlled and calibrated to an officially recognised standard. Records of such calibrations and the standard used shall be kept by the organisation.

(c) The organisation shall inspect, classify and appropriately segregate all incoming components, standard parts and materials.

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

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

AMC to CAR M.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 should be maintained for all the organisation's precision tooling and equipment together with a record of calibrations and standards used.
2. Inspection, service or calibration on a regular basis should be in accordance with the equipment manufacturers' instructions except where the Section 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.609 Maintenance Data

The approved maintenance organisation shall hold and use applicable current maintenance data specified in point CAR M.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 to CAR M.609 Maintenance Data

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

CAR M.610 Maintenance Work Orders

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

AMC to CAR M.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.610 Maintenance Standards

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

CAR M.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 shall be issued in accordance with point M.801.

CAR M.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 shall be issued in accordance with point M.802. AW Form 1 shall be issued except for those components maintained in accordance with point M.502(b) and components fabricated in accordance with point M.603(c).

(b) The component certificate release to service document, AW Form 1 may be generated from a computer database.

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

1. An aircraft component which has been maintained off the aircraft requires the issue of a certificate of release to service for such maintenance and another CRS to service in regard to being installed properly on the aircraft when such action occurs.

2. In the case of components in storage prior to CAR-145, CAR-M and CAR-21 and not released on an AW FORM 1 or equivalent in accordance with M.501(a) or removed serviceable from active aircraft which have been withdrawn from service, this paragraph provides additional guidance regarding the conditions under which an AW FORM 1 may be issued .

   2.1 An AW FORM 1 may be issued for an aircraft component which has been:

   - released without an AW FORM 1 or equivalent.
   - 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 Section A, Subpart F maintenance organisation may issue an AW FORM 1 as detailed in this AMC sub-paragraph 2.5 to 2.9, as appropriate, in accordance with procedures detailed in the manual as approved by the GCAA. The appropriately rated Section 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 AW FORM 1 under this paragraph.

2.3. For the purposes of this paragraph 2 only, appropriately rated means an organisation with an approval class rating for the type of component or for the product in which it may be installed.

2.4. An AW FORM 1 issued in accordance with this paragraph 2 should be issued by signing in block 14a – 14e and stating "Inspected" in block 11. In addition, block 12 should specify:

2.4.1 When the last maintenance was carried out and by whom;

2.4.2 If the component is unused, when the component was manufactured and by whom with a cross reference to any original documentation which should be included with the Form;

2.4.3 A list of all airworthiness directives, repairs and modifications known to have been incorporated. If no airworthiness directives or repairs or modifications are known to be incorporated then this should be so stated

2.4.4 Details 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 13. The maintenance history record and acceptance test report or statement, if applicable, should be attached to the AW FORM 1.

2.5. New/unused aircraft components

2.5.1 Any unused aircraft component in storage without an AW FORM 1 up to the effective date(s) for CAR-21 that was manufactured by an organisation acceptable to the GCAA at the time may be issued an AW FORM 1 by an appropriately rated maintenance organisation approved under Section A, Subpart F. The AW FORM 1 should be issued in accordance with the following subparagraphs which should be included in a procedure within the maintenance organisation manual.

Note 1: It should be understood that the release of a stored but unused aircraft component in accordance with this paragraph represents a maintenance release under Section A, Subpart F and not a production release under CAR-21. It is not intended to bypass the production release procedure agreed by the GCAA for parts and subassemblies intended for fitment on the manufacturers own production line.

(a) An acceptance test report or statement should be available for all used and unused aircraft components that are subjected to acceptance testing after manufacturing or maintenance as appropriate.

(b) The aircraft component should be inspected for compliance with the manufacturer's instructions and limitations for storage and condition including any requirement for limited storage life, inhibitors, controlled climate and special storage containers. In addition or in the absence of specific

storage instructions the aircraft component should be inspected for damage, corrosion and leakage to ensure good condition.

(c) The storage life used of any storage life limited parts should be established.

2.5.2 If it is not possible to establish satisfactory compliance with all applicable conditions specified in subparagraph 2.5.1 (a) to (c) inclusive the aircraft component should be disassembled by an appropriately rated organisation and subjected to a check for incorporated airworthiness directives, repairs and modifications and inspected/tested in accordance with the manufacturers maintenance instructions to establish satisfactory condition and, if relevant, all seals, lubricants and life limited parts replaced. On satisfactory completion after reassembly an AW FORM 1 may be issued stating what was carried out and the reference of the manufacturers maintenance instructions included.

2.6. Used aircraft components removed from a serviceable aircraft.

2.6.1. Serviceable aircraft components removed from a UAE registered aircraft may be issued an AW FORM 1 by an appropriately rated organisation subject to compliance with this subparagraph.

(a) The organisation should ensure that the component was removed from the aircraft by an appropriately qualified person.

(b) The aircraft component may only be deemed serviceable if the last flight operation with the component fitted revealed no faults on that component/related system.

(c) The aircraft component should be inspected for satisfactory condition including in particular damage, corrosion or leakage and compliance with any additional manufacturer's maintenance instructions.

(d) The aircraft record should be researched for any unusual events that could affect the serviceability of the aircraft component such as involvement in accidents, incidents, heavy landings or lightning strikes. Under no circumstances may an AW FORM 1 be issued in accordance with this paragraph 2.6 if it is suspected that the aircraft component has been subjected to extremes of stress, temperatures or immersion which could affect its operation.

(e) A maintenance history record should be available for all used serialised aircraft components.

(f) Compliance with known modifications and repairs should be established.

(g) The flight hours/cycles/landings as applicable of any service life limited parts including time since overhaul should be established.

(h) Compliance with known applicable airworthiness directives should be established.

(i) Subject to satisfactory compliance with this subparagraph 2.6.1 an AW FORM 1 may be issued and should contain the information as specified in paragraph 2.4 including the aircraft from which the aircraft component was removed.

2.6.2. Serviceable aircraft components removed from a non UAE registered aircraft may only be issued an AW FORM 1 if the components are leased or loaned from the maintenance organisation approved under Section A, Subpart F who retains control of the airworthiness status of the components. An AW FORM 1 may be issued and should contain the information as specified in paragraph 2.4 including the aircraft from which the aircraft component was removed.

2.7. Used aircraft components removed from an aircraft withdrawn from service.

Serviceable aircraft components removed from a UAE registered aircraft withdrawn from service may be issued an AW FORM 1 by a maintenance organisation approved under Section A, Subpart F subject to compliance with this sub paragraph.

(a) Aircraft withdrawn from service are sometimes dismantled for spares. This is considered to be a maintenance activity and should be accomplished under the control of an organisation approved under Section A, Subpart F, employing procedures approved by the GCAA.

(b) To be eligible for installation components removed from such aircraft may be issued with an AW FORM 1 by an appropriately rated organisation following a satisfactory assessment.

(c) As a minimum the assessment will need to satisfy the standards set out in paragraphs 2.5 and 2.6 as appropriate. This should where known, include the possible need for the alignment of scheduled maintenance that may be necessary to comply with the maintenance programme applicable to the aircraft on which the component is to be installed.

(d) Irrespective of whether the aircraft holds a certificate of airworthiness or not, the organisation responsible for certifying any removed component should satisfy itself that the manner in which the components were removed and stored are compatible with the standards required by Section A, Subpart F.

(e) A structured plan should be formulated to control the aircraft disassembly process. The disassembly is to be carried out by an appropriately rated organisation under the supervision of certifying staff, who will ensure that the aircraft components are removed and documented in a structured manner in accordance with the appropriate maintenance data and disassembly plan.

(f) All recorded aircraft defects should be reviewed and the possible effects these may have on both normal and standby functions of removed components are to be considered.

(g) Dedicated control documentation is to be used as detailed by the disassembly plan, to facilitate the recording of all maintenance actions and component removals performed during the disassembly process. Components found to be unserviceable are to be identified as such and quarantined pending a decision on the actions to be

taken. Records of the maintenance accomplished to establish serviceability are to form part of the component maintenance history.

(h) Suitable Section A, Subpart F facilities for the removal and storage of removed components are to be used which include suitable environmental conditions, lighting, access equipment, aircraft tooling and storage facilities for the work to be undertaken. While it may be acceptable for components to be removed, given local environmental conditions, without the benefit of an enclosed facility subsequent disassembly (if required) and storage of the components should be in accordance with manufacturer's recommendations.

2.8. Used aircraft components maintained by organisations not approved in accordance with Section A, Subpart F or CAR-145.

For used components maintained by a maintenance organisation unapproved under Section A, Subpart F or CAR-145, due care should be exercised before acceptance of such components. In such cases an appropriately rated maintenance organisation approved under Section A, Subpart F should establish satisfactory conditions by:

(a) dismantling the component for sufficient inspection in accordance with the appropriate maintenance data,

(b) replacing of all service life limit components when no satisfactory evidence of life used is available and/or the components are in an unsatisfactory condition,

(c) reassembling and testing as necessary the component,

(d) completing all certification requirements as specified in CAR M.613

2.9. Used aircraft components removed from an aircraft involved in an accident or incident.

Such components should only be issued with an AW FORM 1 when processed in accordance with paragraph 2.7 and a specific work order including all additional necessary tests and inspections made necessary by the accident or incident. Such a work order may require input from the TC holder or original manufacturer as appropriate. This work order should be referenced in block 12.

3. A certificate should not be issued for any component when it is known that the component is unserviceable except in the case of an 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. A clear statement of limitation should be endorsed in block 12.

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. The certificate is not a delivery or shipping note. It should only be issued by organisations approved by the GCAA within the scope of the approval.

CAR M.614 Maintenance Records

(a) The approved maintenance organisation shall record all details of work carried out. Records necessary to prove all requirements have been met for issuance of the certificate of release to service including the sub-contractor's release documents shall be retained.

(b) The approved maintenance organisation shall provide a copy of each certificate of release to service to the aircraft owner, together with a copy of any specific approved 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.

1. The records under this paragraph 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 GCAA.

AMC to CAR M.614(a) Maintenance 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 should contain basic details of all serialised aircraft components and all other significant aircraft components installed, to ensure traceability to such installed aircraft component documentation and associated CAR M.304 maintenance data.
3. The maintenance record can be either a paper or computer system or any combination of both. The records should remain legible throughout the required retention period.
4. Paper systems should use robust material which can withstand normal handling and filing.
5. Computer systems may be used to control maintenance and/or record details of maintenance work carried out. Computer systems used for maintenance should have at least one backup system which should be updated at least within 24 hours of any maintenance. Each terminal is required to contain programme safeguards against the ability of unauthorised personnel to alter the database.

AMC to CAR M.614(c) Maintenance 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 should refer to the revision status of the data used.

CAR M.615 Privileges Of The Organisation

The maintenance organisation approved in accordance with Section A, Subpart F of 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 specialised 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 GCAA 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 un-serviceability 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 CAR M.612 or CAR M.613.

(e) Reserved.

(f) Reserved.

AMC to CAR M.615(b) Privileges of the organisation

CAR M.615(b) refers to work carried out by another organisation which is not appropriately approved under Section 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 should meet an officially recognised standard or, otherwise, it should be acceptable to the GCAA (through the approval of the Maintenance Organisation Manual).

“Under the control of the Subpart F organisation” means that the Subpart F organisation should investigate the capability of the subcontracted organisation (including qualifications, facilities, equipment and materials) and ensure that such organisation:

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

The certificate of release to service may be issued either at the subcontractors or at the organisation facility by authorised certifying staff, and always under the Section A, Subpart F organisation reference. Such staff would normally come from the Section A, Subpart F organisation but may otherwise be a person from the subcontractor who meets the Section A, Subpart F organisation certifying staff standard which itself is approved by the GCAA via the Maintenance Organisation Manual.

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

CAR M.616 Organisational Review

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

AMC to CAR M.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 should identify:
   - 2.1. The person responsible for the organisational review, and;
   - 2.2. The frequency of the reviews, and;
   - 2.3. The scope and content of the reviews, and;
   - 2.4. The persons accomplishing the reviews, and;
   - 2.5. The procedure for planning, performing and processing review findings.
   - 2.6. 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 CAR M.616 should be used to manage the organisational reviews.

CAR M.617 Changes To The Approved Maintenance Organisation

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

1. the name of the organisation;
2. the location of the organisation;
3. additional locations of the organisation;
4. the accountable manager;
5. any of the persons specified in paragraph CAR M.606(b);
6. the facilities, equipment, tools, material, procedures, work scope and certifying 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 to CAR M.617 Changes to the approved maintenance organisation

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

CAR M.618 Continued Validity Of Approval

(a) An approval shall be issued for one year. It shall 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 CAR M.619, and;
2. the GCAA being granted access to the organisation to determine continued compliance with this CAR, and;
3. the approval not being surrendered or revoked;

(b) Upon surrender or revocation, the approval certificate shall be returned to the GCAA.

CAR M.619 Findings

Refer to GCAA SAFETY AFFAIRS AUDIT STANDARDS For Finding categorization and process.

https://www.gcaa.gov.ae/en/ePublication/_layouts/GCAA/ePublication/DownloadFile.aspx?Un=/en/epublication/admin/Library Pdf/Standards/GCAA SAFETY AFFAIRS AUDIT STANDARD.pdf

SUBPART G - CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATION

CAR M.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.702 Application

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

AMC to CAR M.702 Application

An application should be made on an AWF-ARC 14a (Appendix IX) or equivalent acceptable to the GCAA.

GM to CAR M.702 Application

Guidance Material relating to the approval and oversight of continuing airworthiness management activities for CAR M continuing airworthiness management organisations based in the UAE and outside the UAE **is available in APPENDIX XIV, GM to CAR M.702**

CAR M.703 Extent Of Approval

(a) The approval is indicated on a certificate included in Appendix VI issued by the GCAA.

(b) Notwithstanding paragraph (a), for Commercial Air Operators, the approval shall be part of the air operator certificate issued by the GCAA, for the aircraft operated.

(c) The scope of work deemed to constitute the approval shall be specified in the continuing airworthiness management exposition in accordance with point M.704.

CAR M.704 Continuing Airworthiness Management Exposition

(a) The continuing airworthiness management organisation shall provide a continuing airworthiness management exposition containing the following information:

1. a statement signed by the accountable manager to confirm that the organisation will at all times work in accordance with CAR-M or CAR-ML, as applicable. When the accountable manager is not the chief executive officer of the organisation then such chief executive officer shall countersign the statement, 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.706(a), CAR M.706(c) and CAR M.706(d) and;
4. an organisation chart showing associated chains of responsibility between all the person(s) referred to in points CAR M.706(a), CAR M.706(c) and CAR M.706(d) and;
5. a list of the airworthiness review staff referred to in point CAR M.707 and;
6. a general description and location of the facilities, and;
7. procedures specifying how the continuing airworthiness management organisation ensures compliance with CAR-M and CAR-ML, as applicable, and;

8. the continuing airworthiness management exposition amendment procedures.

9. The list of approved aircraft maintenance programmes, or, for Aircraft not used by commercial air operators, the list of "generic" and "baseline" maintenance programmes.

(b) The continuing airworthiness management exposition and its amendments shall be approved by the GCAA.

(c) Notwithstanding point (b), minor amendments to the exposition may be approved indirectly through an indirect approval procedure. The indirect approval procedure shall define the minor amendment eligible, be established by the continuing airworthiness management organisation as part of the exposition and be approved by the GCAA.

AMC1 CAR M.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 M requirements.

2. A continuing airworthiness management exposition should comprise:

Part 0	General organisation
Part 1	Continuing airworthiness procedures
Part 2	Quality system or organisational review (as applicable)
Part 3	Contracted maintenance (– management of maintenance (liaison with maintenance organisations
Part 4	Airworthiness review procedures (if applicable)
Part 5	Appendices

3. Personnel should be familiar with those parts of the exposition that are relevant to their tasks.

4. The CAMO should specify in the exposition who is responsible for the amendment of the document. Unless otherwise agreed by the GCAA, the person responsible for the management of the quality system or for the organisational review should be responsible for monitoring and amending the exposition, including associated procedures manuals, and the submission of proposed amendments to the GCAA. The GCAA 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 GCAA ('indirect approval procedure').

5. The CAMO may use electronic data processing (EDP) for publication of the continuing airworthiness management exposition. The continuing airworthiness management exposition should be made available to the GCAA in a form acceptable to the GCAA. Attention should be paid to the compatibility of EDP publication systems with the necessary dissemination, both internally and externally, of the continuing airworthiness management exposition.

6. The exposition should contain information as applicable, on how the continuing airworthiness management organisation complies with CDCCL instructions.

7. Appendix V to AMC M.704 contains an example of a continuing airworthiness management exposition layout.

AMC2 CAR M.704 Continuing airworthiness management exposition

EXPOSITION LAYOUT FOR A CAMO HOLDING A MAINTENANCE ORGANISATION APPROVAL

1. Where a CAMO is also approved to another CAR, the exposition or manual required by the other CAR 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 CAR 145.70(a))

Part 0 General organization
Part 1 Management
Part 2 Maintenance procedures
Part L2 Additional line maintenance procedures
Part 3 Quality system and/or organisational review (as applicable). This chapter should cover the functions specified in CAR M.712 'Quality system' and CAR 145.65 'Safety and quality system'.
Part 4 Contracts. This chapter should include:
- the contracts of the CAMO with the owners/operators as per Appendix I to CAR M or Appendix I to CAR ML;
- 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 Other competent authorities approved supplement (if applicable)
Part 8 Reserved
Part 9 Airworthiness review procedures (if applicable)

3. Example for a combined CAMO and CAR M Subpart F organisation:

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

AMC CAR M.704(a)(1) Continuing airworthiness management exposition

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

'This exposition defines the organisation and procedures upon which the GCAA CAMO approval is based.

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

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

It is understood that the GCAA will approve this organisation whilst the GCAA is satisfied that the procedures are followed and the work standard is maintained. It is understood that the GCAA reserves the right to suspend, limit or revoke the CAMO approval or the air operator certificate, as applicable, if the GCAA 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) ... '

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 GCAA. Failure to carry out this action invalidates the CAMO approval or the air operator certificate.

CAR M.705 Facilities

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

AMC to CAR M.705 Facilities

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

CAR M.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 CAR-M or CAR-ML, as applicable.

(b) For commercial air operators, the accountable manager referred to in paragraph (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 always complies with the applicable continuing airworthiness management, airworthiness review of CAR-M or CAR-ML, as applicable, and the permit to fly requirements. Such person(s) shall be ultimately responsible to the accountable manager.

(d) For commercial air operators, 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 the GCAA.

(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) (reserved)

(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.706(a), CAR M.706(c) and CAR M.706(d).

(k) For complex motor-powered aircraft and aircraft used by commercial air operators, the organisation shall establish and control the competence of personnel involved in the continuing airworthiness management, airworthiness review and/or quality audits in accordance with a procedure and to a standard agreed by the GCAA.

AMC CAR M.706 Personnel requirements

1. The person or group of persons should represent the continuing airworthiness management structure of the organisation and be responsible for all continuing airworthiness functions. Dependent on the size of the operation and the organisational set-up, the continuing airworthiness functions may be divided under individual managers or combined in nearly any

number of ways. However, if a quality system is in place it should be independent from the other functions.

2. The actual number of persons to be employed and their necessary qualifications is dependent upon the tasks to be performed and thus dependent on the size and complexity of the organisation (general aviation aircraft, corporate aircraft, number of aircraft and the aircraft types, complexity of the aircraft and their age and for commercial air transport, route network, line or charter, ETOPS) and the amount and complexity of maintenance contracting. Consequently, the number of persons needed, and their qualifications may differ greatly from one organisation to another and a simple formula covering the whole range of possibilities is not feasible.

3. To enable the GCAA to accept the number of persons and their qualifications, an organisation should make an analysis of the tasks to be performed, the way in which it intends to divide and/or combine these tasks, indicate how it intends to assign responsibilities and establish the number of man/hours and the qualifications needed to perform the tasks. With significant changes in the aspects relevant to the number and qualifications of persons needed, this analysis should be updated.

4. Nominated person or group of persons should have:

   4.1. practical experience and expertise in the application of aviation safety standards and safe operating practices;

   4.2. a comprehensive knowledge of:

      (a) relevant parts of operational requirements and procedures;

      (b) the AOC holder's Operations Specifications when applicable;

      (c) the need for, and content of, the relevant parts of the AOC holder's Operations Manual when applicable;

   4.3. knowledge of quality systems;

   4.4. five years relevant work experience of which at least two years should be from the aeronautical industry in an appropriate position;

   4.5. a relevant engineering degree or an aircraft maintenance technician qualification with additional education acceptable to the GCAA. ‘relevant engineering degree’ means an engineering degree from aeronautical, mechanical, electrical, electronic, avionic or other studies relevant to the maintenance and continuing airworthiness of aircraft/aircraft components;

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

   4.6. thorough knowledge with the organisation's continuing airworthiness management exposition;

4.7. knowledge of a relevant sample of the type(s) of aircraft gained through a formalised training course. These courses should be at least at a level equivalent to CAR 66 Appendix III Level 1 General Familiarisation and could be imparted by a CAR 147 organisation, by the manufacturer, or by any other organisation accepted by the GCAA.

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

For any other aircraft of 2730 Kg MTOM and below the formalised training courses may be replaced by demonstration of knowledge. This knowledge may be demonstrated by documented evidence or by an assessment performed by the GCAA. This assessment should be recorded.

4.8. knowledge of maintenance methods.

4.9. knowledge of applicable regulations

AMC CAR M.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 GCAA 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 CAR M.706(e) Personnel requirements

1. The GCAA should 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 organisation'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 part of the same organisation.

AMC CAR M.706(f) Personnel requirements

Additional training in fuel tank safety and electrical wiring interconnection systems (EWIS), where applicable, as well as associated inspection standards and maintenance procedures should be provided to the continuing airworthiness management organisations' technical personnel, especially those technical support staff involved with the management of CDCCL, Service Bulletin assessment, work planning and maintenance programme management.

Fuel tank safety training guidelines is provided in Appendix XII to AMC to CAR M.706(f).

EWIS training guidelines is provided in AMC-01.

AMC CAR M.706(i) Personnel requirements

(Reserved)

AMC to CAR M.706(k) Personnel requirements

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

CAR M.707 Airworthiness Review Staff

(a) To be approved to carry out airworthiness reviews, an approved continuing airworthiness management organisation shall have appropriate airworthiness review staff to issue airworthiness review certificates or recommendations referred to in Subpart I of CAR-M or Subpart I of CAR-ML:

1. For aircraft used by commercial air operators or a CMPA , these staff shall have acquired:

   (a) at least five 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) formal aeronautical maintenance training; and
   (d) a position within the approved organisation with appropriate responsibilities.
   (e) Notwithstanding (a) to (d), the requirement laid down in CAR M.707(a)(1)(b) may be replaced by five years of experience in continuing airworthiness additional to those already required by CAR M.707(a)(1)(a).

2. For NCMPA not used by commercial air operators, these staff shall have acquired:

   (a) at least three years' experience in continuing airworthiness, and
   (b) an appropriate licence 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 (a) to (d), the requirement laid down in CAR M.707(a)(2)(b) may be replaced by four years of experience in continuing airworthiness additional to those already required by CAR M.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 the GCAA after satisfactory completion of an airworthiness review under supervision of the GCAA or under the supervision of the organisation's airworthiness review staff in accordance with a procedure approved by the GCAA.

(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 to CAR M.707(a) Airworthiness review staff

1. Airworthiness review staff are only required if the CAMO wants to be granted CAR M.711(b) airworthiness review privileges.

2. "experience in continuing airworthiness" means any appropriate combination of experience in tasks related to aircraft maintenance and/or continuing airworthiness management (engineering) and/or surveillance of such tasks.

3. A person qualified to the AMC to CAR M.706 subparagraph 4.5 should be considered as holding the equivalent to an aeronautical degree.

4. An appropriate licence in compliance with CAR-66 is 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 2000 kg MTOM and below, a category B3 licence.

   It is not necessary to satisfy the experience requirements of Part 66 at the time of the review.

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

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

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

   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 Maintenance 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 always has overall authority. This means that this person can be nominated as airworthiness review staff.

AMC to CAR M.707(a)(1) Airworthiness review staff

For all aircraft used in commercial air transport and any other aircraft above 2730 kg MTOM, formal aeronautical maintenance training means training (internal or external) supported by evidence on the following subjects:

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

AMC to CAR M.707(a)(2) Airworthiness review staff

For any other aircraft of 2730 Kg MTOM and below, not used in commercial air transport:

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

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

AMC to CAR M.707(b) Airworthiness review staff

The formal acceptance by the GCAA of the airworthiness review staff is granted through the corresponding GTF-NPA-001/ E-services.

An airworthiness review "under supervision" means under the supervision of the GCAA. If the organisation has already properly authorised airworthiness review staff, The GCAA may accept that the supervision be performed by this existing airworthiness review staff in accordance with an approved procedure. In such case, evidence of the airworthiness review performed under supervision should be provided to the GCAA together with GTF-NPA-001. If satisfied, the GCAA will issue the formal acceptance through GTF-NPA-001.

Once the airworthiness review staff has been accepted by the GCAA, the inclusion of their name in the exposition (refer to CAR M.704(a)5) constitutes the formal authorisation by the organisation.

AMC to CAR M.707(c) Airworthiness review staff

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

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

In order to restore the validity of the authorisation, the airworthiness review staff should conduct at a satisfactory level an airworthiness review under the supervision of the GCAA or, if accepted by the GCAA, 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 to CAR M.707(e) Airworthiness review staff

The minimum content of the airworthiness review staff record should 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.708 Continuing Airworthiness Management

(a) The organization shall ensure that all continuing airworthiness management is carried out in accordance with Subpart C of CAR-M or Subpart C of CAR-ML, as applicable.

(b) For every aircraft managed, the approved continuing airworthiness management organisation shall:

1. Ensure than an aircraft maintenance programme including any applicable reliability programme, as required by CAR M.302 or CAR ML.302, as applicable, is developed and controlled;
2. for aircraft not used by commercial air operators, provide a copy of the aircraft maintenance programme to the owner or operator responsible in accordance with CAR M.201 or CAR ML.201, as applicable;
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 Subpart H of CAR-M or Subpart H of CAR-ML, or CAR-145, as applicable;
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;
11. ensure that the following information are provided to the CAR 145 AMO to facilitate the issuance of a CFFF:
    (a) Conditions which necessitated operation of aircraft under a CFFF; and
    (b) Any other condition which affects safe operation of aircraft, if any; and
12. ensure that all information related to a CFFF are provided to the operator/owner to ensure safe operation of the aircraft under a CFFF.

(c) In the case of complex motor-powered aircraft or aircraft used for commercial operator, when the CAMO is not appropriately approved in accordance with CAR-145 or Subpart F of CAR-M, the organisation shall in consultation with the operator, establish a written maintenance contract with an organization approved in accordance with CAR-145 or Subpart F of CAR-M or with another operator, detailing the functions specified under CAR M.301(2), CAR M.301(3), CAR M.301(5) and CAR M.301(6) or or CAR ML.301(b) to (e), ensuring that all maintenance is ultimately carried out by a maintenance organization approved in accordance with CAR-145 or Subpart F of CAR-M and defining the support of the quality functions of CAR M.712(b).

The aircraft base, scheduled line maintenance and engine maintenance contracts, together with all amendments, shall be acceptable to the GCAA.

(d) Notwithstanding point (c), the contract may be in the form of individual work orders addressed to the maintenance organisation approved in accordance with CAR145 or Subpart-F of CAR-M in the case of:
1. an aircraft requiring unscheduled line maintenance,
2. Component maintenance, including engine maintenance.

GM CAR M.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 to CAR M.708(b)(3) Continuing Airworthiness Management

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

GM CAR M.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.

GM CAR M.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.

AMC1 to CAR M.708(c) Continuing airworthiness management

1. In case of complex motor-powered aircraft, aircraft used for commercial specialised operations and aircraft used by commercial ATO, the provisions of CAR M.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.301 points (2), (3), (5) and (6). If the CAMO does not hold the appropriate maintenance organisation approval (CAR-M Subpart F organisation approval or a CAR-145 approval), then the CAMO should conclude a contract with the appropriate organisation(s).
2. The CAMO bears the responsibility for the airworthy condition of the aircraft for which it performs the continuing airworthiness management. Thus, it should be satisfied before the intended flight that all required maintenance has been properly carried out.
3. The CAMO should agree with the operator on the process to select a maintenance organisation before concluding any contract with a maintenance organisation.

4. The fact that the CAMO has contracted a maintenance organisation approved under CAR-145 or CAR-M Subpart F, should not prevent it from checking at the maintenance facilities on any aspect of the contracted work to fulfil its responsibility for the airworthiness of the aircraft.
5. The contract between the CAMO and the maintenance organisation(s) should specify in detail the responsibilities and the work to be performed by each party.
6. Both the specification of work and the assignment of responsibilities should be clear, unambiguous and sufficiently detailed to ensure that no misunderstanding should arise between the parties concerned (operator, CAMO, maintenance organisation) that could result in a situation where work that has a bearing on the airworthiness or serviceability of aircraft is not or will not be properly performed.
7. Special attention should be paid to procedures and responsibilities to ensure that all maintenance work is performed, service bulletins are analysed and decisions taken on accomplishment, airworthiness directives are completed 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 AMC1 to CAR M.708(c) gives further details on the subject.

AMC2 CAR M.708(c) Continuing airworthiness management

MAINTENANCE CONTRACT WITH ANOTHER OPERATOR

1. The purpose of M.708 (c) is to ensure that all maintenance is carried out by an appropriately approved maintenance organisation. It is possible to contract another operator/CAMO (secondary operator/CAMO) that does not hold a maintenance organisation approval when it proves that such a contract is in the interest of the CAMO by simplifying the management of its maintenance, and the CAMO keeps an appropriate control of it. In this case the continuing airworthiness management exposition should include appropriate procedures to ensure that all maintenance is ultimately carried out on time by approved maintenance organisations in accordance with the CAMO's data. In particular, the quality system procedures should place great emphasis on monitoring compliance with the above. The list of approved maintenance organisations, or a reference to this list, should be included in the CAMO's continuing airworthiness management exposition.
2. This contract should not preclude the operator/CAMO from ensuring that all maintenance is performed by appropriately approved organisations which comply with the M.201 continuing airworthiness responsibility requirements, the GCAA should be satisfied during oversight that such an arrangement allows the operator to ensure full compliance with responsibilities pursuant to CAR M.201. 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 appropriately approved maintenance organisations. 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 appropriately approved maintenance organisations and in accordance with the approved standards.
   - Aircraft, engine and component maintenance:

     The CAMO may wish to have a maintenance contract with another a secondary operator/CAMO not approved under CAR-145 for the same type of aircraft. A typical case is that of a dry-leased aircraft between operators, where the parties, for consistency or continuity reasons (especially for

short term lease agreements) find it appropriate to keep the aircraft 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 contract with the lessor operator/CAMO. Whatever type of acceptable maintenance contract is concluded, the CAMO is required to exercise the same level of control on contracted maintenance, particularly through the M.706(c) continuing airworthiness management group of persons and quality system as referred to in M.712.

AMC to CAR M.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 for obvious reasons unscheduled line maintenance and may also include aeroplane component maintenance up to engines, so long as the GCAA considers that the maintenance is manageable through work orders, both in term of volume and complexity. It should be noted that this paragraph implies that even where base maintenance is ordered on a case-by-case basis, there should be a written maintenance contract.

CAR M.709 Documentation

(a) The approved continuing airworthiness management organisation shall hold and use applicable current maintenance data in accordance with CAR M.401, as applicable, for the performance of continuing airworthiness tasks referred to in CAR M.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 CAR M.714.

(b) For aircraft not used by air carriers, the approved continuing airworthiness management organisation may develop "baseline" or "generic" maintenance programmes, or both, in order to allow for the initial approval or the extension of the scope of an approval, without having the contracts referred to in Appendix I to CAR-M or Appendix I to CAR-ML, as applicable. These "baseline" and "generic" maintenance programmes however do not preclude the need to establish an adequate Aircraft Maintenance Programme in compliance with CAR M.302 or CAR ML.302, as applicable, in due time before exercising the privileges referred to in CAR M.711.

AMC to CAR M.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 should establish appropriate procedures or provisions in the contract with the customer.

The sentence “…, except when required by point CAR M.714”, means, in particular, the need to keep a copy of the customer data which was used to perform continuing airworthiness activities during the contract period.

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

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

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

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

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

Continuing airworthiness management organisations may seek authorisation for indirect approval in order to amend the aircraft maintenance programme mentioned above in accordance with M.302(c). The indirect approval procedure should include provisions to notify to the GCAA that an aircraft maintenance programme specific for a customer has been created. The reason is that, according to M.704(a)(9), for aircraft not involved in air carrier and commercial air transport the Continuing Airworthiness Management Exposition (CAME) only needs to include the reference to the baseline/generic maintenance programme.

GM CAR-M.709 Documentation

Paragraph CAR-M.709(a) refers to continuing airworthiness tasks referred to in CAR-M.708. As a consequence, this covers continuing airworthiness management tasks but not airworthiness reviews.

Airworthiness review requirements are established in CAR-M.710 and the requirements for the corresponding record retention are contained in CAR-M.714.

CAR M.710 Airworthiness Review

When the organisation approved in accordance with CAR M.711(b) performs airworthiness reviews, they shall be performed in accordance with CAR M.901 or CAR ML.903, as applicable.

CAR M.711 Privileges of the Organisation

(a) A continuing airworthiness management organisation approved in accordance with Subpart G of CAR-M may:

1. manage the continuing airworthiness of aircraft; except those used by commercial air operators, as listed on the approval certificate;

2. manage the continuing airworthiness of aircraft used by commercial air operators, when listed both on its approval certificate and on its Air Operator Certificate (AOC);
3. arrange to carry out limited continuing airworthiness tasks with any contracted organisation, working under its quality system, as listed on the approval certificate;
4. (Reserved)
5. (Reserved).

(b) An approved continuing airworthiness management organisation may, additionally, be approved to carry out airworthiness reviews referred to in CAR M.710 and:

1. issue the related airworthiness review certificate and,
2. issue a recommendation for the airworthiness review to the GCAA.

(c) (Reserved).

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

SUBCONTRACTING OF CONTINUING AIRWORTHINESS TASKS

1. The CAMO may subcontract certain continuing airworthiness management tasks to qualified persons or organisations. The subcontracted person or organisation performs the continuing airworthiness management tasks as an integral part of the CAMO's continuing airworthiness management system, irrespective of any other approval held by the subcontracted person or organisation (including CAMO or 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 should be satisfied that the actions taken by the subcontracted person or organisation meet the standards required by Subpart G. Therefore, the CAMO management of such activities should be accomplished:
   (a) by active control through direct involvement, and/or
   (b) by endorsing the recommendations made by the subcontracted person or organisation.
4. In order to retain ultimate responsibility, the CAMO should limit subcontracted tasks to the activities specified below:
   (a) airworthiness directive analysis and planning;
   (b) service bulletin analysis;
   (c) planning of maintenance;
   (d) reliability monitoring, engine health monitoring;
   (e) maintenance programme development and amendments;
   (f) any other activities, which do not limit the CAMO responsibilities, as agreed by the GCAA.
5. The CAMO's controls associated with subcontracted continuing airworthiness management tasks should be reflected in the associated contract and be in accordance with the CAMO policy and procedures defined in the continuing airworthiness management exposition. When such tasks are subcontracted, the continuing airworthiness management system is considered to be extended to the subcontracted persons or organisations.

6. With the exception of engines and auxiliary power units, contracts would normally be limited to one organisation per aircraft type for any combination of the activities described in Appendix II . Where contracts are made with more than one organisation, the CAMO should demonstrate that adequate coordination controls are in place and that the individuals' responsibilities are clearly defined in the related contracts.
7. Contracts should not authorise the subcontracted organisation to subcontract to other organisations elements of the continuing airworthiness management tasks.
8. The GCAA should exercise oversight of the subcontracted activities through the CAMO approval. The contracts should be acceptable to the GCAA. The CAMO should only subcontract to organisations which are specified by the GCAA in the approval certificate Form. AWF-ARC-014.

Note: when subcontracting such activities; Storing digital records/or data, records' storage facilities and maintenance management software tools for supporting the continuing airworthiness management, the CAMO should, without the need to amend approval certificate to list such subcontracted organization;

- demonstrate that it is actively control these activities,
- define the services and responsibilities of each party in the contract,
- amend the list of the subcontractors in the CAME,
- append/or make reference to such contract in the CAME.

Such contractual arrangement shall be acceptable to the GCAA

9. The subcontracted organisation should agree to notify the CAMO of any changes affecting the contract as soon as practical. The CAMO should then inform the GCAA. Failure to do so may invalidate the GCAA's acceptance of the contract.
10. Appendix II to AMC to CAR M.711(a)(3) provides information on the subcontracting of continuing airworthiness management tasks.

AMC to CAR M.711(b) Privileges of the organisation

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

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

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

AMC CAR M.711(c) Privileges of the organisation

(Reserved).

CAR M.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 CAR-M Subpart G activities. It shall at least include the following functions:

1. monitoring that all activities carried out under CAR-M Subpart-G 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 CAR.

(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 CAR, the quality system may be combined with that required by the other CAR.

(e) For commercial air operators, the CAR-M 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 commercial air operators , the quality system may be replaced by regular organisational reviews subject to the approval of the GCAA, except when the organisation issues airworthiness review certificates for aircraft above 2730 kg MTOM. In the case where there is no quality system, the organisation shall not contract continuing airworthiness management tasks to other parties.

AMC to CAR M.712(a) Quality system

1. Procedures should be held current such that they reflect best practice within the organisation. It is the responsibility of all employees to report any difficulties with the procedures via their organisation’s internal occurrence reporting mechanisms.
2. All procedures, and changes to the procedures, should be verified and validated before use where practicable.

3. The feedback part of the system should address who is required to rectify any non-compliance in each particular case and the procedure to be followed if rectification is not completed within appropriate timescales. The procedure should lead to the accountable manager specified in M.706.

4. The independent quality audit reports referenced in AMC to CAR M.712(b) should be sent to the relevant department for rectification action giving target rectification dates. Rectification dates should be discussed with such department before the quality department or nominated quality auditor confirms such dates in the report. The relevant department is required to rectify findings and inform the quality manager or the quality auditor of such rectification.

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

AMC to CAR M.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 M.902 requirement for an airworthiness review to be satisfied that all aircraft managed by the organisation remain airworthy.

5. The independent audit should ensure that all aspects of Section 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 year period in accordance with a scheduled plan. The independent audit does not require each procedure to be checked against each product line when it can be shown that the particular procedure is common to more than one product line and the procedure has been checked every year without resultant findings. Where findings have been identified, the particular procedure should be rechecked against other product lines until the findings have been rectified after which the independent audit procedure may revert back to a yearly 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 GCAA.

6. Where the organisation has more than one location approved, the audit plan should ensure that each location is audited every year or at an interval determined through a risk assessment agreed by the GCAA and not exceeding the applicable audit planning cycle.

7. A report should be raised each time an audit is carried out describing what was checked and the resulting findings against applicable requirements, procedures and products.

8. The independence of the audit should be established by always ensuring that audits are carried out by personnel not responsible for the function, procedure or products being checked.

9. An organisation should establish a quality plan acceptable to the GCAA to show when and how often the activities as required by Section A, Subpart G will be audited.

AMC to CAR M.712(f) Quality system

A small organisation is considered to be an organisation with up to 5 full-time staff (including all M.706 personnel) or equivalent proportional number when using part-time staff. The complexity of the organisation, combination of aircraft and aircraft types, the utilisation of the aircraft and the number of approved locations of the organisations should also be considered before replacing the quality system by an organisational review.

Appendix XIII to AMC to CAR M.712(f) should be used to manage the organisational reviews.

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

- 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 CAR M.714(d) and CAR M.714(e)):
  - If the tool is used by several organisations, each organisation should have access to its own data only.
  - Introduction of data can only be performed by personnel of the continuing airworthiness management organisation.
  - The data can be retrieved at any time

CAR M.713 Changes To The Approved Continuing Airworthiness Organisation

In order to enable the GCAA 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 CAR M.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 to CAR M.713 Changes to the approved continuing airworthiness organisation

1. This paragraph covers scheduled changes to the CAMO approval.

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

CAR M.714 Record Keeping

(a) The continuing airworthiness management organisation shall record all details of work carried out. The records required by CAR M.305 or CAR ML.305, as applicable, and if applicable CAR M.306 shall be retained.

(b) If the continuing airworthiness management organisation has the privilege referred to in CAR M.711(b), it shall retain a copy of each airworthiness review certificate and recommendation issued together with all supporting documents.

(c) (Reserved).

(d) The continuing airworthiness management organisation shall retain a copy of all records referred to in point (b) until two years after the aircraft has been permanently withdrawn from service.

(e) The records shall be stored in a manner that ensures protection from damage, alteration and theft.

(f) All computer hardware used to ensure backup shall be stored in a different location from that containing the working data in an environment that ensures they remain in good condition.

(g) Where continuing airworthiness management of an aircraft is transferred to another organisation or person, all retained records shall be transferred to the said organisation or person. The time periods prescribed for the retention of records shall continue to apply to the said organisation or person.

(h) Where a continuing airworthiness management organisation terminates its operation, all retained records shall be transferred to the owner of the aircraft.

AMC to CAR M.714 Record-keeping

1. The CAMO should ensure that it always receives a complete CRS from the approved maintenance organisation such that the required records can be retained. The system to keep the continuing airworthiness records should be described in the organisation continuing airworthiness management exposition.

2. When an organisation arranges for the relevant maintenance organisation to retain copies of the continuing airworthiness records on its behalf, it will nevertheless continue to be responsible for the records under CAR M.714 relating to the preservation of records. If it ceases to be the organisation managing 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 GCAA means in paper form or on a computer database or a combination of both methods. Records stored in microfilm or optical disc form are also acceptable. The record should remain legible throughout the required retention period.

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

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

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

CAR M.715 Continued validity of approval

(a) An approval shall be issued for an unlimited duration. It shall remain valid subject to:

1. the organisation remaining in compliance with this CAR and any additional conditions prescribed in the approval certificate, in accordance with the provisions related to the handling of findings as specified by the GCAA, and;

2. the GCAA being granted access to the organisation to determine continued compliance with this CAR, and;

3. The approval not being surrendered or revoked.

(b) Upon surrender or revocation, the approval certificate shall be returned to GCAA,

CAR M.716 Findings

Refer to GCAA SAFETY AFFAIRS AUDIT STANDARDS For Finding categorization and process.

https://www.gcaa.gov.ae/en/ePublication/_layouts/GCAA/ePublication/DownloadFile.aspx?Un=/en/epublication/admin/Library Pdf/Standards/GCAA SAFETY AFFAIRS AUDIT STANDARD.pdf

SUBPART H - CERTIFICATE OF RELEASE TO SERVICE — CRS

CAR M.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 shall be released to service unless a CRS is issued when all maintenance tasks ordered have been properly carried out. The CRS shall be issued by an authorised certifying staff of the maintenance organisation approved in accordance with Subpart F of CAR-M, except for maintenance tasks other than complex maintenance tasks listed in Appendix VII to CAR M where the CRS is issued, alternatively by:

1. independent certifying staff in compliance with the requirements in CAR 66;
2. the pilot-owner acting in accordance with CAR M.803;

(c) By derogation from point (b), in the case of unforeseen situations, when an aircraft is grounded at a location where no approved maintenance organisation approved in accordance with this regulation, CAR 145, and no independent certifying staff are available, the owner may authorise any person, with no less than three years of appropriate maintenance experience and holding either a valid ICAO Annex 1 compliant maintenance license for the aircraft type requiring certification or a certifying staff authorisation valid for the work requiring certification issued by an ICAO Annex 6 approved maintenance organization to maintain the aircraft in accordance with the standards set out in Subpart D of this regulation and release it to service. In that case, the owner shall:

1. obtain and keep in the aircraft records details of the maintenance carried out and of the qualifications of the person issuing the CRS;
2. ensure that any such maintenance is later on verified and a new CRS is issued by an appropriately authorised person referred to in point (b) or an organisation approved in accordance with Subpart F of CAR M, CAR 145, at the earliest opportunity and in any case within 7 calendar days from the issuance of a CRS by the person authorised by the owner;
3. notify the organisation responsible for the continuing airworthiness management of the aircraft, when contracted, or the GCAA in the absence of such a contract, within 7 days from the issuance of such authorisation;

(d) In case of a release to service in accordance with point (b)(2), the certifying staff may be assisted in performing the maintenance tasks by one or more persons subject to his or her direct and continuous control;

(e) A CRS shall contain at least:

1. basic details of the maintenance carried out;
2. the date on which the maintenance was completed; and
3. the identity of the organisation or person issuing the CRS, including, alternatively:

(i) the approval reference of the maintenance organisation and the certifying staff issuing the CRS;

(ii) in the case referred to in point (b)(2), the identity and, where applicable, the licence number of the certifying staff issuing the CRS;

4. the limitations to airworthiness or operations, if any.

(f) By derogation from point (b) and notwithstanding point (g), when the required maintenance cannot be completed, a CRS may be issued with the approved aircraft limitations. In that case, the certificate shall indicate that the maintenance could not be completed, as well as indicate any applicable airworthiness or operations limitations, as part of the information required in point (e)(4);

(g) A CRS shall not be issued in the case of any known non-compliance which endangers flight safety.

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

1. Release to service and eligible persons

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

For aircraft where there is no CAR-66 licence applicable, the release to service of an aircraft after embodiment of a SC/SR is only possible by holders of an appropriate and valid certifying staff qualification with the following conditions:

- If the holder signs the release to service on behalf of an Approved Maintenance Organisation (AMO).
- If the holder signs the release to service as an independent certifying staff (not on behalf of an AMO).

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

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

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

The design of the parts and appliances to be used in a SC/SR is considered a part of the change/repair, and, therefore, there is no need of a specific design approval. However, it is possible that for a particular SC, these Certification Specifications specifically require the use of parts and appliances that meet a technical standard. In this case, when the parts and appliances require to be authorised as an TSO article, other articles recognised as equivalent by means of an international safety agreement or grandfathered in accordance with CAR 21 are equally acceptable.

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

Eligibility for installation of parts and appliances belonging to a SC/SR is subject to compliance with the CAR-21 and CAR-M, CAR-145 related provisions, and the situation varies depending on the aircraft in/on which the SC/SR is to be embodied, and who the installer is.
The need for an AW Form 1 is addressed in CAR-21 and CAR-M. Furthermore, CAR-M Subpart F, CAR-145 contain provisions (i.e. CAR M.603(c), CAR 145.42(c)) allowing maintenance organisations to fabricate certain parts to be installed in/on the aircraft as part of their maintenance activities.

3. Parts and appliances identification

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

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

In accordance with CAR-M or CAR-145 (e.g. AMC CAR M.801 (e) and AMC CAR 145.50(b)), the legal or natural person responsible for the embodiment of a change or a repair should compile details of the work accomplished. In the case of SCs/SRs, this includes, as necessary, based on its complexity, an engineering file containing drawings, a list of the parts and appliances used for the change or repair, supporting analysis and the results of tests performed or any other evidence suitable to show that the design fulfils the applicable Certification Specifications within CS-STAN together with a statement of compliance and amendments to aircraft manuals, to instructions for continuing airworthiness and to other documents such as aircraft parts list, wiring diagrams, etc., as deemed necessary. AW Form 123 is prepared for the purpose of documenting the preparation and embodiment of the SC/SR. The aircraft
logbook should contain an entry referring to AW Form 123; both AW Form 123 and the release to service required after the embodiment of the SC/SR should be signed by the same person.

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

5. Record-keeping

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

145 and CS-STAN.

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

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

6. Instructions for continuing airworthiness

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

7. Embodiment of more than one SC

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

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

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

AW Form 123 — Standard Change/Standard Repair (SC/SR) embodiment record	1. SC/SR number(s):
2. SC/SR title & description:	
3. Applicability:	
4. List of parts (description/Part-No/Qty):	
5. Operational limitations/affected aircraft manuals. Copies of these manuals are provided to the aircraft owner:	
6. Documents used for the development and embodiment of this SC/SR: * Copies of the documents marked with an asterisk are handed to the aircraft owner.	

7. Instructions for continuing airworthiness. Copies of these manuals are provided to the aircraft owner:	
8. Other information:	
9a. □ This SC complies with the criteria established in the SC definition and with the relevant paragraphs of CS-STAN.	
9b. □ This SR complies with the criteria established in the SR definition and with the relevant paragraphs of CS-STAN.	
10. Date of SC/SR embodiment:	11. Identification data and signature of the person responsible for the embodiment of the SC/SR:
12. Signature of the aircraft owner. This signature attests that all relevant documentation is handed over from the issuer of this form to the aircraft owner, and, therefore, the latter becomes aware of any impact or limitations on operations or additional continuing airworthiness requirements, which may apply to the aircraft due to the embodiment of the change/repair.	

AW Form 123

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

The aircraft owner should retain a copy of this form.

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

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

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

Completion instructions:

Use English to fill in the form.

1. Identify the SC/SR with a unique number and reference this number in the aircraft logbook.

2. Specify the applicable CS-STAN chapter including revision (e.g. CS-SCxxxy or CS-SRxxxy) & title. Provide also a short description.

3. Identify the aircraft (a/c) registration, serial number and type.

4. List the parts' numbers and description for the parts installed. Refer to an auxiliary document if necessary.

5. Identify affected aircraft manuals.

6. Refer to the documentation developed to support the SC/SR and its embodiment, including design data required by the CS-STAN: design definition, documents recording the showing of compliance with the Certification Specifications or any test result, etc. The documents' references should quote their revision/issue.

7. Identify instructions for continuing airworthiness that need to be considered for the aircraft maintenance programme review.

8. To be used as deemed necessary by the installer.

9a., 9b., 10. and 12. Self-explanatory.

11. Give full name details and certificate reference (of the natural or legal person) used for issuing the aircraft release to service.

AMC to CAR M.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 CAR M.801(c) Aircraft certificate of release to service

AIRCRAFT GROUNDED AT OTHER LOCATIONS

1. '3 years of appropriate maintenance experience' means 3 years working in an aircraft maintenance environment on at least some of the aircraft type systems corresponding to the aircraft endorsed on the aircraft maintenance license or on the certifying staff authorisation that the person holds.
2. 'Holding the proper qualifications' means holding either:

   (a) a valid ICAO Annex 1 compliant maintenance license for the aircraft type requiring certification, or;
   (b) a certifying staff authorisation valid for the work requiring certification, issued by an ICAO Annex 6 approved maintenance organisation.

3. A release in accordance with this paragraph does not affect the controlled environment, in accordance with point (b) of CAR M.901, of the aircraft as long as the CAR M.801(c)2 recheck and release has been carried out by an approved maintenance organisation.

AMC CAR M.801(e) Aircraft certificate of release to service

1. The aircraft certificate of release to service should contain the following statement:

   (a) 'Certifies that the work specified except as otherwise specified was carried out in accordance with 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 should 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 should relate to the task specified in the manufacturer's or operator's instruction or the aircraft maintenance programme which itself may cross-refer to a manufacturer's/operator's instruction in a maintenance manual, service bulletin etc.
3. The date such maintenance was carried out should include when the maintenance took place relative to any life or overhaul limitation in terms of date/flying hours/cycles/ landings etc., as appropriate.
4. When extensive maintenance has been carried out, it is acceptable for the certificate of release to service to summarise the maintenance so long as there is a unique cross-reference to the work-pack containing full details of maintenance carried out. Dimensional information should be retained in the work-pack record.
5. The person issuing the certificate of release to service should use his normal signature except in the case where a computer release to service system is used. In this latter case the GCAA will need to be satisfied that only the particular person can electronically issue the release to service. One such method of compliance is the use of a magnetic or optical personal card in conjunction with a personal identity number (PIN) known only to the individual, which is keyed into the computer. A certification stamp is optional.
6. At the completion of all maintenance, owners, certifying staff, operators and maintenance organisations should ensure they have a clear, concise, legible record of the work performed.
7. In the case of an CAR M.801(b)1 release to service, certifying staff should retain all records necessary to prove that all requirements have been met for the issuance of a certificate of release to service.

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

INCOMPLETE MAINTENANCE

1. Being unable to establish full compliance with sub-paragraph CAR M.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 or because the maintenance data requires a flight to be performed as part of the maintenance, as described in paragraph 4.
2. The aircraft owner or CAMO is responsible for ensuring that all required maintenance has been carried out before flight. Therefore, an aircraft owner, or CAMO should be informed and agree to the deferment of full compliance with CAR M.801(b). The certificate of release to service may then be issued subject to details of the deferment, including the aircraft owner or CAMO authorisation, being endorsed on the certificate.
3. If a CRS is issued with incomplete maintenance a record should be kept stating what action the mechanic, supervisor and certifying staff should take to bring the matter to the attention of the

relevant aircraft owner or CAMO so that the issue may be discussed and resolved with the aircraft owner or CAMO.

4. Certain maintenance data issued by the design approval holder (e.g. aircraft maintenance manual (AMM)) require that a maintenance task be performed in flight as a necessary condition to complete the maintenance ordered. Within the aircraft limitations, the person authorised to certify the maintenance per CAR M.801 should release the incomplete maintenance before this flight. GM CAR M.301(i) describes the relations with the aircraft operator, which retains the responsibility for the MCF. After performing the flight and any additional maintenance necessary to complete the maintenance ordered, a certificate of release to service should be issued in accordance with CAR M.801.

AMC CAR M.801(g) 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.802 Component Certificate of Release To Service

(a) Except for component released to service by a maintenance organization approved in accordance with CAR-145, a CRS shall be issued at the completion of any maintenance carried out on an aircraft component in accordance with CAR M.502.

(b) The authorised release certificate identified as AW Form 1 constitutes the component CRS, except when such maintenance on aircraft components has been performed in accordance with point (b) of CAR M.502, in which case the maintenance is subject to aircraft release procedures in accordance with CAR M.801.

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

The purpose of the AW Form 1 (see also Appendix II to CAR-M) is to release components after manufacture and to release maintenance work carried out on such components under the approval of a competent authority, and to allow components that are removed from one aircraft/component to be fitted to another aircraft/component.

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

CAR M.803 Pilot-owner authorization

(a) To qualify as a Pilot-owner, the person must:

1. hold a valid pilot license (or equivalent) issued or validated by the GCAA 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 other than complex motor-powered aircraft of 2 730 kg MTOM and below, which are not used in CAT operations, in commercial specialised operations or in commercial operations by ATOs, the pilot-owner may issue a CRS after having carried out limited pilot-owner maintenance as specified in Appendix VIII.

(c) The scope of the limited Pilot-owner maintenance shall be specified in the aircraft maintenance programme referred to in CAR M.302.

(d) The CRS shall be entered in the aircraft continuing airworthiness record system and contain basic details of the maintenance carried out, the maintenance data used, the date on which that maintenance was completed, as well as the identity, the signature and pilot license number of the Pilot-owner issuing such a certificate.

AMC CAR M.803 Pilot-owner authorization

1. Privately operated means the aircraft is operated pursuant to CAR M.201(i).
2. A Pilot-owner may only issue a CRS for maintenance he/she has performed.
3. In the case of a jointly-owned aircraft, the maintenance programme should list:
   - The names of all Pilot-owners competent and designated to perform Pilot-owner maintenance in accordance with the basic principles described in Appendix VIII of CAR-M. An alternative would be the maintenance programme to contain a procedure to ensure how such a list of competent Pilot-owners should be managed separately and kept current.
   - The limited maintenance tasks they may perform.
4. An equivalent valid pilot license may be any document attesting a pilot qualification issued or recognized by the GCAA. In such a case, the equivalent certificate or qualification number should be used instead of the pilot's licence number for the purpose of CAR M.801(b)3 (certificate of release to service).
5. Not holding a valid medical examination does not invalidate the pilot licence (or equivalent) required under CAR M.803(a)1 for the purpose of the Pilot-owner authorisation.

SUBPART I - AIRWORTHINESS REVIEW CERTIFICATE

CAR M.901 Aircraft Airworthiness Review

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

(a) An airworthiness review certificate is issued in in accordance with Appendix III (AWF-ARC-15a or AWF-ARC-15b) on completion of a satisfactory airworthiness review. The airworthiness review certificate shall be valid for one year provided that the certificate is endorsed by the GCAA;

(b) An aircraft in a controlled environment is an aircraft which, during the preceding 12 months:

1. has had its airworthiness continuously managed by a unique CAMO;
2. has been maintained by a maintenance organisations approved in accordance with Subpart F of CAR-M or CAR-145, including the cases when maintenance tasks referred to in point (b) of CAR M.803 are carried out and released to service in accordance with point (b)(1) or (b)(2) of CAR M.801.

(c) For all aircraft used by Commercial Air Operator and/or for aircraft above 2730 kg MTOM that are in a controlled environment, the organisation referred to in CAR M.901(b)(1) managing the continuing airworthiness of the aircraft may in accordance with CAR M.711(b), as applicable, and subject to compliance with CAR M.901(j):

1. Issue an airworthiness review certificate in accordance with CAR M.901.
2. (Reserved)

(d) The airworthiness review certificate shall be issued by the GCAA upon satisfactory assessment based on a recommendation made by a CAMO, sent together with the application from the owner or operator for all aircraft used by commercial air operator and/or for aircraft above 2730 kg MTOM that complies with the following alternative conditions:

1. Aircraft is not in a controlled environment;
2. Continuing airworthiness is managed by an organisation that does not hold the privilege to carry out airworthiness reviews.

The recommendation shall be based on an airworthiness review carried out in accordance with CAR M.901.

(e) For aircraft not used by commercial air operator and for aircraft of 2730 kg MTOM and below, any CAMO chosen by the owner or operator may in accordance with CAR M.711(b), as applicable, and subject to compliance with point (j):

1. issue the airworthiness review certificate in accordance with CAR M.901;
2. (Reserved)

(f) (Reserved)

(g) Whenever circumstances reveal the existence of a potential risk to aviation safety, the GCAA shall carry out the airworthiness review and issue the airworthiness review certificate itself.

(h) Without prejudice to point (g), the GCAA may carry out the airworthiness review and issue the airworthiness review certificate itself in the following cases:

1. when the continuing airworthiness of the aircraft is managed by a CAMO which has its principal place of business located in a third country;

2. for any other aircraft of 2730 kg MTOM and below, if the owner so requests.

(i) Where the GCAA issues the airworthiness review certificate itself in accordance with points (g) or (h) or after assessing the recommendation in accordance with point (d), the owner or operator of the aircraft shall, where necessary for those purposes, provide the GCAA with:

1. the documentation required by the GCAA; and
2. suitable accommodation at the appropriate location for its personnel; and
3. the support of the certifying staff.

(j) An airworthiness review certificate shall not be issued, nor extended if there is evidence or indications that the aircraft is not airworthy;

(k) The airworthiness review of the aircraft shall include a full documented review of the aircraft records establishing that the following requirements have been met:

1. airframe, engine and propeller flying hours and associated flight cycles have been properly recorded;
2. the flight manual is applicable to the aircraft configuration and reflects the latest revision status;
3. all the maintenance due on the aircraft pursuant to the approved AMP has been carried out;
4. all known defects have been corrected or, when applicable, carried forward in a controlled manner in accordance with CAR M.403;
5. all applicable ADs have been applied and properly registered;
6. all modifications and repairs applied to the aircraft have been registered and are in compliance with CAR M.304;
7. all life-limited parts and time-controlled components installed on the aircraft are properly identified, registered and have not exceeded their limitation;
8. all maintenance has been carried out in accordance with this regulations;
9. the current mass and balance statement reflects the current configuration of the aircraft and is valid;
10. the aircraft complies with the latest revision of its type design approved/accepted by the GCAA;
11. if required, the aircraft holds a noise certificate corresponding to the current configuration of the aircraft in compliance with Subpart I of CAR-21.

(l) The airworthiness review of the aircraft shall include a physical survey of the aircraft. For that survey, airworthiness review staff not appropriately qualified in accordance with CAR-66 shall be assisted by such qualified staff.

(m) Through the physical survey of the aircraft, the airworthiness review staff shall ensure that:

1. all required markings and placards are properly installed;
2. the aircraft complies with its approved flight manual;
3. the aircraft configuration complies with the approved documentation;
4. no evident defect can be found that has not been addressed in accordance with CAR M.403;
5. no inconsistencies can be found between the aircraft and the documented review of records referred to in point (k).

(n) By derogation from point (a), the airworthiness review may be anticipated by a maximum period of 90 days without loss of continuity of the airworthiness review pattern, so as to allow for the physical review to take place during a maintenance check.

(o) The airworthiness review certificate (AWF-ARC-15b) or the recommendation for the issue of the airworthiness review certificate (AWF-ARC-15a) referred to in Appendix III to this regulations can only be issued:

1. by authorised airworthiness review staff on behalf of the approved organisation;
2. if the airworthiness review has been completely carried out.

(p) A copy of any airworthiness review certificate issued for an aircraft shall be sent to the GCAA for endorsement.

(q) Airworthiness review tasks shall not be subcontracted.

(r) Should the outcome of the airworthiness review be inconclusive, the organisation having carried out the review shall inform the GCAA as soon as possible and in any case within 72 hours from the moment the organisation identifies the reason for which the airworthiness review is inconclusive.

(s) The airworthiness review certificate shall not be issued until all findings have been closed.

AMC to CAR M.901 Aircraft airworthiness review

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

GM CAR-M.901 Airworthiness review

Responsibilities of airworthiness review staff:

The following is a summary of the requirements contained in CAR-M.901 as well as the associated AMC and Appendices, in relation to the responsibilities of the airworthiness review staff:

- Airworthiness review staff are responsible for performing both the documental and the physical survey.
- Procedures must be established by the CAMO in order to perform the airworthiness review, including the depth of samplings.
- Procedures must make very clear that the final word about the depth of the inspections (both documental and physical) belongs to the airworthiness review staff, who can go beyond the depth established in the CAME if they find it necessary. At the end, it is the responsibility of the airworthiness review staff to be satisfied that the aircraft complies with CAR-M and is airworthy, and the organisation must ensure that no pressure or restrictions are imposed on the airworthiness review staff when performing their duty.
- A compliance report must be produced by the airworthiness review staff, detailing all items checked and the outcome of the review.

- Airworthiness review staff are responsible for the items checked during the airworthiness review. However, they do not take over the responsibilities of the CAMO, maintenance organisation, DOA, POA or any other organisations, not being responsible for problems not detected during the airworthiness review or for the possibility that the approved or declared maintenance programme may not include certain recommendations from the design approval holder. Obviously, if the airworthiness review staff are not independent of the airworthiness management process and were nominated on the basis of the option of having overall authority on such a process, they will be responsible for the full continuing airworthiness of such aircraft. Nevertheless, this responsibility will be a consequence of their position in the organisation and not of their function as airworthiness review staff.
- The issuance of the airworthiness review certificate (ARC) by the airworthiness review staff only certifies that the aircraft is considered airworthy in relation to the scope of the airworthiness review performed and the fact that the airworthiness review staff are not aware of instances of non-compliance which endanger flight safety. Furthermore, it only certifies that the aircraft is considered airworthy at the time of the review.

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

GM CAR M.901(a) Aircraft airworthiness review

AWF-ARC-15a is issued by the GCAA while AWF-ARC-15b is issued by a CAMO organisation.

AMC to CAR M.901(b) Aircraft airworthiness review

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

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

(Reserved)

AMC to CAR M.901(d) Aircraft airworthiness review

The recommendation sent by a CAMO to the GCAA should be in English.

The recommendation sent to the GCAA should contain at least the items described below.

(a) General information

- CAMO information
- owner/lessee information
- date and place the document review and the aircraft survey were carried out

- period and place the aircraft can be seen if required by the GCAA.

(b) Aircraft information

- registration
- type
- manufacturer
- serial number
- flight manual reference
- weight and centre of gravity data
- maintenance programme reference

(c) Documents accompanying the recommendation

- copy of registration papers
- copy of the owners request for a new airworthiness review certificate

(d) Aircraft status

- aircraft total time and cycles
- list of persons or organisations having carried out continuing airworthiness activities including maintenance tasks on the aircraft and its components since the last airworthiness review certificate

(e) Aircraft survey

- a precise list of the areas of the aircraft that were surveyed and their status

(f) Findings

- a list of all the findings made during the airworthiness review with the corrective action carried out

(g) Statement

A statement signed by the airworthiness review staff recommending the issue of an airworthiness review certificate. The statement should confirm that the aircraft in its current configuration complies with the following:

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

- operational requirements.

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

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

AMC to CAR M.901(i) Aircraft airworthiness review

Suitable accommodation should include:

ii. an office with normal office equipment such as desks, telephones, photocopying machines etc. whereby the continuing airworthiness records can be reviewed.

iii. a hangar when needed for the physical survey.

The support of personnel appropriately qualified in accordance with CAR-66 is necessary when the GCAA's airworthiness review staff is not appropriately qualified.

AMC CAR M.901(k) Aircraft airworthiness review

FULL DOCUMENTED REVIEW

1. A full documented review is a check of at least the following categories of documents:

- registration papers;
- CAR M.305 aircraft continuing airworthiness record system;
- CAR M.306 aircraft technical log system;
- list of deferred defects, minimum equipment list and configuration deviation list if applicable;
- aircraft flight manual including aircraft configuration;
- aircraft maintenance programme;
- maintenance data;
- relevant work packages;
- AD status;
- modification and SB status;
- modification and repair approval sheets;
- status of life-limited parts and time-controlled components;
- relevant GCAA AW Form 1 or equivalent;
- mass and balance report and equipment list;
- aircraft, engine and propeller TC data sheets.

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

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

AMC CAR M.901(l) and (m) Aircraft airworthiness review

PHYSICAL SURVEY

1. The physical survey could require actions categorised as maintenance (e.g. operational tests, tests of emergency equipment, visual inspections requiring panel opening, etc.). In this case, after the airworthiness review, a release to service should be issued.
2. When the airworthiness review staff are not appropriately qualified as per CAR-66 in order to release such maintenance, CAR M.901(l) requires them to be assisted by such qualified personnel. However, the function of such CAR-66 personnel is limited to performing and releasing the maintenance actions requested by the airworthiness review staff, it not being their function to perform the physical survey of the aircraft.
3. This means that the airworthiness review staff who is going to sign the airworthiness review certificate or the recommendation should be the one performing both the documented review and the physical survey of the aircraft. It is not the intent of the rule to delegate the survey to CAR-66 personnel who are not airworthiness review staff. Furthermore, the provision of CAR M.901(n) that allows a 90-day anticipation for the physical survey provides enough flexibility to ensure that the airworthiness review staff (ARS) are present.
4. The physical survey may include verifications to be carried out during flight.
5. The CAMO should develop procedures for the ARS to produce a compliance report that confirms that the physical survey has been carried out and found satisfactory.
6. To ensure compliance, the physical survey may include relevant sample checks of items.

AMC CAR M.901(n) Aircraft airworthiness review

'Without loss of continuity of the airworthiness review pattern' means that the new expiration date is set up 1 year after the previous expiration date. As a consequence, when the airworthiness review is anticipated, the validity or the airworthiness review certificate is longer than 1 year (up to 90 days longer).

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

AMC CAR M.901(o) Airworthiness review

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

CAR M.902 Validity of the Airworthiness Review Certificate

(a) An airworthiness review certificate becomes invalid if:

1. suspended or revoked; or

2. the certificate of airworthiness is suspended, revoked or becomes invalid due to any reason specified in CAR 21.181; or

3. the aircraft is not on the aircraft register of the United Arab Emirates; or

4. the type certificate under which the certificate of airworthiness was issued is suspended or revoked, or

5. the validity period is lapsed unless specifically extended by the GCAA.

(b) An aircraft must not fly if the certificate of airworthiness 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/accepted by the GCAA; 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 M.304.

(c) Upon surrender or revocation, the airworthiness review certificate shall be returned to the GCAA.

(d) Airworthiness review certificate endorsement procedure:

1. The organisation responsible for the continued airworthiness of the aircraft as per CAR M.201 shall apply for the endorsement of the Airworthiness Review Certificate in a form and a manner established by the GCAA.

2. The original Airworthiness Review Certificate shall be submitted to the GCAA along with all the required supporting documents.

CAR M.903 Transfer of Aircraft Registration

(a) Reserved

(b) Reserved

(c) When transferring an aircraft registration to another country and upon the importing authority's request, an export certificate of airworthiness shall be issued for this aircraft as per CAR PART V, Chapter II, Section 13 subject to it having an airworthiness review carried out satisfactorily in accordance with CAR M.901.

CAR M.904 Airworthiness review of aircraft imported into the United Arab Emirates

(a) When importing an aircraft onto the UAE register from a foreign country, the applicant shall:

1. apply for the issuance of a new certificate of airworthiness in accordance with CAR-21;

2. have an airworthiness review carried out satisfactorily in accordance with CAR M. 901; and

3. have all maintenance carried out to comply with the approved maintenance programme in accordance with CAR M.302.

(b) When satisfied that the aircraft is in compliance with the relevant requirements, the organisation performing the airworthiness review, shall send a documented recommendation for the issuance of an airworthiness review certificate to the GCAA.

(c) The owner shall allow access to the aircraft for inspection by the GCAA.

(d) The GCAA shall issue a certificate of airworthiness when it is satisfied that the aircraft complies with the requirements of CAR 21.

(e) The GCAA shall also issue the airworthiness review certificate. The certificate shall be valid for 1 year, unless the GCAA decides to reduce the period of validity for reasons of aviation safety.

AMC to CAR M.904(a)(1) Airworthiness reviews of aircraft imported into the UAE

In order to allow for the participation of GCAA personnel, the applicant should inform the GCAA at least 30 working days in advance of the time and location of the airworthiness review.

AMC to CAR M.904(a)(2) Airworthiness reviews of aircraft imported into the UAE

1. When performing an airworthiness review of aircraft imported into the UAE the aircraft and the relevant records should be reviewed to determine the work to be undertaken to establish the airworthiness of the aircraft.

2. In determining the work to be undertaken during the airworthiness review on the aircraft, the following should be taken into consideration:

   (a) the information from third country authorities such as export certificates, primary authority information; and,

   (b) the information on aircraft maintenance history such as continuing airworthiness records, aircraft, engine, propeller, rotor and life limited part log books or cards as appropriate, tech log / flight log / cabin log, list of deferred defects, total flight times and cycles, times and cycles since last maintenance, accident history, former maintenance schedule, former AD compliance status; and,

   (c) the information on aircraft such as aircraft, engine and propeller type certificate datasheets, noise and emission certificate data sheets, flight manual and supplements; and,

   (d) the aircraft continuing airworthiness status such as the aircraft and component AD status, the SB status, the maintenance status, the status of all service life limited components, weight and centre of gravity schedule including equipment list; and,

   (e) the modification and repair status of the aircraft detailing elements such as owner/operator designed modifications and repairs, STCs, and,

   (f) the aircraft cabin configuration such as emergency equipment fitted, cockpit configuration, placards, instrument limitations, cabin layout; and,

   (g) the maintenance needed for import, such as embodiment of modifications needed to comply with the GCAA's accepted type certificate, bridging check to comply with the new maintenance programme; and,

(h) the avionics such as, but not limited to, radio and navigation equipment, instrument flight rules (IFR) equipment, digital flight data recorder (DFDR) / cockpit voice recorder (CVR) test, ELT 406 MHz code and identification; and,

(i) the compass compensation; and,

(j) special operating rules such as extended twin-engine operations (ETOPS)/ long range operations (LROPS), reduced vertical separation minima (RVSM), MNPS, all weather operations (AWOPS), RNAV; and,

(k) the aircraft survey including verification of conformity with the flight manual and the datasheet, presence of fire proof identification plates, conformity of markings including registration, presence and serviceability of emergency equipment, internal and external lighting systems, and,

(l) check flight including check of control system / cockpit ground check / engine run up.

3. If there is no CAMO or maintenance organisation approved for the airworthiness review of the specific aircraft type available, the GCAA may carry out the airworthiness review. In this case, the airworthiness review should be requested to the GCAA with a 30-day notice.

AMC to CAR M.904(b) Airworthiness review of aircraft imported into the UAE

The recommendation sent to the GCAA should contain at least the items described below.

(a) All the information set forth by AMC CAR M. 901(d)

(b) Aircraft information

- aircraft assigned registration
- state of manufacturer
- previous registration
- export certificate number
- TC and TC data sheet numbers
- noise and emissions TC and TC data sheet numbers
- comparison of prior maintenance programme with the proposed new maintenance programme.

(c) Documents accompanying the recommendation

- copy of the application, and;
- original export certificate, and;
- copy of the approvals of the flight manual and its supplements, and;
- list of ADs incorporated up to the latest published issue, and;
- proposed new maintenance programme, and;
- status of all service life limited components, and;

- the valid weight and centre of gravity schedule reflecting the current configuration of the aircraft, and;
- CAR-21 approval reference for all modifications and repairs.

(d) Maintenance

- a copy of the work packages requested by the subpart G organisation including details of any bridging check to ensure all the necessary maintenance has been carried out.

(e) Aircraft check flight

- a copy of the check flight report

CAR M.905 Findings

Refer to GCAA SAFETY AFFAIRS AUDIT STANDARDS For Finding categorization and process.

https://www.gcaa.gov.ae/en/ePublication/_layouts/GCAA/ePublication/DownloadFile.aspx?Un=/en/epublication/admin/Library Pdf/Standards/GCAA SAFETY AFFAIRS AUDIT STANDARD.pdf

SECTION B: RESERVED

APPENDICES TO REQUIREMENTS

APPENDIX I - CONTINUING AIRWORTHINESS MANAGEMENT CONTRACT

1. When an owner/operator contracts in accordance with CAR M.201 a CAMO to carry out continuing airworthiness management tasks, upon request by the GCAA, a copy of the contract signed by both parties shall be sent by the owner/operator to the GCAA.
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 following information:
   - aircraft registration, type and serial number,
   - aircraft owner or registered lessee's name or company details including the address,
   - details of the contracted CAMO, including the address, and
   - The type of operation
4. It shall state the following:

   "The owner/operator entrusts the CAMO with the management of the continuing airworthiness of the aircraft, the development of a maintenance programme that shall be approved by the GCAA as detailed in CAR 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 GCAA within two weeks about such non-conformity with the contract.
5. When an owner/operator contracts a CAMO in accordance with CAR-M.201, the obligations of each party shall be assigned as follows:

   5.1. Obligations of the CAMO:

   1. have the aircraft type included in its terms of approval;
   2. respect the conditions listed below with regard to maintaining the continuing airworthiness of the aircraft:
      (a) develop a maintenance programme for the aircraft, including any reliability programme developed, if applicable;
      (b) declare the maintenance tasks (in the AMP) that may be carried out by the pilot-owner in accordance with point (c) of point CAR M.803;
      (c) organise the approval of the aircraft's maintenance programme;

(d) once it has been approved, provide the owner/ operator with a copy of the aircraft's maintenance programme;

(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 rectified by an approved maintenance organisation;

(i) coordinate scheduled maintenance, the application of airworthiness directives, the replacement of life limited parts, and component inspection requirements;

(j) inform the owner each time the aircraft shall be brought to an approved maintenance organisation;

(k) manage all technical records;

(l) archive all technical records;

3. organise the approval of any modification to the aircraft according to CAR-21 before it is embodied;
4. organise the approval of any repair to the aircraft according to CAR-21 before it is carried out;
5. inform the GCAA whenever the aircraft is not presented to the approved maintenance organisation by the owner as requested by the approved organisation;
6. inform the GCAA whenever the present contract is not respected;
7. ensure that the airworthiness review of the aircraft is carried out when necessary and ensure that the airworthiness review certificate is issued or a recommendation is sent to the GCAA;
8. When ARC is issued by the approved organization, ensure endorsement by GCAA, before expiry of valid ARC.
9. carry out all occurrence reporting mandated by applicable regulations;
10. inform the GCAA whenever the contract is denounced by either party.

5.2 Obligations of the owner/ operator:

1. have a general understanding of the AMP;
2. have a general understanding of the continuing airworthiness regulations;
3. present the aircraft to the approved maintenance organisation agreed with the CAMO at the due time designated by the CAMO's requests;
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 all defects found during operations to the CAMO through the logbook;
7. inform the GCAA whenever the present contract is denounced by either party;
8. inform the GCAA and the CAMO whenever the aircraft is sold;
9. carry out all occurrence reporting mandated by applicable regulations

10. inform on a regular basis the CAMO about the aircraft flying hours and any other utilisation data, as agreed with the CAMO.

11. enter the CRS in the logbooks as mentioned in point (d) of CAR M.803 when performing pilot-owner maintenance without exceeding the limits of the maintenance tasks list as declared in the approved AMP as laid down in point (c) of CAR M.803;

12. inform the CAMO not later than 30 days after completion of any pilot-owner maintenance task in accordance with point (a) of CAR M.305.

6. When an owner or operator contracts a CAMO in accordance with CAR M.201, the obligations of each party in respect of mandatory and voluntary occurrence reporting shall be clearly specified.

GM to Appendix I to CAR M - 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 – AW FORM 1

<table>
<tr><td colspan="3">1. General Civil Aviation Authority
United Arab Emirates</td><td colspan="3">2. AUTHORISED RELEASE CERTIFICATE
AW Form 1</td><td>3. Form Tracking Number:</td></tr>
<tr><td colspan="6">4. Organisation Name and Address:</td><td>5. Work Order/Contract/Invoice:</td></tr>
<tr><td>6. Item</td><td>7. Description</td><td>8. Part Number</td><td>9. Qty.</td><td>10. Serial Number</td><td>11. Status/Work</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="6">12. Remarks:</td></tr>
<tr><td colspan="3">13a. Certifies that the items identified above were manufactured in conformity to:
☐ Approved design data and are in condition for safe operation
☐ Non-approved design data specified in block 12</td><td colspan="3">14a. ☐ CAR 145.50 Release to Service ☐ Other regulation, specified in block 12
Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, was accomplished in accordance with CAR 145 and in respect to that work the items are considered ready for release to service.</td></tr>
<tr><td colspan="2">13b. Authorised Signature</td><td>13c.Approval/Authorisation Number</td><td colspan="2">14b. Authorised Signature</td><td>14c. Certificate/Approved Ref. No.</td></tr>
<tr><td colspan="2">13d. Name</td><td>13e. Date (dd mmm yyyy)</td><td colspan="2">14d. Name</td><td>14e. Date (dd mmm yyyy)</td></tr>
<tr><td colspan="6">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 their Airworthiness Authority accepts items from the Airworthiness Authority specified in block 1.
Statements in block(s) 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 of the user/installer before the aircraft may be flown.</td></tr>
</table>

Authorised Release Certificate AW Form 1

These instructions relate only to the use of the AW Form 1 for maintenance purposes. Attention is drawn to Appendix I to CAR 21, which covers the use of the AW Form 1 for production purposes.

1. PURPOSE AND USE

1.1. The primary purpose of the Certificate is to declare the airworthiness of maintenance work undertaken on products, parts and appliances (hereafter referred to as 'item(s)').

1.2. Correlation must be established between the Certificate and the item(s). The originator must retain a Certificate in a form that allows verification of the original data.

1.3. The Certificate is acceptable to many airworthiness authorities, but may be dependent on the existence of bilateral agreements and/or the policy of the airworthiness authority. The 'approved design data' mentioned in this Certificate then means approved by the airworthiness authority of the importing country.

1.4. The Certificate is not a delivery or shipping note.

1.5. Aircraft are not to be released using the Certificate.

1.6. The Certificate does not constitute approval to install the item on a particular aircraft, engine, or propeller but helps the end user determine its airworthiness approval status.

1.7. A mixture of production released and maintenance released items is not permitted on the same Certificate.

2. GENERAL FORMAT

2.1. The Certificate must comply with the format attached including block numbers and the location of each block. The size of each block may however be varied to suit the individual application, but not to the extent that would make the Certificate unrecognisable.

2.2. The Certificate must be in 'landscape' format but the overall size may be significantly increased or decreased so long as the Certificate remains recognisable and legible. If in doubt consult the GCAA.

2.3. The User/Installer responsibility statement can be placed on either side of the form.

2.4. All printing must be clear and legible to permit easy reading.

2.5. The Certificate may either be pre-printed or computer generated but in either case the printing of lines and characters must be clear and legible and in accordance with the defined format.

2.6. The Certificate should be in English, and if appropriate, in one or more other languages.

2.7. The details to be entered on the Certificate may be either machine/computer printed or hand-written using block letters and must permit easy reading.

2.8. Limit the use of abbreviations to a minimum, to aid clarity.

2.9. The space remaining on the reverse side of the Certificate may be used by the originator for any additional information but must not include any certification statement. Any use of the reverse side of the Certificate must be referenced in the appropriate block on the front side of the Certificate

3. COPIES

3.1. There is no restriction in the number of copies of the Certificate sent to the customer or retained by the originator.

4. ERROR(S) ON A CERTIFICATE

4.1. If an end-user finds an error(s) on a Certificate, he must identify it/them in writing to the originator. The originator may issue a new Certificate only if the error(s) can be verified and corrected.

4.2. The new Certificate must have a new tracking number, signature and date.

4.3. The request for a new Certificate may be honoured without re-verification of the item(s) condition. The new Certificate is not a statement of current condition and should refer to the previous Certificate in block 12 by the following statement; 'This Certificate corrects the error(s) in block(s) [enter block(s) corrected] of the Certificate [enter original tracking number] dated [enter original issuance date] and does not cover conformity/condition/release to service'. Both Certificates should be retained according to the retention period associated with the first.

5. COMPLETION OF THE CERTIFICATE BY THE ORIGINATOR

Block 1 Approving Authority, General Civil Aviation Authority United Arab Emirates

When issuing AW Form 1, GCAA/UAE is to be stated in this block to address that the certificate is issued under the jurisdiction of the GCAA.

Block 2 AW Form 1 header

'AUTHORISED RELEASE CERTIFICATE GCAA AW 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 releasing the work covered by this Certificate. Logos, etc., are permitted if the logo can be contained within the block.

Block 5 Work Order/Contract/Invoice

To facilitate customer traceability of the item(s), enter the work order number, contract number, invoice number, or similar reference number.

Block 6 Item

Enter line item numbers when there is more than one line item. This block permits easy cross referencing to the Remarks block 12.

Block 7 Description

Enter the name or description of the item. Preference should be given to the term used in the instructions for continued airworthiness or maintenance data (e.g. Illustrated Parts Catalogue, Aircraft Maintenance Manual, Service Bulletin, Component Maintenance Manual).

Block 8 Part Number

Enter the part number as it appears on the item or tag/packaging. In case of an engine or propeller the type designation may be used.

Block 9 Quantity

State the quantity of items.

Block 10 Serial Number

If the item is required by regulations to be identified with a serial number, enter it here. Additionally, any other serial number not required by regulation may also be entered. If there is no serial number identified on the item, enter 'N/A'.

Block 11 Status/Work

The following describes the permissible entries for block 11. Enter only one of these terms – where more than one may be applicable, use the one that most accurately describes the majority of the work performed and/or the status of the article.

(i)	Overhauled	Means a process that ensures the item is in complete conformity with all the applicable service tolerances specified in the type certificate holder, 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 applicable standard*)
(iii)	Inspected/tested	Examination, measurement, etc. in accordance with an applicable standard*) (e.g. visual inspection, functional testing, bench testing etc.).
(iv)	Modified	Alteration of an item to conform to an applicable standard*).

*): Applicable standard means a manufacturing/design/maintenance/quality standard, method, technique or practice approved by or acceptable to the GCAA. 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 AW 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 CAR M.613, as applicable: 'Certifies that, unless otherwise specified in this block, the work identified in block 11 and described in this block was accomplished in accordance to the requirements of 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 AW Form 1, any appropriate data not fit for other blocks should be entered in this block.

Block 13a-13e

General Requirements for blocks 13a-13e: Not used for maintenance release. Shade, darken, or otherwise mark to preclude inadvertent or unauthorised use.

Block 14a

[Mark the appropriate box (es) indicating which regulations apply to the completed work. If the box 'other regulations specified in block 12' is marked, then the regulations of the other airworthiness authority(ies) must be identified in block 12. At least one box must be marked, or both boxes may be marked, as appropriate.

For all maintenance carried out by maintenance organisations approved in accordance with 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 CAR145, 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 in 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 GCAA 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 GCAA

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.'

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

1. The following formats of an issued AW 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 AW Form 1 or equivalent when complying with the following subparagraph 2.

2. Electronic signature and electronic exchange of the AW Form 1
   a) Submission to the GCAA

      Any organisation intending to implement an electronic signature procedure to issue AW Form 1 and/or to exchange electronically such data contained on the AW Form 1, should document it and submit it to the GCAA as part of the documents attached to its exposition.

   b) Characteristics of the electronic system generating the AW Form 1

      The electronic system should:
      - guarantee secure access for each certifying staff;
      - ensure integrity and accuracy of the data certified by the signature on the form and be able to show evidence of the authenticity of the AW 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 AW Form 1;
      - not permit to sign a blank form;
      - provide a high degree of assurance that the data has not been modified after signature (if modification is necessary after issuance, i.e., re-certification of a part, a new form with a new number and reference to the initial issuance should be made).
      - provide for a 'personal' electronic signature, identifying the signatory. The signature should be generated only in presence of the signatory. An electronic signature means data in electronic form which is attached to or logically associated with other electronic data and which serves as a method of authentication and should meet the following criteria:
        - it is uniquely linked to the signatory;
        - it is capable of identifying the signatory;
        - it is created using means that the signatory can maintain under his sole control.

      This electronic signature should be an electronically generated value based on a cryptographic algorithm and appended to data in a way to enable the verification of the data's source and integrity.

Organisation(s) are reminded that additional national and/or international requirements may need to be satisfied when operating electronic systems.

The electronic system should be based on a policy and management structure (confidentiality, integrity and availability), such as:

- Administrators, signatories;
- Scope of authorisation, rights;
- Password and secure access, authentication, protections, confidentiality;
- Track changes;
- Minimum blocks to be completed, completeness of information;
- Archives;
- etc.

The electronic system generating the AW Form 1 may contain additional data such as;

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

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

To facilitate understanding and acceptance of the AW Form 1 released with an electronic signature, the following statement should be in Block 14b: 'Electronic Signature on File'.

In addition to this statement, it is accepted to print or display a signature in any form, such as a representation of the hand-written signature of the person signing (i.e. scanned signature) or a representation of their name.

When printing the electronic form, the AW Form 1 should meet the general format as specified in Appendix II to CAR-M. A watermark-type 'PRINTED FROM ELECTRONIC FILE' should be printed on the document.

When the electronic file contains a hyperlink to data required to determine the airworthiness of the item(s), the data associated to the hyperlink, when printed, should be in a legible format and be identified as a reference from the AW Form 1.

Additional information not required by the AW Form 1 completion instructions may be added to the printed copies of AW Form 1, as long as the additional data do not prevent a person from filling out, issuing, printing, or reading any portion of the AW Form 1. This additional data should be provided only in block 12 unless it is necessary to include it in another block to clarify the content of that block.

d) Electronic exchange of the electronic AW Form 1

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

For that purpose, the exchange needs to include:

- all data of the AW Form 1, including referenced data required by the AW Form 1 completion instructions;
- all data required for authentication of the AW Form 1.

In addition, the exchange may include:

- data necessary for the electronic format;
- additional data not required by the CAR Form 1 completion instructions, such as manufacturer code, customer identification code.

The system used for the exchange of the electronic AW Form 1 should provide:

- A high level of digital security; the data should be protected, not altered or not corrupted;
- Traceability of data back to its source.

Trading partners wishing to exchange AW Form 1 electronically should do so in accordance with the means of compliance stated in this document. It is recommended that they use an established, common, industry method such as Air Transport Association (ATA) Spec 2000 Chapter 16.

The organisation(s) are reminded that additional national and/or international requirements may need to be satisfied when operating the electronic exchange of the electronic AW Form 1.

The receiver should be capable of regenerating the AW Form 1 from the received data without alteration; if not, the system should revert back to the paper system.

When the receiver needs to print the electronic form, refer to subparagraph c) here above.

GM to Appendix II to CAR-M Use of the AW Form 1 for maintenance

AW FORM 1 BLOCK 12 'REMARKS'

The AW Form 1 identifies the airworthiness status of an aircraft component in relation to the work being certified. Block 12 'Remarks' of the AW Form 1 in some cases contains vital airworthiness-related information (see also Appendix II to CAR-M) which may need appropriate and necessary actions.

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

Airworthiness Review Certificate – GCAA
Form No.: AWF-ARC-15a
Note: Form not included, form can be downloaded from GCAA website

Airworthiness Review Certificate - CAMO
Form No.: AWF-ARC-15b
Note: Form not included, form can be downloaded from GCAA website

APPENDIX IV - CLASS AND RATINGS SYSTEM TO BE USED FOR THE APPROVAL OF MAINTENANCE ORGANISATIONS REFERRED TO IN CAR M SUBPART-F AND CAR-145

1. Except as stated otherwise for the smallest organisation in point 12, the table referred to point 13 provides the standards system for the approval of maintenance organization 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 point 13, the approved maintenance organisation is required to indicate its scope of work in the maintenance organisation manual/exposition. See also paragraph 11.

3. Within the approval class(es) and rating(s) granted by the GCAA, the scope of work specified in the maintenance organisation manual/exposition defines the exact limits of approval. It is therefore essential that the approval class(es) and rating(s) and the organisation's 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 Auxillary Power Units (APUs)), in accordance with aircraft maintenance data or, if agreed by the GCAA, 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 manual/exposition to be approved by the GCAA. 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/APU ('Auxiliary Power Unit') and engine/APU components, in accordance with engine and/or APU maintenance data or, if agreed by the GCAA, in accordance with component maintenance data, only whilst such components are fitted to the engine/APU. Nevertheless, such B Rated approved maintenance organisations 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/manual to be approved by the GCAA. The maintenance organisation exposition/manual scope of work shall reflect such activity where permitted by the GCAA.

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/manual to be approved by the GCAA. The maintenance organisation exposition/manual scope of work shall reflect such activity where permitted by the GCAA.

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. An approved maintenance organisation with a class rating in A, B or C category may carry out NDT on products it is maintaining subject to the maintenance organisation exposition/manual 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 organization may be approved for either 'Base' or 'Line' maintenance or both. It should be noted that a 'Line' facility located at a main base facility requires a 'Line' maintenance approval.

9. The 'limitation' section is intended to give the GCAA maximum flexibility to customise the approval to a 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 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 etc; any number of series or types may be quoted; Group means for example Cessna Single Piston-Engine aircraft or Lycoming Non-Supercharged Piston Engine 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 CAR M.604(c) or CAR 145.70(c), 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:

TABLE 1

CLASS	RATING	LIMITATION
AIRCRAFT	A2 AEROPLANES 5700 KG AND BELOW	PISTON ENGINE 5700 KG AND BELOW

AIRCRAFT	A3 HELICOPTERS	SINGLE PISTON ENGINE 3175 KG AND BELOW
AIRCRAFT	A4 AIRCRAFT OTHER THAN A1, A2 AND A3	NO LIMITATION
ENGINES	B2 PISTON	LESS THAN 450 HP
COMPONENTS RATING OTHER THAN COMPLETE ENGINES OR APU's	C1 TO C22	AS PER CAPABILITY LIST
SPECIALISED	D1 NDT	NDT METHODS(S) TO BE SPECIFIED

It should be noted that such an organisation may be further limited by the GCAA in the scope of approval dependent upon the capability of the particular organisation.

13. TABLE 2

CLASS	RATING	LIMITATION	BASE	LINE
AIRCRAFT	A1 Aeroplanes above 5700 kg	[Rating reserved to Maintenance Organisations approved in accordance with CAR-145)] [Shall 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	Shall state aeroplane manufacturer or group or series or type and/or the maintenance tasks(s) *Example: DHC-6 Twin Otter Series.*	[YES/NO] (*)	[YES/NO] (*)
	A3 helicopters/ single engine	Shall state helicopter manufacturer or group or series or type and/or the maintenance tasks(s) *Example: Robinson R44*	[YES/NO] (*)	[YES/NO] (*)
	A4 Aircraft other than A1, A2 and A3	Shall state aircraft category (sailplane, balloon, airship, etc.) manufacturer or group or series or type and/or the maintenance task(s)	[YES/NO] (*)	[YES/NO] (*)
ENGINES	B1 Turbine	[Shall state engine series or type and/or the maintenance task(s)] *Example: PT6A Series*		

	B2 Piston	Shall state engine manufacturer or group or series or type and/or the maintenance task(s)
	B3 APU	Shall state engine manufacturer or series or type and/or the maintenance task(s)
COMPONENTS OTHER THAN COMPLETE ENGINES OR APUs	C1 Air Cond & Press	Shall 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 maintenance task(s) *Example: PT6A Fuel Control*
	C2 Auto Flight	
	C3 Comms & Nav	
	C4 Doors – Hatches	
	C5 Electrical Power & Lights	
	C6 Equipment	
	C7 Engine – APU	
	C8 Flight Controls	
	C9 Fuel – Airframe	
	C10 Helicopter –Rotors	
	C11 Helicopter – trans	
	C12 Hydraulic Power	
	C13 Indicating – Recording System	
	C14 Landing Gear	
	C15 Oxygen	
	C16 Propellers	
	C17 Pneumatic & Vacuum	
	C18 Protection ice/rain/fire	
	C19Windows	
	C20 Structural	
	C21 Water Ballast	
	C22 Propulsion Augmentation	
SPECIALISED SERIVICES	D1 Non Destructive Testing	Shall state particular NDT Method(s)
(*) Delete as appropriate.		

APPENDIX V - SUBPART F MAINTENANCE ORGANISATION APPROVAL CERTIFICATE

Form No.: AWF-AMO-011

Note: Form not included, form can be downloaded from GCAA website

APPENDIX VI - CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATION APPROVAL CERTIFICATE

Form No.: AWF-ARC-014

Note: Form not included, form can be downloaded from GCAA website

APPENDIX VII

Complex Maintenance Tasks

The following constitutes the complex maintenance tasks referred to in CAR M.801(b):

1. The modification, repair or replacement by riveting, bonding, laminating, or welding of any of the following airframe parts:
   (a) a box beam;
   (b) a wing stringer or chord member;
   (c) a spar;
   (d) a spar flange;
   (e) a member of a truss-type beam;
   (f) the web of a beam;
   (g) a keel or chine member of a flying boat hull or a float;
   (h) a corrugated sheet compression member in a wing or tail surface;
   (i) a wing main rib;
   (j) a wing or tail surface brace strut;
   (k) an engine mount;
   (l) a fuselage longeron or frame;
   (m) a member of a side truss, horizontal truss or bulkhead;
   (n) a seat support brace or bracket;
   (o) a seat rail replacement;
   (p) a landing gear strut or brace strut;
   (q) an axle;
   (r) a wheel; and
   (s) a ski or ski pedestal, excluding the replacement of a low-friction coating.
2. The modification or repair of any of the following parts:
   (a) aircraft skin, or the skin of an aircraft float, if the work requires the use of a support, jig or fixture;
   (b) aircraft skin that is subject to pressurization loads, if the damage to the skin measures more than 15 cm (6 inches) in any direction;
   (c) a load-bearing part of a control system, including a control column, pedal, shaft, quadrant, bell crank, torque tube, control horn and forged or cast bracket, but excluding
      I. the swaging of a repair splice or cable fitting,and
      II. the replacement of a push-pull tube end fitting that is attached by riveting; and
   (d) any other structure, not listed in (1), that a manufacturer has identified as primary structure in its maintenance manual, structural repair manual or instructions for continuing airworthiness.

3. The performance of the following maintenance on a piston engine:

(a) dismantling and subsequent reassembling of a piston engine other than (i) to obtain access to the piston/cylinder assemblies; or (ii) to remove the rear accessory cover to inspect and/or replace oil pump assemblies, where such work does not involve the removal and re-fitment of internal gears;
(b) dismantling and subsequent reassembling of reduction gears;
(c) welding and brazing of joints, other than minor weld repairs to exhaust units carried out by a suitably approved or authorised welder but excluding component replacement;
(d) the disturbing of individual parts of units which are supplied as bench tested units, except for the replacement or adjustment of items normally replaceable or adjustable in service.

4. The balancing of a propeller, except:
   (a) for the certification of static balancing where required by the maintenance manual;
   (b) dynamic balancing on installed propellers using electronic balancing equipment where permitted by the maintenance manual or other approved airworthiness data;
5. Any additional task that requires:
   (a) specialized tooling, equipment or facilities; or
   (b) significant coordination procedures because of the extensive duration of the tasks and the involvement of several persons.

AMC to Appendix VII — Complex Maintenance Tasks

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

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 of 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 CAR M.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 CAR-M or is a component maintenance task in accordance with CAR M.502(a), (b), (c) or (d).

The criteria 1 to 8 cannot be overridden by less restrictive instructions issued in accordance with ‘CAR M.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 CAR M.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 CAR M.803(d).

The Pilot-owner must inform the approved continuing airworthiness management organisation responsible for the continuing airworthiness of the aircraft (if applicable) not later than 30 days after completion of the Pilot-owner maintenance task in accordance with CAR M.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 Part-M.
2. The list of tasks may not address in a detailed manner the specific needs of the various aircraft categories. In addition, the development of technology and the nature of the operations undertaken by these categories of aircraft cannot be always adequately considered.
3. Therefore, the following lists are considered to be the representative scope of limited Pilot Owner maintenance referred to in CAR M.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 Month periodicity.

The Inspections to be carried out are limited to those areas and tasks listed in this AMC to Appendix VIII; this allows flexibility in the development of the maintenance programme and does not limit the inspection to certain specific periodic inspections. A 50 Hrs/6 Month periodic inspection for a fixed

wing aeroplane as well as the one-year inspection on a glider may normally be eligible for Pilot-owner maintenance.

Note: Tasks in Part A or Part B shown with ** exclude IFR operations following Pilot-owner maintenance. For these aircraft to operate under IFR operations, these tasks should be released by an appropriate licensed engineer.

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

PILOT-OWNER MAINTENANCE TASKS for POWERED AIRCRAFT (AEROPLANES)			
ATA	Area	Task	Aeroplanes <=2 730kg
09	Towing	Tow release unit and tow cable retraction mechanism – Cleaning, lubrication and tow cable replacement (including weak links).	Yes
		Mirror –Installation and replacement of mirrors	Yes
11	Placards	Placards, Markings – Installation and renewal of placards and markings required by AFM and AMM.	Yes
12	Servicing	Lubrication – Those items not requiring a disassembly other than of non-structural items such as cover plates, cowlings and fairings.	Yes
20	Standard Practices	Safety Wiring – Replacement of defective safety wiring or cotter keys, excluding those in engine controls, transmission controls and flight control systems.	Yes
		Simple Non-Structural Standard Fasteners – Replacement and adjustment, excluding the replacement of receptacles and anchor nuts requiring riveting.	Yes
21	Air Conditioning	Replacement of flexible hoses and ducts.	Yes
23	Communication	Communication devices – Remove and replace self-contained, instrument panel mount communication devices with quick disconnect connectors, excluding IFR operations.	Yes**
24	Electrical power	Batteries – Replacement and servicing, excluding servicing of Ni-Cd batteries and IFR operations.	Yes**
		Wiring – Repairing broken circuits in non-critical equipment, excluding ignition system, primary generating system and required communication, navigation system and primary flight instruments.	Yes
		Bonding – Replacement of broken bonding cable.	Yes
		Fuses – Replacement with the correct rating.	Yes
25	Equipment	Safety Belts – Replacement of safety belts and harnesses excluding belts fitted with airbag systems.	Yes
		Seats – Replacement of seats or seat parts not involving disassembly of any primary structure or control system.	Yes

		Non-essential instruments and/or equipment - Replacement of self-contained, instrument panel mount equipment with quick disconnect connectors.	Yes
		Oxygen System – Replacement of portable oxygen bottles and systems in approved mountings, excluding permanently installed bottles and systems.	Yes
		ELT – Removal/Reinstallation.	Yes
27	Flight Controls	Removal or reinstallation of co-pilot control column and rudder pedals where provision for quick disconnect is made by design.	Yes
28	Fuel	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**

		Self-contained data logger – Installation, data restoration.	Yes
51	Structure	Fabric patches – Simple patches extending over not more than one rib and not requiring rib stitching or removal of structural parts or control surfaces.	Yes
		Protective Coating – Applying preservative material or coatings where no disassembly of any primary structure or operating system is involved.	Yes
		Surface finish - Minor restoration where no disassembly of any primary structure or operating system is involved. This includes application of signal coatings or thin foils as well as registration markings.	Yes
		Fairings – Simple repairs to non-structural fairings and cover plates, which do not change the contour.	Yes
52	Doors	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	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
76	Engine Indication	Engine Indicating – Removal and replacement of self-contained, instrument panel mount indicators that have quick-release connectors and do not employ direct reading connections.	Yes
79	Oil System	Strainer or filter elements – Cleaning and/or replacement.	Yes
		Oil – Changing or replenishment of engine oil and gearbox fluid.	Yes

Part B/ PILOT-OWNER MAINTENANCE TASKS for ROTORCRAFT

PILOT-OWNER MAINTENANCE TASKS for ROTORCRAFT			
ATA	Area	Task	Single Engine Rotorcraft <=2 730kg

11	Placards	Placards, Markings – Installation and renewal of placards and markings required by AFM and AMM.	Yes
12	Servicing	Fuel, oil, hydraulic, de-iced and windshield liquid replenishment.	Yes
		Lubrication – Those items not requiring a disassembly other than of non-structural items such as cover plates, cowlings and fairings.	Yes
20	Standard practices	Safety Wiring – Replacement of defective safety wiring or cotter keys, excluding those in engine controls, transmission controls and flight control systems.	Yes
		Simple non-structural standard fasteners – Replacement and adjustment, excluding latches and the replacement of receptacles and anchor nuts requiring riveting.	Yes
21	Air conditioning	Replacement of flexible hoses and ducts.	Yes
23	Communication	Communication devices – Remove and replace self-contained, instrument panel mount communication devices with quick disconnect connectors, excluding IFR operations.	Yes**
24	Electrical Power	Batteries – Replacement and servicing, excluding servicing of Ni-Cd batteries and IFR operations.	Yes**
		Wiring – Repairing broken circuits in noncritical equipment, excluding ignition system, primary generating system and required communication, navigation system and primary flight instruments.	Yes
		Bonding – Replacement of broken bonding cable excluding bonding on rotating parts and flying controls.	Yes
		Fuses – Replacement with the correct rating.	Yes
25	Equipment	Safety Belts - Replacement of safety belts and harnesses excluding belts fitted with airbag systems.	Yes
		Seats – Replacement of seats or seat parts not involving disassembly of any primary structure or control system excluding flight crew seats.	Yes
		Removal/installation of emergency flotation gears with quick disconnect connectors.	Yes
		Non-essential instruments and/or equipment - Replacement of self-contained, instrument panel mount equipment with quick disconnect connectors.	Yes
		ELT - Removal/Reinstallation.	Yes
30	Ice and rain protection	Windshield wiper replacement	Yes
31	Instruments	Instrument Panel– Removal and reinstallation provided this it is a design feature with quick disconnect connectors, excluding IFR operations.	Yes**

		Pitot Static System – Simple sense and leak check, excluding IFR operations.	Yes**
		Drainage – Drainage of water drainage traps or filters within the Pitot Static system excluding IFR operations.	Yes**
		Instruments – Check for legibility of markings and those readings are consistent with ambient conditions.	Yes
32	Landing Gears	Wheels – Removal, replacement and servicing, including replacement of wheel bearings and lubrication.	Yes
		Replacement of skid wear shoes.	Yes
		Fit and remove snow landing pads.	Yes
		Servicing – Replenishment of hydraulic fluid.	Yes
		Brake – Replacement of worn brake pads	Yes
33	Lights	Lights – replacement of internal and external bulbs, filaments, reflectors and lenses.	Yes
34	Navigation	Software – Updating self contained, instrument panel mount, navigational software databases, excluding automatic flight control systems and transponders.	Yes
		Navigation devices – Remove and replace self contained, instrument panel mount navigation devices with quick disconnect connectors, excluding automatic flight control systems, transponders, primary flight control system and IFR operations.	Yes**
		Self contained data logger – Installation, data restoration.	Yes
51	Structures	Protective Coating – Applying preservative material or coatings where no disassembly of any primary structure or operating system is involved.	Yes
		Surface finish - Minor restoration where no disassembly of any primary structure or operating system is involved, excluding intervention on main and tail rotors. This includes application of signal coatings or thin foils as well as Registration markings.	Yes
		Fairings – Simple repairs to non-structural fairings and cover plates which do not change the contour.	Yes
52	Doors	Doors - Removal and reinstallation.	Yes
53	Fuselage	Upholstery, furnishing – Minor repairs which do not require disassembly of primary structure or operating systems, or interfere with control systems.	Yes
56	Windows	Side Windows - Replacement if it does not require riveting, bonding or any special process.	Yes
62	Main rotor	Removal/installation of main rotor blades that are designed for removal where special tools are not required (tail rotor blades excluded) limited to installation of the same blades previously removed refitted in the original position.	Yes

63 65	Transmission	Chip detectors – Remove, check and replace provided the chip detector is a self-sealing type and not electrically indicated.	Yes
67	Flight Control	Removal or reinstallation of co-pilot cyclic and collective controls and yaw pedals where provision for quick disconnect is made by design.	Yea
71	Powerplant installation	Cowlings - Removal and re-fitment.	Yes
72	Engine	Chip detectors –removal, checking and reinstallation provided the chip detector is a self sealing type and not electrically indicated.	Yes
79	Oil System	Filter elements – Replacement, provided that the element is of the “spin on/off” type.	Yes
		Oil - Changing or replenishment of engine oil.	Yes

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

Abbreviations applicable to this Part:

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

PILOT-OWNER MAINTENANCE TASKS for SAILPLANES AND POWERED SAILPLANES					
ATA	Area	Task	SP	SSPS	SLPS/TM
08	Weighing	Recalculation – Small changes of the Trim plan without needing a reweighing.	Yes	Yes	Yes
09	Towing	Tow release unit and tow cable retraction mechanism – Cleaning, lubrication and tow cable replacement (including weak links).	Yes	Yes	Yes
		Mirror - Installation and replacement of mirrors.	Yes	Yes	Yes
11	Placards	Placards, Markings – Installation and renewal of placards and markings required by AFM and AMM.	Yes	Yes	Yes
12	Servicing	Lubrication – Those items not requiring a disassembly other than of non-structural items such as cover plates, cowlings and fairings.	Yes	Yes	Yes
20	Standard Practices	Safety Wiring – Replacement of defective safety wiring or cotter keys, excluding those in engine controls, transmission controls and flight control systems.	Yes	Yes	Yes

		Simple Non-Structural Standard Fasteners – Replacement and adjustment, excluding the replacement of receptacles and anchor nuts requiring riveting.	Yes	Yes	Yes
		Free play – Measurement of the free play in the control system and the wing to fuselage attachment including minor adjustments by simple means provided by the manufacturer.	Yes	Yes	Yes
21	Air Conditioning	Replacement of flexible hoses and ducts.	Yes	Yes	Yes
23	Communication	Communication devices – Remove and replace self-contained, instrument panel mount communication devices with quick disconnect connectors.	Yes	Yes	Yes
24	Electrical Power	Batteries and solar panels – Replacement and servicing.	Yes	Yes	Yes
		Wiring - Installation of simple wiring connections to the existing wiring for additional non-required equipment such as electric variometers, flight computers but excluding required communication, navigation systems and engine wiring.	Yes	Yes	Yes
		Wiring – Repairing broken circuits in landing light and any other wiring for non-required equipment such as electrical variometers or flight computers, excluding ignition system, primary generating system and required communication, navigation system and primary flight instruments.	Yes	Yes	Yes
		Bonding – Replacement of broken bonding cable.	Yes	Yes	Yes
		Switches – This includes soldering and crimping of non- required equipment such as electrical variometers or flight computers, but excluding ignition system, primary generating system and required communication, navigation system and primary flight instruments.	Yes	Yes	Yes
		Fuses – Replacement with the correct rating.	Yes	Yes	Yes
25	Equipment	Safety Belts – Replacement of safety belt and harnesses.	Yes	Yes	Yes
		Seats – Replacement of seats or seat parts not involving disassembly of any primary structure or control system	Yes	Yes	Yes
		Non-essential instruments and / or equipment - Replacement of self-contained, instrument	Yes	Yes	Yes

		panel mount equipment with quick disconnect connectors.			
		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
		ELT – Removal / Reinstallation.	Yes	Yes	Yes
26	Fire Protection	Fire Warning – Replacement of sensors and indicators.	N/A	Yes	Yes
27	Flight Control	Gap Seals – Installation and servicing if it does not require complete flight control removal.	Yes	Yes	Yes
		Control System – Measurement of the control system travel without removing the control surfaces.	Yes	Yes	Yes
		Control Cables – Simple optical Inspection for Condition.	Yes	Yes	Yes
		Gas Dampener – Replacement of Gas Dampener in the Control or Air Brake System.	Yes	Yes	Yes
		Co-pilot stick and pedals - Removal or reinstallation where provision for quick disconnect is made by design.	Yes	Yes	Yes
28	Fuel System	Fuel lines – Replacement of prefabricated fuel lines fitted with self-sealing couplings.	N/A	Yes	Yes
		Fuel Filter – Cleaning and/or replacement.	N/A	Yes	Yes
31	Instruments	Instrument Panel– Removal and reinstallation provided this is a design feature with quick disconnect, excluding IFR operations.	Yes	Yes	Yes
		Pitot Static System – Simple sense and leak check.	Yes	Yes	Yes
		Instrument Panel vibration damper/shock absorbers-Replacement.	Yes	Yes	Yes
		Drainage – Drainage of water drainage traps or filters within the Pitot static system.	Yes	Yes	Yes
		Flexible tubes - Replacement of damaged tubes.	Yes	Yes	Yes

32	Landing Gear	Wheels – Removal, replacement and servicing, including replacement of wheel bearings and lubrication.	Yes	Yes	Yes
		Servicing – Replenishment of hydraulic fluid	Yes	Yes	Yes
		Shock Absorber – Replacement or servicing of elastic cords or rubber dampers.	Yes	Yes	Yes
		Shock Struts – Replenishment of oil or air.	Yes	Yes	Yes
		Landing gear doors - Removal or reinstallation and repair including operating straps.	Yes	Yes	Yes
		Skis – Changing between wheel and ski landing gear.	Yes	Yes	Yes
		Skids – Removal or reinstallation and servicing of main, wing and tail skids.	Yes	Yes	Yes
		Wheels fairing (spats) – Removal and reinstallation.	Yes	Yes	Yes
		Mechanical brakes – Adjustment of simple cable operated systems.	Yes	Yes	Yes
		Brake – Replacement of worn brake pads.	Yes	Yes	Yes
		Springs – Replacement of worn or aged springs.	Yes	Yes	Yes
		Gear Warning –Removal or reinstallation of simple gear warning systems.	Yes	Yes	Yes
33	Lights	Lights – Replacement of internal and external bulbs, filaments, reflectors and lenses.	N/A	N/A	Yes
34	Navigation	Software – Updating self-contained, instrument panel mount navigational software databases, excluding automatic flight control systems and transponders and including update of non-required instruments/equipment.	Yes	Yes	Yes
		Navigation devices – Removal and replacement of self-contained, instrument panel mount navigation devices with quick disconnect connectors, excluding automatic flight control systems, transponders, primary flight control system.	Yes	Yes	Yes
		Self-contained data logger – Installation, data restoration.	Yes	Yes	Yes
51	Structure	Fabric patches – Simple patches extending over not more than one rib and not requiring rib stitching or removal of structural parts or control surfaces.	Yes	Yes	Yes
		Protective Coating – Applying preservative material or coatings where no disassembly of	Yes	Yes	Yes

		any primary structure or operating system is involved.			
		Surface finish - Minor restoration of paint or coating where the underlying primary structure is not affected. This includes application of signal coatings or thin foils as well as Registration markings.	Yes	Yes	Yes
		Fairings – Simple repairs to non-structural fairings and cover plates, which do not change the contour.	Yes	Yes	Yes
52	Doors	Doors - Removal and reinstallation.	Yes	Yes	Yes
53	Fuselage	Upholstery, furnishing – Minor repairs, which do not require disassembly of primary structure or operating systems, or interfere with control systems.	Yes	Yes	Yes
56	Windows	Side Windows - Replacement if it does not require riveting, bonding or any special process.	Yes	Yes	Yes
		Canopies - Removal and re-fitment.	Yes	Yes	Yes
		Gas dampener – Replacement of Canopy Gas dampener.	Yes	Yes	Yes
57	Wings	Wing Skids – Removal or reinstallation and service of lower wing skids or wing roller including spring assembly.	Yes	Yes	Yes
		Water ballast – Removal or reinstallation of flexible tanks.	Yes	Yes	Yes
		Turbulator and sealing tapes – Removal or reinstallation of approved sealing tapes and turbulator tapes.	Yes	Yes	Yes
61	Propeller	Spinner – Removal and reinstallation.	N/A	Yes	Yes
71	Powerplant installation	Removal or installation of Powerplant unit including engine and propeller.	N/A	Yes	No
		Cowling - Removal and reinstallation not requiring removal of propeller or disconnection of flight controls.	N/A	Yes	Yes
		Induction System – Inspection and replacement of induction air filter.	N/A	Yes	Yes
72	Engine	Chip detectors – Removal, checking and reinstallation provided the chip detector is a self-sealing type and not electrically indicated.	N/A	Yes	Yes
73	Engine fuel	Strainer or Filter elements – Cleaning and/or replacement.	N/A	Yes	Yes
		Fuel - Mixing of required oil into fuel.	N/A	Yes	Yes

74	Ignition	Spark Plugs – Removal, cleaning, adjustment and reinstallation.	N/A	Yes	Yes
75	Cooling	Coolant – Replenishment of coolant fluid.	N/A	Yes	Yes
76	Engine Controls	Controls – Minor adjustments of non-flight or propulsion controls whose operation is not critical for any phase of flight.	N/A	Yes	NO
77	Engine Indicating	Engine Indicating – Removal and replacement of self-contained instrument panel mount indicators that have quick-release connectors and do not employ direct reading connections.	N/A	Yes	Yes
79	Oil System	Strainer or Filter elements – Cleaning and/or replacement.	N/A	Yes	Yes
		Oil – Changing or replenishment of engine oil and gearbox fluid.	N/A	Yes	Yes

Part D/ PILOT-OWNER MAINTENANCE TASKS for BALLOONS/AIRSHIPS

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	Yes
4- Melting link (temperature flag) - replacement.	Yes	Yes	N/A
5- Temperature transmitter and temperature indication cables - removal or reinstallation.	Yes	Yes	N/A
6- Crown line - replacement (where permanently attached to the crown ring).	No	Yes	N/A
7- Scoop or skirt-replacement or repair of (including fasteners).	Yes	Yes	N/A
B) BURNER			
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	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			
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			
20- Cleaning and Lubrication not requiring disassembly other than removal of non-structural items such as cover plates, cowlings and fairings.	Yes	N/A	N/A
21- Cowling-removal and re-fitment not requiring removal of the propeller	Yes	N/A	N/A
22- Fuel and oil strainers and/or filter elements - Removal, cleaning and/or replacement	Yes	N/A	N/A
23- Batteries - replacing and servicing (excluding servicing of Ni-Cd batteries).	Yes	N/A	N/A
24- Propeller Spinner – removal and installation for inspection.	Yes	N/A	N/A
25- Powerplant - Removal or installation of powerplant unit including engine and propeller.	Yes	N/A	N/A
26- Engine- Chip detectors – remove, check and replace.	Yes	N/A	N/A
27- Ignition Spark Plug – removal or installation and adjustment including gap clearance.	Yes	N/A	N/A
28- Coolant fluid - replenishment.	Yes	N/A	N/A
29- Engine Controls - minor adjustments of non-flight or propulsion controls whose operation is not critical for any phase of flight.	Yes	N/A	N/A
30- Engine instruments - removal and replacement.	Yes	N/A	N/A
31- Lubrication oil – changing or replenishment of engine oil and gearbox fluid.	Yes	N/A	N/A
32- Fuel lines - replacement of prefabricated hoses with self- sealing couplings.	Yes	N/A	N/A
33- Air filters (if installed) – removal, cleaning and replacement.	Yes	N/A	N/A

APPENDICES TO AMC AND GM TO CAR M

APPENDIX I TO AMC CAR M.302 - CONTENT OF THE MAINTENANCE PROGRAMME

Note: For the purpose of this Appendix, references to CAR 145 organisations should be understood as references to Subpart F organisations, as applicable.

1 General requirements

1.1 The maintenance programme should contain the following basic information.

1.1.1 The type/model and registration number of the aircraft, engines and, where applicable, auxiliary power units and propellers

1.1.2 The name and address of the owner, operator or Section A, Subpart G approved organisation 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 Section A, Subpart G approved organisation managing the aircraft airworthiness to the effect that the specified aircraft will be maintained to the programme and that the programme will be reviewed and updated as required.

1.1.5 Contents/list of effective pages and their revision status of the document.

1.1.6 Check periods, which reflect the anticipated utilisation of the aircraft. Such utilisation should be stated and include a tolerance of not more than 25%. Where utilisation cannot be anticipated, calendar time limits should also be included.

1.1.7 Procedures for the escalation of established check periods, where applicable and acceptable to the GCAA.

1.1.8 Provision to record the date and reference of approved amendments incorporated in the maintenance programme.

1.1.9 Details of pre-flight maintenance tasks that are accomplished by maintenance staff.

1.1.10 The tasks and the periods (intervals/frequencies) at which each part of the aircraft, engines, APU's, propellers, components, accessories, equipment, instruments, electrical and radio apparatus, together with the associated systems and installations should be inspected. This should include the type and degree of inspection required.

1.1.11 The periods at which components should be checked, cleaned, lubricated, replenished, adjusted and tested.

1.1.12 If applicable details of ageing aircraft system requirements together with any specified sampling programmes.

1.1.13 If applicable details of specific structural maintenance programmes where issued by the type certificate holder including but not limited to:

(d) Maintenance of structural Integrity by damage Tolerance and Supplemental Structural Inspection Programmes (SSID).

(e) Structural maintenance programmes resulting from the SB review performed by the TC holder.

(f) Corrosion prevention and control.

(g) Repair Assessment.

(h) Widespread Fatigue Damage

1.1.14 If applicable, details of Critical Design Configuration Control Limitations together with appropriate procedures.

1.1.15 If applicable a statement of the limit of validity in terms of total flight cycles/calendar date/flight hours for the structural programme in 1.1.13.

1.1.16 The periods at which overhauls and/or replacements by new or overhauled components should be made.

1.1.17 A cross-reference to other documents approved by the GCAA which contain the details of maintenance tasks related to mandatory life limitations, Certification Maintenance Requirements (CMR's) and ADs.

Note: To prevent inadvertent variations to such tasks or intervals these items should not be included in the main portion of the maintenance programme document, or any planning control system, without specific identification of their mandatory status.

1.1.18 Details of, or cross-reference to, any required reliability programme or statistical methods of continuous Surveillance.

1.1.19 A statement that practices and procedures to satisfy the programme should be to the standards specified in the TC holder's Maintenance Instructions. In the case of approved practices and procedures that differ, the statement should refer to them.

1.1.20 Each maintenance task quoted should be defined in a definition section of the programme.

1.1.21 Operators and continuing airworthiness management organisations are required to develop procedures to comply with maintenance requirements for cockpit voice recorders (CVR) and (digital) flight data recorders FDR (DFDR). Instructions may include requirements published by one or more of the equipment manufacturers, TC/STC holders and the GCAA. In order to allow detection of dormant failures performing the following maintenance actions are required to be included in the maintenance programme.

(a) For CVR: At intervals not exceeding 12 months, inspect the installation. Confirm by means of the CVR controller monitor jack, proper recording on each audio channel from area microphone(s), receiver audio, side tone, interphone, public address (if recorded) and boom microphone (including 'hot mike' function, i.e. interphone OFF). Confirm proper function of the inhibit logic for the bulk erase.

(b) For FDR (DFDR): As part of each Pre-Flight Check, the aural or visual means for preflight checking the flight recorders for proper operation, of an automatically or manually initiated test, should be used every day. When no such means is available for a flight recorder, the operator should perform an operational check of the flight recorder for no failure.

1.1.22 Every 24 month inspections should be included in the AMP to be carried out as follows for CVR and FDR (DFDR):

(c) The read-out of the recorded data from the CVR and FDR (DFDR) should ensure that the recorder operates correctly for the nominal duration of the recording in accordance with CAT.IDE.A.185 or CAT.IDE.A.190.

(d) The analysis of the FDR (DFDR) should evaluate the quality of the recorded data to determine if the bit error rate is within acceptable limits and to determine the nature and distribution of the errors.

(e) A complete flight from the FDR (DFDR) should be examined in engineering units to evaluate the validity of all recorded parameters. Particular attention should be given to parameters from sensors dedicated to the FDR (DFDR). Parameters taken from the aircraft's electrical bus system need not be checked if their serviceability can be detected by other aircraft systems.

NOTE: This recording should be preserved, at least until replaced by a more recent one. The purpose of this is to ensure that, in the event of an accident/incident, air accident investigators have access to a readout from the flight recording system that is representative of the actual aircraft conditions prior to the event.

(f) The read-out facility should have the necessary software to accurately convert the recorded values to engineering units and to determine the status of discrete signals.

(g) A sampling of 10% of the fleet should be carried out within the 24 month period examining the recorded signals on the CVR by a re-play of the CVR recording. Furthermore, Where practicable, during the 24 month period examination (i.e. AMP task), a sample of in-flight recordings of the CVR should be examined for evidence that the intelligibility of the signal is acceptable.

NOTE: While installed in the aircraft, the CVR should record test signals from each aircraft source and from relevant external sources to ensure that all required signals meet intelligibility standards.

(h) Reserved

1.1.23 Calibration of the FDR (DFDR) system, unless otherwise addressed by the aircraft Type Certificate Holder or OEM, should be included in the AMP as follows:

(b) The FDR(DFDR) system should be re-calibrated at least every five years to determine any discrepancies in the engineering conversion routines for the mandatory parameters (CAT.IDE.A.190), and to ensure that parameters are being recorded within the calibration tolerances, and

(c) When the parameters of altitude and airspeed are provided by sensors that are dedicated to the FDR (DFDR) system, there should be a re-calibration performed as recommended by the sensor manufacturer, or at least every two years.

1.1.24 When developing the aircraft maintenance programme, operators should consider the instructions for continued airworthiness provided by the TC or STC Holder for the CVR/FDR (DFDR) and the ICAO guidelines stated in ICAO Annex 6 Part I-Aeroplanes Appendix 8 or ICAO Annex 6 Part III-Helicopters Appendix 4 as minimum. CVR and FDR (DFDR) malfunction occurrences should be reported to the GCAA through the ROSI system. In addition procedures for the analysis of CVR/FDR (DFDR) recordings, including arrangements with any sub-contracted organisation when applicable, should be reflected in the organisation CAME procedures. Specific procedures for the analysis of FDR (DFDR) recordings should include:

(a) Arrangements for the accomplishment of a representative flight, and provision of the recorded parameters, for assessment of the recording.

(b) Method of transmission of the data to a suitable readout facility.

(c) Where the analysis of the readout results will be carried out and how the results will be presented to the operator.

(d) The method of recording a satisfactory readout in the continuing airworthiness records.

(e) The procedures to be used to raise any defects noted during the readout check and to control their rectification in accordance with MEL requirements.

1.1.25 Operators and continuing airworthiness management organisations are required to develop procedures to comply with maintenance requirements of

the Emergency Locator Transmitter (ELT), including fixed, portable and automatically deployable ELT devices. In order to allow detection of dormant failures performing the following minimum maintenance actions are required to be included in the maintenance programme. At all times the manufacturer's instructions for continuing airworthiness must be followed.

(a) ELTs installed in aircraft are subject to extreme environmental conditions which may cause corrosion to develop in circuit boards and battery compartments. As a minimum, a corrosion inspection shall be performed in accordance with CMM requirements where available or when ELT is subject (but not limited to) repair, overhaul or ULB battery replacement.

(b) Performance and operational testing of the installed ELT system should be carried out in accordance with the CMM interval for operational test requirements, and also in accordance with the ELT manufacturers approved technical data. International guidelines on the timing of such tests, if carried out in-situ, should also be followed.

2. Programme basis

2.1 An owner or a CAMO aircraft maintenance programme should normally be based upon the MRB report, where applicable, and the TC holder's maintenance planning document or Chapter 5 of the maintenance manual, (i.e. the manufacturer's recommended maintenance programme).

The structure and format of these maintenance recommendations may be re-written by the owner or the CAMO to better suit the operation and control of the particular maintenance programme.

2.2 For a newly type-certificated aircraft where no previously approved maintenance programme exists, it will be necessary for the owner or the CAMO to comprehensively appraise the manufacturer's recommendations (and the MRB report where applicable), together with other airworthiness information, in order to produce a realistic programme for approval.

2.3 For existing aircraft types it is permissible for the operator to make comparisons with maintenance programmes previously approved. It should not be assumed that a programme approved for one owner or the CAMO would automatically be approved for another.

Evaluation should be made of the aircraft/fleet utilisation, landing rate, equipment fit and, in particular, the experience of the owner or the CAMO when assessing an existing programme.

Where the GCAA is not satisfied that the proposed maintenance programme can be used as is, the GCAA should request appropriate changes such as additional maintenance tasks or de-escalation of check frequencies as necessary.

2.4 Critical Design Configuration Control Limitations (CDCCL)

If CDCCL have been identified for the aircraft type by the TC/STC holder, maintenance instructions should be developed. CDCCL's are characterised by features in an aircraft installation or component that should be retained during modification, change, repair, or scheduled maintenance for the operational life of the aircraft or applicable component or part.

3. Amendments

Amendments (revisions) to the approved maintenance programme should be made by the owner or the CAMO, to reflect changes in the TC holder's recommendations, modifications, service experience, or as required by the GCAA.

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 GCAA or through a procedure developed in the maintenance programme and approved by the GCAA.

5. Periodic review of maintenance programme contents

5.1 The owner or the CAMO approved maintenance programmes should be subject to periodic review to ensure that they reflect current TC holder's recommendations, revisions to the MRB report if applicable, mandatory requirements and the maintenance needs of the aircraft.

5.2 The owner or the CAMO should review the detailed requirements at least annually for continued validity in the light of operating experience.

6. Reliability Programmes

6.1 Applicability

6.1.1 A reliability programme should be developed in the following cases:

(a) the aircraft maintenance programme is based upon MSG-3 logic;

(b) the aircraft maintenance programme includes condition monitored components;

(c) the aircraft maintenance programme does not contain overhaul time periods for all significant system components;

(d) when specified by the Manufacturer's maintenance planning document or MRB.

6.1.1 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.

Note: for the purpose of this paragraph, a significant system is a system the failure of which could hazard the aircraft safety.

6.1.2 Notwithstanding paragraphs 6.1.1 and 6.1.2 above, a CAR M. Subpart G organisation may however, develop its own reliability monitoring programme when it may be deemed beneficial from a maintenance planning point of view.

6.2 Applicability for CAMO/operator of small fleets of aircraft

6.2.1 For the purpose of this paragraph, a small fleet of aircraft is a fleet of less than 6 aircraft of the same type.

6.2.2 The requirement for a reliability programme is irrespective of the CAMO fleet size.

6.2.3 Complex reliability programmes could be inappropriate for a small fleet. It is recommended that such CAMOs tailor their reliability programmes to suit the size and complexity of operation.

6.2.4 One difficulty with a small fleet of aircraft consists in the amount of available data which can be processed: when this amount is too low, the calculation of alert level is very coarse. Therefore “alert levels” should be used carefully.

6.2.5 A CAMO of a small fleet of aircraft, when establishing a reliability programme, should consider the following:

(a) The programme should focus on areas where a sufficient amount of data is likely to be processed.

(b) When the amount of available data is very limited, the CAMO engineering judgement is then a vital element. In the following examples, careful engineering analysis should be exercised before taking decisions:

- A “0” rate in the statistical calculation may possibly simply reveal that enough statistical data is missing, rather 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 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 GCAA should impose additional restrictions on the MRB/MPD tasks intervals (e.g. no variations or only minor evolution are possible, and with the GCAA 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 GCAA is expected to ensure that the organisation which runs the programme (it may be the CAMO, or a CAR-145 organisation under contract) hires sufficiently qualified personnel with appropriate engineering experience and understanding of reliability concept (see AMC M.706)).

6.3.2 It follows that failure to provide appropriately qualified personnel for the reliability programme may lead the GCAA to reject the approval of the reliability programme and therefore the aircraft maintenance programme.

6.4 Contracted maintenance

6.4.1 Whereas CAR M.302 specifies that, the aircraft maintenance programme -which includes the associated reliability programme-, should be managed and presented by the CAMO to the GCAA, 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 GCAA the approval to implement a corrective action) remains the CAMO prerogative and responsibility. In relation to paragraph 6.4.2(d) above, a decision not to implement a corrective action should be justified and documented.

6.4.4 The arrangement between the CAMO and the maintenance organisation should be specified in the maintenance contract [(see Appendix XI to the AMC CAR M.708(c))] and the relevant CAME, and maintenance organisation procedures.

6.5 Reliability programme

In preparing the programme details, account should be taken of this paragraph. All associated procedures should be clearly defined.

6.5.1 Objectives

6.5.1.1 A statement should be included summarizing as precisely as possible the prime

objectives of the programme. To the minimum it should include the following:

(a) to recognize the need for corrective action,
(b) to establish what corrective action is needed and,
(c) to determine the effectiveness of that action

6.5.1.2 The extent of the objectives should be directly related to the scope of the programme. Its scope could vary from a component defect monitoring system for a small CAMO, to an integrated maintenance management programme for a big CAMO. The manufacturer's maintenance planning documents may give guidance on the objectives and should be consulted in every case.

6.5.1.3 In case of a MSG-3 based maintenance programme, the reliability programme should provide a monitor that all MSG-3 related tasks from the maintenance programme are effective and their periodicity is adequate.

6.5.2 Identification of items.

The items controlled by the programme should be stated, e.g. by ATA Chapters. Where some items (e.g. aircraft structure, engines, APU) are controlled by separate programmes, the associated procedures (e.g. individual sampling or life development programmes, constructor's structure sampling programmes) should be cross referenced in the programme.

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

6.5.4 Information sources and collection.

6.5.4.1 Sources of information should be listed and procedures for the transmission of information from the sources, together with the procedure for collecting and receiving it, should be set out in detail in the CAME or MOE as appropriate.

6.5.4.2 The type of information to be collected should be related to the objectives of the Programme and should be such that it enables both an overall broad based assessment of the information to be made and also allow for assessments to be made as to whether any reaction, both to trends and to individual events, is necessary. The following are examples of the normal prime sources:

(a) Pilots Reports.
(b) Technical Logs.
(c) Aircraft Maintenance Access Terminal / On-board Maintenance System readouts.
(d) Maintenance Worksheets.
(e) Workshop Reports.
(f) Reports on Functional Checks.
(g) Reports on Special Inspections
(h) Stores Issues/Reports.

(i) Air Safety Reports.

(j) Reports on Technical Delays and Incidents.

(k) Other sources: ETOPS, RVSM, CAT II/III.

6.5.4.3 In addition to the normal prime sources of information, due account should be taken of continuing airworthiness and safety information promulgated under 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 should be stated. The format should be such that the identification of trends, specific highlights and related events would be readily apparent.

6.5.5.1 Where “standards” or “alert levels” are included in the programme, the display of information should be oriented accordingly.

6.5.6 Examination, analysis and interpretation of the information.

The method employed for examining, analysing and interpreting the programme information should be explained.

6.5.6.1 Examination.

Methods of examination of information may be varied according to the content and quantity of information of individual programmes. These can range from examination of the initial indication of performance variations to formalised detailed procedures at specific periods, and the methods should be fully described in the programme documentation.

6.5.6.2 Analysis and Interpretation.

The procedures for analysis and interpretation of information should be such as to enable the performance of the items controlled by the programme to be measured; they should also facilitate recognition, diagnosis and recording of significant problems. The whole process should be such as to enable a critical assessment to be made of the effectiveness of the programme as a total activity. Such a process may involve:

(a) Comparisons of operational reliability with established or allocated standards (in the initial period these could be obtained from in-service experience of similar equipment of aircraft types).

(b) Analysis and interpretation of trends.

(c) The evaluation of repetitive defects.

(d) Confidence testing of expected and achieved results.

(e) Studies of life-bands and survival characteristics.

(f) Reliability predictions.

(g) Other methods of assessment.

6.5.6.3 The range and depth of engineering analysis and interpretation should be related to the particular programme and to the facilities available. The following, at least, should be taken into account:

(a) Flight defects and reductions in operational reliability.
(b) Defects occurring on-line and at main base.
(c) Deterioration observed during routine maintenance.
(d) Workshop and overhaul facility findings.
(e) Modification evaluations.
(f) Sampling programmes.
(g) The adequacy of maintenance equipment and publications.
(h) The effectiveness of maintenance procedures.
(i) Staff training.
(j) Service bulletins, technical instructions, etc.

6.5.6.4 Where the CAMO relies upon contracted maintenance and/or overhaul facilities as an information input to the programme, the arrangements for availability and continuity of such information should be established and details should be included.

6.5.7 Corrective Actions.

6.5.7.1 The procedures and time scales both for implementing corrective actions and for monitoring the effects of corrective actions should be fully described. Corrective actions shall correct any reduction in reliability revealed by the programme and could take the form of:

(a) Changes to maintenance, operational procedures or techniques.
(b) Maintenance changes involving inspection frequency and content, function checks, overhaul requirements and time limits, which will require amendment of the scheduled maintenance periods or tasks in the approved maintenance programme. This may include escalation or de-escalation of tasks, addition, modification or deletion of tasks.
(c) Amendments to approved manuals (e.g. maintenance manual, crew manual).
(d) Initiation of modifications.
(e) Special inspections of fleet campaigns.
(f) Spares provisioning.
(g) Staff training.
(h) Manpower and equipment planning.

Note: Some of the above corrective actions may need the GCAA approval before implementation.

6.5.7.2 The procedures for effecting changes to the maintenance programme should be described, and the associated documentation should include a planned completion date for each corrective action, where applicable.

6.5.8 Organisational Responsibilities.

The organisational structure and the department responsible for the administration of the programme should be stated. The chains of responsibility for individuals and departments (Engineering, Production, Quality, Operations etc.) in respect of the programme, together with the information and functions of any programme control committees (reliability group), should be defined. Participation of the GCAA should be stated. This information should be contained in the CAME as appropriate.

The organisation structure of the reliability program administration will largely depend on the size of operations. In small organisations, administration of a reliability program may be a shared responsibility while the large airlines may establish their own dedicated reliability group.

Large or small, each reliability program, however, should clearly define the individual by office title or departmental responsibilities for all phases of its administration, including policy enforcement, follow-ups and corrective actions.

6.5.9 Presentation of information to the GCAA.

The following information should be submitted to the GCAA 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.
(d) The procedures for the preparation, approval and implementation of its revisions.
(e) Reliability program's revision control and approval of revisions (e.g. List of Effective Pages, Table of Contents, etc.)
(f) A general description of the reliability program
(g) Definitions of significant terms used in the reliability programme.
(h) Application of the program by aircraft fleet type/model, aircraft registration marks, or serial numbers, as appropriate.
(i) The organisational structure, duties and responsibilities
(j) Procedures for establishing and reviewing performance standards
(k) Data collection system
(l) Methods of data analysis
(m) Data display and reporting
(n) Corrective action program

(o) Maintenance program amendment

(p) A copy and explanation of all forms, relevant to the program.

These reports should contain sufficient detailed information to enable the GCAA to make its own evaluation where necessary.

The program areas requiring GCAA's approval may include changes to the program that involve:

- Any procedural and organisational changes concerning program administration
- Adding or deleting aircraft types
- Adding or deleting components/systems
- Procedures relating to performance standards
- Data collection system
- Data analysis methods and application to the total maintenance program
- Procedures for maintenance program amendment.

Each operator is unique in terms of type / scope of operations, the operating environment, operations network, type of aircraft fleet etc. and accordingly what should or should not be included in the periodic reliability reports should be decided by the maintenance management to reflect most accurate picture of the actual reliability or effectiveness of its maintenance operations.
The GCAA suggests following information to be included in the periodic reliability report:

- Fleet reliability summary

This summary relates to all aircraft of the same type, and should contain the following information for the defined reporting period:

- Number of aircraft in fleet and Number of aircraft in service
- Number of operating days (less maintenance checks)
- Total number of flying hours
- Average daily utilisation per aircraft, and average flight duration
- Total number of cycles/landings
- Total number delays/cancellations
- Technical incidents

- Dispatch reliability (Aircraft technical delays/cancellations)

  All technical delays more than 15 minutes and cancellation of flight(s), due to technical malfunction should be reported. The report should include the delay/cancellation rate for the defined reporting period, the three-monthly moving average rate and, where appropriate, the alert level. The operator should present the information for a minimum period of 12 consecutive

months. This information should be presented in such a way as to show the long-term trend.

- In-flight diversions due to technical malfunction or failures (known or suspected)

  While all in-flight diversions due to technical malfunction or failures (known or suspected) should be reported through normal Mandatory Occurrence / Difficulty Reporting (MODR) System, a summary of all in-flight technical diversions should be provided in the periodic reliability report.

- Engine unscheduled shut-down or propeller feathering

  All In-Flight Shut Down (IFSD) and IFSD rates or propeller feathering in flight, if applicable, listed by type of engine and aircraft for the reporting period should be reported and presented in graphical form. When dealing with small numbers of IFSD, IFSD rate, or propeller feathering in flight, this information should be presented in such a way as to show the long-term trend.

- Incidents involving inability to control engine/obtain desired power

  All incidents involving inability to control/obtain engine desired power during the reporting period should be reported and presented in graphical form. When dealing with small numbers of such incidences, this information should be presented in such a way as to show the long-term trend.

- Unscheduled engine removals due to technical failures

  All unscheduled engine removals and rates due to technical failures, listed by type of engine and aircraft for the reporting period should be reported and presented in graphical form. When dealing with small numbers of unscheduled engine removals, this information should be presented in such a way as to show the long term trend.

- Component unscheduled removal

  All unscheduled removal of maintenance significant components, by ATA chapter, during the defined reporting period should be reported. The format of component removal information should be such that, both unscheduled removals and confirmed failures rates should be compared with the alert levels; and current and past periods of operation should be compared.

- Operation of aircraft with multiple Minimum Equipment List (MEL) items invoked

  A periodic reliability report should include trend reporting of dispatch of aircraft with multiple MEL items invoked and shall present the information for a

minimum period of 12 months. The report need not repeat the occurrences in descriptive form.

- PIREPS

  PIREPS should be reported to the GCAA by ATA chapters in graphical and/or tabular form as a count and rate for the defined reporting period, and comparison thereof with the alert level. For certain types of aircraft pilot reported defects are not a valid reliability indicator. In such situations, reporting of PIREPS will not be required.

- ETOPS specific operations

  In addition to non-ETOPS reliability reporting requirements, the following information should be provided for ETOPS flights:
  - number of ETOPS flights during the defined reporting period
  - aircraft/engine type/combination involved in the program, e.g. B767/CF6-80C2
  - details of aircraft involved in the program during the reporting cycle O Average fleet utilization time and cycles during the reporting cycle
  - ETOPS critical component failures or malfunctions, by ATA chapter. However, ETOPS critical system failure reporting may also be acceptable.

  The periodic reliability report may also explain changes, which have been made or are planned in the aircraft's maintenance program, including changes in maintenance and task intervals and changes from one maintenance process to another. It should discuss continuing over-alert conditions carried forward from previous reports and should report the progress of corrective action programs.

  The operator is required to make available all reliability reports during audits or when required by the GCAA. The Reliability program should therefore specify the procedure for periodic distribution of the reports as well as for their storage at a safe place and retrieval, when required.

6.5.10 Evaluation and review

Each programme should describe the procedures and individual responsibilities in respect of continuous monitoring of the effectiveness of the programme as a whole. The personnel engaged in reliability monitoring should be suitably qualified, experienced and trained. The time periods and the procedures for both routine and non-routine reviews of maintenance control should be detailed (progressive, monthly, quarterly, or annual reviews, procedures following reliability "standards" or "alert levels" being exceeded, etc.). The reliability reports should be generated on quarterly basis at the least and should be presented during periodic audits or when required by the GCAA.

For air carriers and other large operators (with fleet size of six or more aircraft), periodic reliability meetings should be organised with an aim to address all events affecting aircraft reliability. The GCAA should be invited to participate in such meetings.

6.5.10.1 Each Programme should contain procedures for monitoring and, as necessary, revising the reliability "standards" or "alert levels". The organizational responsibilities for monitoring and revising the "standards" should be specified together with associated time scales.

6.5.10.2 Although not exclusive, the following list gives guidance on the criteria to be taken into account during the review.

(a) Utilization (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 GCAA may authorize the CAMO to implement in the maintenance programme changes arising from the reliability programme results prior to their formal approval by the authority when satisfied that;

(a) the Reliability Programme monitors the content of the Maintenance Programme in a comprehensive manner, and

(b) the procedures associated with the functioning of the "Reliability Group" provide the assurance that appropriate control is exercised by the CAMO over the internal validation of such changes.

6.6 Pooling Arrangements.

6.6.1 In some cases, in order that sufficient data may be analysed it may be desirable to "pool" data: i.e. collate data from a number of CAMOs of the same type of aircraft. For the analysis to be valid, the aircraft concerned, mode of operation, and maintenance procedures applied should be substantially the same: variations in utilisation between two CAMOs may, more than anything, fundamentally corrupt the analysis. Although not exhaustive, the following list gives guidance on the primary factors which need to be taken into account.

(a) Certification factors, such as: aircraft TCDS compliance (variant)/modification status, including SB compliance.

(b) Operational Factors, such as: operational environment/utilization, e.g. low/high/seasonal, etc./respective fleet size operating rules applicable (e.g. ETOPS/RVSM/All Weather etc.)/operating procedures/MEL and MEL utilization.

(c) Maintenance factors, such as: aircraft age maintenance procedures; maintenance standards applicable; lubrication procedures and programme; MPD revision or escalation applied or maintenance programme applicable.

6.6.2 Although it may not be necessary for all of the foregoing to be completely common, it is necessary for a substantial amount of commonality to prevail. Decision should be taken by the GCAA on a case by case basis.

6.6.3 In case of a short term lease agreement (less than 6 month) more flexibility against the para 6.6.1 criteria may be granted by the GCAA, 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 GCAA should be sought prior to any formal agreement being signed between CAMOs.

6.6.5 Whereas this paragraph 6.6 is intended to address the pooling of data directly between CAMOs, it is acceptable that the CAMO participates in a reliability programme managed by the aircraft manufacturer, when the GCAA is satisfied that the manufacturer manages a reliability programme which complies with the intent of this paragraph.

GM 1 to Appendix I to AMC M.A.302

Performance Standards

A performance standard or reliability alert level is an indicator (expressed in mathematical terms), which when exceeded indicates that there has been an apparent deterioration in the normal behaviour pattern of the item with which it is associated.

When an alert level is exceeded an assessment should be made to determine if corrective action should be taken.

Performance standard or alert or equivalent title (e.g. Control Level, Reliability Index, Upper Limit etc.) require engineering judgement for their application.

Alert levels are not minimum acceptable airworthiness levels. Similarly, in the case of a system designed to a multiple redundancy philosophy it should not be misunderstood that, as redundancy exists, an increase in failure rate can always be tolerated without corrective action being taken.

Alert levels can range from 0.00 failure rate per 1,000 hours both for important components, where failures in-service have been extremely rare, and to perhaps as many as 70 PIREPS (Pilot Reports) per 1,000 hours on a systems basis for ATA 100 Chapter 25 - Equipment/Furnishings, or for 20 removals of passenger entertainment units in a like period. For structural or significant non-routine findings from major checks, a non-statistical review may identify an alert condition.

Due to the constantly changing technologies, no performance standard should be considered fixed and should be subject to change as reliability changes. Accordingly, the standards should be responsive and sensitive to the level of reliability experienced (i.e. should be "stable" without being "fixed").

If, over a period of time, the performance of a system improves to a point where even abnormal variations would not produce an alert, then the performance standard has lost its value and should be adjusted downward. Conversely, should it become evident that the standard is consistently exceeded in spite of taking the best known corrective measures to produce the desired reliability, then the performance standard should be re-evaluated and a more realistic standard should be established.

A Reliability Program should contain a section on the performance standards, describing what type of alert levels will be used, how the levels will be established, how the levels will be re-established if required, how the system would know if the levels have been exceeded and what corrective action(s) would be taken and how.

Establishing alert levels

Alert levels should, where possible, be based on the number of events, which have occurred during a representative period of safe operation of the aircraft fleet. They should be up-dated periodically to reflect operating experience, product improvement, changes in procedures, etc.

When establishing alert levels based on operating experience, the normal period of operation taken should be for one year at least, preferably more (2 – 3 years) depending on the fleet size and utilisation.

Where there is insufficient operating experience, or when a program for a new aircraft type is being established, the following approach may be used:

- For a new aircraft type, during the initial period of operation, alert levels should be established in conjunction with the aircraft type certificate holder and operators experience if appropriate and should be closely monitored for effectiveness during the induction period. Program data should still be accumulated for future use.
- For an established aircraft type with a new operator, the experience of other operators may be utilised until the new operator has accumulated a sufficient period of own experience. Alternatively, experience gained from operation of a similar aircraft model may be used.
- While setting alert levels for the latest aircraft designs, computed values based on the degree of system and component in-service expected reliability assumed in the design of the aircraft

might also be used. These computed values are normally quoted in terms of Mean Time Between Unscheduled Removals (MTBUR) or Mean Time Between Failure (MTBF), for both individual components and complete systems. These initial predictions should be replaced when sufficient in-service experience has been accumulated.

There are several recognised methods of calculating alert levels, any one of which may be used provided that the method chosen is fully defined in the operator's program documentation.

Re-calculation of alert levels

Whenever a significant change in the reliability of an item is experienced, which may be related to the introduction of a known action (e.g. modification, changes in maintenance or operating procedures) then the alert level applicable to the item should be re-assessed and revised on the data subsequent to the change.

Procedures for changes in alert levels should be outlined in the reliability program and the procedures, periods and conditions for re-calculation should also be defined.

APPENDIX II TO AMC CAR M.711(a)(3) - SUB-CONTRACTING OF CONTINUING AIRWORTHINESS MANAGEMENT TASKS

1. SUB-CONTRACTED OPERATOR'S CONTINUING AIRWORTHINESS MANAGEMENT TASKS

1.1 To actively control the standards of the sub-contracted organisation the CAMO should employ a person or group of persons who are trained and competent in the disciplines associated with CAR-M Subpart G. As such they are responsible for determining what maintenance is required, when it has to be performed and by whom and to what standard, in order to ensure the continued airworthiness of the aircraft being operated.

1.2 The CAMO should conduct a pre-contract audit to establish that the sub-contracted organisation can achieve the standards required by CAR-M Subpart G in connection with those activities to be sub-contracted.

1.3 The CAMO should ensure that the sub-contracted organisation has sufficient qualified personnel who are trained and competent in the functions to be subcontracted. In assessing the adequacy of personnel resources the operator should consider the particular needs of those activities that are to be sub-contracted, while taking into account the sub-contracted organisations existing commitments.

1.4 To be appropriately approved to contract out continuing airworthiness management tasks the CAMO should have procedures for the management control of these arrangements. The Continuing Airworthiness Management Exposition should contain relevant procedures to reflect his control of those arrangements made with the sub-contracted organisation.

1.5 Sub-contracted continuing airworthiness management tasks should be addressed in a contract between the CAMO and the sub-contracted organisation. The contract should also specify that the sub-contracted organisation is responsible for informing the CAMO that is in turn responsible for notifying the GCAA, of any subsequent changes that affect their ability to support the contract.

1.6 The subcontracted organisation should use procedures which set out the manner of fulfiling its responsibility to those sub-contracted activities. Such procedures may be developed by either the sub-contracted organisation or the CAMO.

1.7 Where the sub-contracted organisation develops its own procedures, they should be compatible with the continuing airworthiness management exposition and the terms of the contract. These should be accepted by the GCAA as extended procedures of the CAMO and as such should be cross-referenced from the continuing airworthiness management exposition. One current copy of the sub-contracted organisation's relevant procedures should be kept by the CAMO and should be accessible to the GCAA where needed.

Note: Should any conflict arise between the sub-contracted organisation's procedures and those of the CAMO, then the policy and procedures of the continuing airworthiness management exposition will prevail.

1.8 The contract should also specify that the sub-contracted organisation's procedures may only be amended with the agreement of the CAMO. The CAMO should ensure that these amendments are compatible with its continuing airworthiness management exposition and in compliance with CAR-M Subpart G.

The CAMO should nominate the person responsible for continued monitoring and acceptance of the sub-contracted organisation procedures and their amendments. The controls used to fulfil this function should be clearly set out in the amendment section of the continuing airworthiness management exposition detailing the level of CAMO involvement.

1.9 Whenever any elements of continuing airworthiness management tasks are sub-contracted, the CAMO personnel should have access to all relevant data in order to fulfil their responsibilities.

Note: The CAMO retains authority to override where necessary for the continuing airworthiness of their aircraft, any recommendation of the sub-contracted organisation.

1.10 The CAMO should ensure that the sub-contracted organisation continues to have qualified technical expertise and sufficient resources to perform the subcontracted tasks while complying with the relevant procedures. Failure to do so may invalidate the CAMO approval.

1.11 The contract should provide for GCAA monitoring.

1.12 The contract should address the respective responsibilities to ensure that any findings arising from the GCAA monitoring will be closed to the satisfaction of the GCAA.

2. ACCOMPLISHMENT

This paragraph describes topics, which may be applicable in such a sub-contract arrangements.

2.1 Scope of work

The type of aircraft and their registrations, engine types and/or component subject to the continuing airworthiness management tasks contract should be specified.

2.2 Maintenance programme development and amendment

The CAMO may sub-contract the preparation of the draft maintenance programme and any subsequent amendments. However, the CAMO remains responsible for assessing that the draft proposals meet his needs and for obtaining GCAA approval; the relevant

procedures should specify these responsibilities. The contract should also stipulate that any data necessary to substantiate the approval of the initial programme or an amendment to this programme should be provided for CAMO agreement and/or GCAA review upon request.

2.3 Maintenance programme effectiveness and reliability

The CAMO should have a system in place to monitor and assess the effectiveness of the maintenance programme based on maintenance and operational experience. The collection of data and initial assessment may be made by the sub-contracted organisation; the required actions are to be endorsed by the CAMO.

Where reliability monitoring is used to establish maintenance programme effectiveness, this may be provided by the sub-contracted organisation and should be specified in the relevant procedures. Reference should be made to the approved maintenance programme and reliability programme. Participation of the CAMO's personnel in reliability meetings with the sub-contracted organisation should also be specified.

When providing reliability data, the sub-contracted 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 acceptable to the GCAA.

2.4 Permitted variations to maintenance programme.

The reasons and justification for any proposed variation to scheduled maintenance may be prepared by the sub-contracted organisation. Acceptance of the proposed variation should be granted by the CAMO. The means by which the CAMO acceptance is given should be specified in the relevant procedures. When outside the limits set out in the maintenance programme, the CAMO is required to obtain approval by the GCAA.

2.5 Scheduled maintenance

Where the sub-contracted organisation plans and defines maintenance checks or inspections in accordance with the approved maintenance programme, the required liaison with the CAMO, including feedback should be defined.

The planning control and documentation should be specified in the appropriate supporting procedures. These procedures should typically set out the CAMO's level of involvement in each type of check. This will normally involve the CAMO assessing and agreeing to a work specification on a case by case for base maintenance checks. For routine line maintenance checks, this may be controlled on a day-to-day basis by the sub-contracted organisation subject to appropriate liaison and CAMO controls to ensure timely compliance. This typically may include, but is not necessarily limited to:

- Applicable work package, including job cards,
- Scheduled component removal list,
- ADs to be incorporated,
- Modifications to be incorporated

The associated procedures should ensure that the CAMO is advised in a timely manner on the accomplishment of such tasks.

2.6 Quality monitoring

The CAMO's quality system should monitor the adequacy of the sub-contracted continuing airworthiness management task performance for compliance with the contract and with CAR-M Subpart G. The terms of the contract should therefore include a provision allowing the CAMO to perform a quality surveillance (including audits) of the sub-contracted organisation. The aim of the surveillance is primarily to investigate and judge the effectiveness of those sub-contracted activities and thereby to ensure compliance with CAR-M Subpart G and the contract. Audit reports may be subject to review when requested by the GCAA.

2.7 Access to the GCAA

The contract should specify that the sub-contracted organisation should always grant access to the GCAA.

2.8 Maintenance data

The maintenance data used for the purpose of the contract should be specified, together with those responsible for providing such documentation and the Authority responsible for the acceptance/approval of such data when applicable. The CAMO should ensure such data including revisions is readily available to the CAMO's personnel and those in the sub-contracted organisation who may be required to assess such data. The CAMO should establish a 'fast track' means to ensure that urgent data is transmitted to the subcontractor in a timely manner. Maintenance data may include, but is not necessarily limited to:

- Maintenance programme,
- ADs,

- Service Bulletins,
- Major repairs/modification data,
- Aircraft Maintenance Manual,
- Engine overhaul manual,
- Aircraft IPC,
- Wiring diagrams,
- Trouble shooting manual,

2.9 Airworthiness directives

While the various aspects of AD assessment, planning and follow-up may be accomplished by the sub-contracted organisation, AD embodiment is performed by a maintenance organisation. The CAMO is responsible for ensuring timely embodiment of applicable ADs and is to be provided with notification of compliance. It, therefore, follows that the CAMO should have clear policies and procedures on AD embodiment supported by defined procedures which will ensure that the CAMO agrees to the proposed means of compliance.

The relevant procedures should specify:

- What information (e.g. AD publications, continuing airworthiness records, flight hours/cycles, etc.) the sub-contracted organisation needs from the CAMO.
- What information (e.g. AD planning listing, detailed engineering order, etc.) the CAMO needs from the sub-contracted organisation in order to ensure timely compliance with ADs.

To fulfil the above responsibility, the CAMO should ensure that they are in receipt of current mandatory continued airworthiness information for the aircraft and equipment it is managing.

2.10 Service bulletin modifications

The sub-contracted organisation may be required to review and make recommendations on embodiment of an SB and other associated non-mandatory material based on a clear policy established by the CAMO. This should be specified in the contract.

2.11 Mandatory life limitation or scheduled maintenance controls and component control/removal forecast.

Where the sub-contracted organisation performs planning activities, it should be specified that the organisation should recieve the current flight cycles; flight hours; landings and/or calendar controlled details, as applicable, at a frequency to be specified in the contract. The frequency should be such that it allows the organisation to properly perform the sub-contracted planning functions. It, therefore, follows that there will

need to be adequate liaison between the CAMO, the contracted maintenance organisation(s) and the sub-contracted organisation. Additionally the contract should specify how the CAMO will be in possession of all current flight cycles, flight hours, etc. so that it may assure the timely accomplishment of the required maintenance.

2.12 Engine health monitoring

If the CAMO sub-contracts the on wing engine health monitoring, the sub-contracted organisation should recieve all the relevant information to perform this task, including any parameter reading deemed necessary to be supplied by the CAMO for this control. The contract should also specify what kind of feedback information (such as engine limitation, appropriate technical advice, etc.) the organisation should provide to the CAMO.

2.13 Defect control

Where the CAMO has sub-contracted the day-to-day control of technical log deferred defects, this should be specified in the contract and should be adequately described in the appropriate procedures. The operator's MEL/CDL provides the basis for establishing which defects may be deferred and associated limits. The procedures should also define the responsibilities and actions to be taken for defects such as AOG situations, repetitive defects, and damage beyond type certificate holder's limits.

For all other defects identified during maintenance, the information should be brought to the attention of the CAMO which depending upon the procedural authority granted by the GCAA may determine that some defects can be deferred. Therefore, adequate liaison between the CAMO, its sub-contracted organisation and contracted maintenance organisation should be ensured.

The sub-contracted organisation should make a positive assessment of potential deferred defects and consider the potential hazards arising from the cumulative effect of any combination of defects. The sub-contracted organisations should liaise with the CAMO to gain 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 should be reported as required by the respective requirements. The CAMO should ensure adequate liaison exists with the sub-contracted organisation and the maintenance organisation.

2.15 Continuing airworthiness records

Records may be maintained and kept by the sub-contracted organisation on behalf of the CAMO who remains the owner of these documents. However, the CAMO should be provided with the current status of AD compliance and life-limited parts and time-controlled components in accordance with the agreed procedures. The CAMO should also be granted unrestricted and timely access to original records as and when needed. On-line access to the appropriate information systems is acceptable.

The record keeping requirements of CAR M should be met. Access to the records by duly authorised members of the GCAA should be granted upon request.

2.16 Mainenance Check flight (MCF) procedures

MCF are performed under the control of the operator in coordination with the CAMO. MCF requirements from the sub-contracted organisation or contracted maintenance organisations should be agreed by the operator/CAMO.

2.17 Communication between the CAMO and sub-contracted organisation

2.17.1 In order to fulfil its airworthiness responsibility, the CAMO needs to recieve all the relevant reports and relevant maintenance data. The contract should specify what information should be provided and when.

2.17.2 Meetings provide one important cornerstone whereby the CAMO can fulfil part of its responsibility for ensuring the airworthiness of the operated aircraft. They should be used to establish good communications between the CAMO, the sub-contracted organisation and the contracted maintenance organisation. The terms of contract should include, whenever appropriate, the provision for a certain number of meetings to be held between the involved parties. Details of the types of liaison meetings and associated terms of reference of each meeting should be documented. The meetings may include but are not limited to all or a combination of:

(a) Contract review

Before the contract is enforced, it is very important that the technical personnel of both parties that are involved in the fulfillment of the contract, meet in order to be sure that every point leads to a common understanding of the duties of both parties.

(b) Work scope planning meeting

Work scope planning meetings may be organised so that the tasks to be performed are commonly agreed.

(c) Technical meeting

Scheduled meetings should be organised in order to review on a regular basis and agree actions on technical matters such as ADs, SBs, future modifications, major defects found during shop visit, reliability, etc…

(d) Quality meeting

Quality meetings should be organised in order to examine matters raised by the CAMO's quality surveillance and the GCAA's monitoring activity and to agree on necessary corrective actions.

(e) Reliability meeting

When a reliability programme exists, the contract should specify the involvement of the CAMO and of the subcontracted organization in that programme, including the participation to reliability meetings. Provision to enable the GCAA participation in the periodical reliability meetings should also be made.

APPENDIX III - RESERVED

APPENDIX IV TO AMC CAR M.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 or CAR ML according to the extent of approval and the privileges granted to the organisation.

The maintenance organisation manual should define precisely the work that the approved maintenance organisation is authorised to carry out and the subcontracted work. It should detail the resources used by the organisation, its structure and its procedures.

2. Content

A typical Maintenance Organisation Manual for a small organisation (less than 10 maintenance staff) should be designed to be used directly on a day to day basis. The working documents and lists should be directly included into the manual. It should contain the following:

Part A — General

— **Table of content**

— **List of effective pages**

— **Record of amendments**

— **Amendment procedure**

- Drafting
- Amendments requiring direct approval by the GCAA
- 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 and CAR ML
- 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**
  - Minimum qualification and experience
  - List of authorised certifying 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 CAR M.402 or CAR ML.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 and CAR ML)
- Responsibility
- Organisation, frequency, scope and content (including processing of GCAA 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 AW FORM 1
- Incomplete maintenance
- Check flight authorisation
- Copy of CRS and AW FORM 1

— **Records**

— **Special procedures**

Such as specialised tasks, disposal of unsalvageable components, re-certification of parts not having an AW 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 GCAA
- Final validation

Part E – Appendices

— **Sample of all documents used.**

— **List of maintenance locations.**

— **List of CAR 145 or Section A, Subpart F organisations.**

— **List of subcontracted specialised services.**

3. Approval

The GCAA should approve the manual in writing. This will normally be done by approving a list of effective pages.

Minor amendments, or amendments to a large capability list, can be approved indirectly, through a procedure approved by the GCAA.

4. Continuous compliance with CAR M and CAR ML

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 AMC1 CAR M.704 - CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATION EXPOSITION (CAME)

The following text provides relevant information for developing a CAME for the particular case of a CAMO working on aircraft subject to CAR-M and contracting maintenance to CAR M Subpart F and CAR 145 organisations

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		Notification procedure to the GCAA regarding 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		Maintenance Check Flight procedures.

Part 2	**Quality System**	
2.1		Continuing airworthiness quality policy, plan, audit and non-conformity remedial action 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 sub-contractors used by the maintenance contractor.
2.6		Quality audit personnel – qualification, training, experience and competence assessment
2.7		Continuing Airworthiness Management Personnel – qualification, training, experience and competence assessment
Part 3	**Contracted Maintenance**	
3.1		Maintenance contractor selection procedure.
3.2		Quality audit of aircraft.
Part 4A	**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 the GCAA for the import of aircraft.
4.5		Recommendations to the GCAA for the issue of airworthiness review certificates
4.6		Issue of airworthiness review certificates.
4.7		Airworthiness review records, responsibilities, retention and access.
Part 4B		**Flight Permit procedure**

4B.1		Conformity with approved flight conditions
4B.2		Application and Issue of the flight permit
4B.3		Reserved
4B.4		Interface with the local authority for the flight
4B.5		Flight Permit records, responsibilities, retention and access
Part 5	**Appendices**	
5.1		Sample documents.
5.2		List of airworthiness review staff.
5.3		List of sub-contractors as per AMC CAR M.711 (a) 3.
5.4		List of contracted approved maintenance organisations.
5.5		Copy of contracts for sub-contracted work (Appendix II to CAR M.711 (a)(3).
5.6		Copy of contracts with approved maintenance organisations.

LIST OF EFFECTIVE PAGES

Page	Revision
1	Original
2	Original

Page	Revision
3	Original
4	Original

Page	Revision
5	Original
….	….

DISTRIBUTION LIST

(The document should include a distribution list to ensure proper distribution of the manual and to demonstrate to the GCAA that all personnel involved in continuing airworthiness has access to the relevant information. This does not mean that all personnel have to be in receipt of a manual but that a reasonable amount of manuals are distributed within the organisation(s) so that the concerned personnel may have quick and easy access to this manual.

Accordingly, the continuing airworthiness management exposition should be distributed to:

- *the operator's or the organisation's management personnel and any person at a lower level as necessary; and,*
- *the CAR 145 or CAR M Subpart F contracted maintenance organisation(s) ; and,*
- *the GCAA.)*

PART 0 GENERAL ORGANISATION.

0.1 Corporate commitment by the accountable manager

(The accountable manager's exposition statement should embrace the intent of the following paragraph and in fact this statement may be used without amendment. Any modification to the statement should not alter the intent.)

This exposition defines the organisation and procedures upon which the Section 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 the continuing airworthiness activities including maintenance for aircraft managed by [Joe Bloggs] is 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 GCAA from time to time where these new or amended regulations are in conflict with these procedures.

The GCAA will approve this organisation whilst the GCAA is satisfied that the procedures are being followed. It is understood that the GCAA reserves the right to suspend, vary or revoke the Section A, Subpart G continuing airworthiness management approval of the organisation, as applicable, if the GCAA has evidence that the procedures are not followed and the standards not upheld.

In the case of commercial air operator, suspension or revocation of the approval of the CAR M Subpart G continuing airworthiness management approval would invalidate the AOC.

0.2 General Information

a) Brief description of the organisation

(This paragraph should describe broadly how the whole organisation [i.e. including the whole operator in the case of commercial air transport or the whole organisation when other approvals are held] is organised under the management of the accountable manager, and should refer to the organisation charts of paragraph 0.4.)

b) Relationship with other organisations

(This paragraph may not be applicable to every organisation.)

(1) Subsidiaries / mother company

(For clarity purpose, where the organisation belongs to a group, this paragraph should explain the specific relationship the organisation may have with other members of that group - e.g. links between [Joe Bloggs] *Airlines,* [Joe Bloggs] *Finance,* [Joe Bloggs] *Leasing,* [Joe Bloggs] *Maintenance, etc...)*

(2) Consortia

(Where the organisation belongs to a consortium, it should be indicated here. The other members of the consortium should be specified, as well as the scope of organisation of the consortium [e.g. operations, maintenance, design (modifications and repairs), production etc...]. The reason for specifying this is that consortium maintenance may be controlled through specific contracts and through consortium's policy and/or procedures manuals that might unintentionally override the maintenance contracts. In addition, in respect of international consortiums, the respective competent authorities should be consulted and their agreement to the arrangement clearly stated. This paragraph should then make reference to any consortium's continuing airworthiness related manual or procedure and to any GCAA *agreement that would apply.)*

c) Scope of work - Aircraft managed

(This paragraph should specify the scope of the work for which the CAMO is approved. This paragraph may include aircraft type/series, aircraft registrations, owner/operator, contract references, etc*. The following is given as an example :)*

Aircraft type/ series	Date included in the scope of work	Aircraft maintenance programme or 'generic/baseline' maintenance programme	Aircraft registration(s)*	Owner/ operator	CAMO contract reference

*: For commercial air operators, this paragraph can make reference to the operations specifications or operations manual where the aircraft registrations are listed.

(Depending on the number of aircraft, this paragraph may be updated as follows:

(1) The paragraph is revised each time an aircraft is removed from or added in the list.

(2) *The paragraph is revised each time a type of aircraft or a significant number of aircraft is removed from or added to the list. In that case the paragraph should explain where the current list of aircraft managed is available for consultation.)*

d) Type of operation

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

0.3 Management personnel

a) Accountable manager

(This paragraph should address the duties and responsibilities of the accountable manager as far as regard CAR M Subpart G approval and should demonstrate that he/she has corporate authority for ensuring that all continuing airworthiness activities can be financed and carried out to the required standard.)

b) Nominated post holder for continuing airworthiness referred to in CAR M.706(d)

(This paragraph should:

- *Emphasise that the nominated post holder 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 should list in sufficient detail the job functions that constitute the "group of persons" as required by CAR M.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 Post holder for continuing airworthiness constitutes himself/herself the "group of persons", this paragraph may be merged with the previous one.)

d) Duties and responsibilities

(This paragraph should further elaborate the duties and responsibilities of all the nominated persons and of any other management personnel.)

e) Manpower resources and training policy

(1) Manpower resources

(This paragraph should give broad figures to show that the number of people assigned to the performance of the approved continuing airworthiness activity is adequate. It is not necessary to give the detailed number of employees of the whole company, but only the number of those involved in continuing airworthiness. This could be presented as follows :)

As of 28 November 2003, the number of employees assigned to the performance of the continuing airworthiness management system is the following:

	Full Time	Part Time in equivalent full time
Quality monitoring	AA	aa = AA'
Continuing airworthiness management	BB	bb = BB'
(Detailed information about the	BB1	bb1 = BB1'
management group of persons)	BB2	bb2 = BB2'
Other...	CC	cc =CC'
Total	TT	tt = TT'
Total Man hours	TT + TT'	

(Note: According to the size and complexity of the organisation, this table may be further developed or simplified)

(2) Training policy

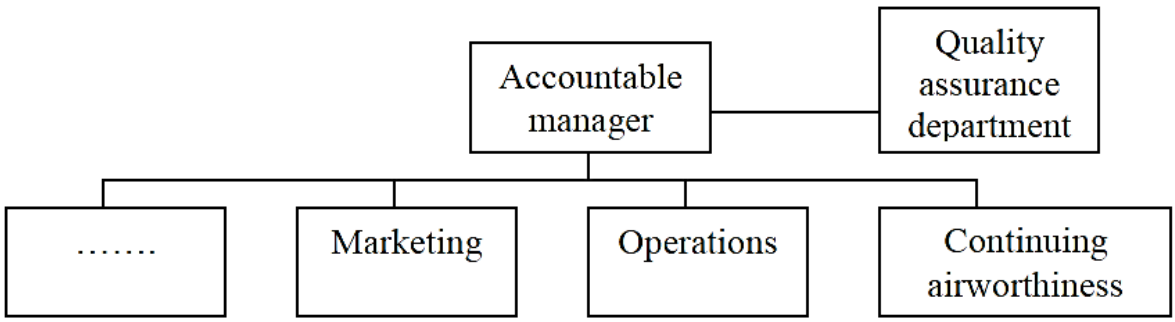
(This paragraph should show that the training and qualification standards for the personnel quoted above are consistent with the size and complexity of the organisation. It should also

explain how the need for recurrent training is assessed and how the training recording and follow-up is performed)

0.4 Management organisation chart(s)

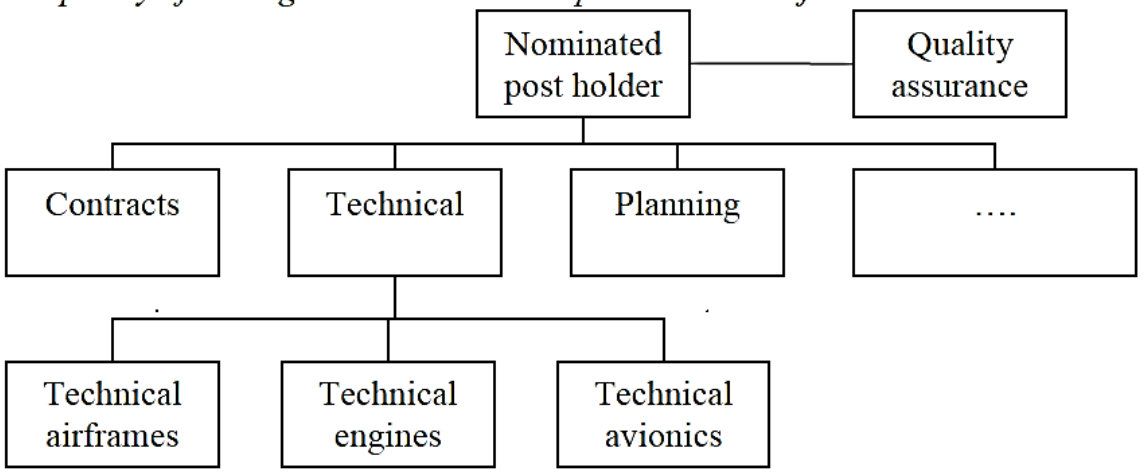
a) General organisation chart

This flow chart should provide a comprehensive understanding of the whole company's organisation. For example in the case of an AOC holder:



b) Continuing airworthiness management organisation chart

This flow chart should give further details on the continuing airworthiness Management system, and should clearly show the independence of the quality monitoring system, including the links between the quality assurance 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 the complexity of the organisation. For example in the case of an AOC holder:



0.5 Notification procedure to the GCAA regarding changes to the organisation's activities / approval / location / personnel

(This paragraph should explain in which occasion the company should inform the GCAA prior to incorporating proposed changes; for instance:

The accountable manager (or any delegated person such as the engineering director or the quality manager) will notify to the GCAA any change concerning:

(1) the company's name and location(s)
(2) the group of person as specified in paragraph 0.3.c)
(3) operations, procedures and technical arrangements, as far as they may affect the approval.

[Joe Bloggs] will not incorporate such change until the change have been assessed and approved by the GCAA.)

0.6 Exposition amendment procedure

(This paragraph should explain who is responsible for the amendment of the exposition and submission to the GCAA for approval. This may include, if agreed by the GCAA the possibility for the approved organisation to approve internally minor changes that have no impact on the approval held. The paragraph should then specify what types of changes are considered as 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 remind, in this introduction paragraph, the purpose of the aircraft technical log system and/or continuing airworthiness record system, with special care to the options of CAR M.305 and CAR M.306.

For that purpose, paragraphs of CAR M.305 and CAR M.306 may be quoted or further explained.)

(2) Instructions for use

(This paragraph should provide instructions for using the aircraft technical log and/or continuing airworthiness record system. It should insist on the respective responsibilities of the maintenance personnel and operating crew. Samples of the technical log and/or continuing airworthiness record system should be included in Part 5 "Appendices" in order to provide enough detailed instructions.)

(3) Aircraft technical log approval

(This paragraph should explain who is responsible for submitting the aircraft technical log any subsequent amendment to the GCAA for approval and what is the procedure to be followed)

b) M.E.L. application

(The MEL is a document not controlled by the CAMO and the decision of whether accepting or not the operation with a defect deferred in accordance with the MEL is normally the responsibility of the operating crew. This paragraph should explain in sufficient detail the MEL application procedure, because the MEL is a tool that the personnel involved in continuing

airworthiness an maintenance have to be familiar with in order to ensure proper and efficient communication with the crew in case of a defect rectification to be deferred.)

(This paragraph does not apply to those types of aircraft that do not have an MEL.)

1) General

(This paragraph should explain broadly what a 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 such defect, it should be explained here what are the general principles of such a system. It is essential for the personnel involved in maintenance to be familiar with it for the management of MEL's deferred defect rectification.)

3) **Application**

(This paragraph should explain how the maintenance personnel identify a MEL limitation to the crew. This should refer to the technical log procedures)

4) **Acceptance by the crew**

(This paragraph should explain how the crew notifies his acceptance or non-acceptance of the MEL deferment in the technical log)

5) **Management of the MEL time limits**

(Once a technical limitation is accepted by the crew, the defect must be rectified within the time limit specified in the MEL. There should be a system to ensure that the defect will actually be rectified before that time limit. This system could be the aircraft technical log for those [small] operators that use it as a planning document, or a specific follow-up system, in other cases, where control of the maintenance time limit is ensured by other means such as data processed planning systems.)

6) **MEL Time Limitation Overrun**

(The GCAA may grant the owner/operator permission to overrun MEL time limitation under specified conditions. Where applicable this paragraph should describe the specific duties and responsibilities for controlling these extensions.)

1.2 Aircraft maintenance programmes – development, amendment and approval

a) General

(This introductory paragraph should remind that the purpose of a maintenance programme is to provide maintenance planning instructions necessary for the safe operation of the aircraft.)

b) Content

(This paragraph should explain what is [are] the format[s] of the company's aircraft maintenance programme[s]. Appendix I to AMC CAR M.302 (a) should be used as a guideline to develop this paragraph.)

c) Development

(1) Sources

(This paragraph should explain what are the sources [MRB, MPD, Maintenance Manual, etc...] used for the development of an aircraft maintenance programme.)

(2) Responsibilities

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

(3) Manual amendments

(This paragraph should demonstrate that there is a system for ensuring the continuing validity of the aircraft maintenance programme. Particularly, it should show how any relevant information is used to update the aircraft maintenance programme. This should include, as applicable, MRB report revisions, consequences of modifications, manufacturers and GCAA recommendations, in service experience, and reliability reports.)

(4) Acceptance by the GCAA

(This paragraph should explain who is responsible for the submission of the maintenance programme to the GCAA and what the procedure to follow is. This should in particular address the issue of the approval for variation to maintenance periods either by the GCAA or by a procedure in the maintenance programme for the organisation to approve internally certain changes.)

1.3 Time and continuing airworthiness records, responsibilities, retention and access

a) Hours and cycles recording

(The recording of flight hours and cycles is essential for the planning of maintenance tasks. This paragraph should explain how the continuing airworthiness management organisation has access to the current flight hours and cycle information and how it is processed through the organisation.)

b) Records

(This paragraph should give in detail the type of company documents that are required to be recorded and what are the recording period requirements for each of the CAR M records. This can be provided by a table or series of tables that would include the following:

- *Family of document [if necessary],*
- *Name of document,*
- *Retention period,*
- *Responsible person for retention,*
- *Place of retention,)*

c) Preservation of records

(This paragraph should set out the means provided to protect the records from fire, floods, etc.. as well as the specific procedures in place to guarantee that the records will not been altered during the retention period [especially for the computer record].)

d) Transfer of continuing airworthiness records

(This paragraph should set out the procedure for the transfer of records, in case of purchase/lease-in, sale/lease-out and transfer to another organisation of an aircraft. In

particular, it should specify which records have to be transferred and who is responsible for the coordination [if necessary] of the transfer.)

1.4 Accomplishment and control of Airworthiness Directives

(This paragraph should demonstrate that there is a comprehensive system for the management of airworthiness directives. This paragraph may for instance include the following Sub-paragraphs:)

a) Airworthiness directive information

(This paragraph should explain what the AD information sources are and who receives them in the company. Where available, redundant sources [e.g. EASA+ GCAA + manufacturer or association] may be useful.)

b) Airworthiness directive decision

(This paragraph should explain how and by whom the AD information is analysed and what kind of information is provided to the contracted maintenance organisations in order to plan and to perform the airworthiness directive. This should as necessary include a specific procedure for emergency airworthiness directive management)

c) Airworthiness directive control

(This paragraph should specify how the organisation manages to ensure that all the applicable airworthiness directives are performed and that they are performed on time. This should include a close 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 Airworthiness Directive is not yet performed but the time limit is not overdue,*
- *the Airworthiness Directive is performed 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(s)

(this paragraph should show what tools are used in order to analyse the efficiency of the maintenance programme, such as:

- *PIREPS,*
- *air turn-backs*
- *spare consumption,*
- *repetitive technical occurrence and defect,*
- *technical delays analysis [through statistics if relevant],*
- *technical incidents analysis [through statistics if relevant],*
- *etc.*

The paragraph should also indicate by whom and how these data are analysed, what is the decision process to take action and what kind of action could be taken. This may include:

- *amendment of the maintenance programme,*
- *amendment of maintenance or operational procedures,*
- *etc.)*

1.6 Non-mandatory modification embodiment policy

(This paragraph should specify how non-mandatory modification is processed through the organisation, who is responsible for its assessment against the operator's/owner's own need and operational experience, what are the main criteria for decision and who takes the decision of implementing [or not] a non-mandatory modification)

1.7 Major repair and modification standards

(This paragraph should set out a procedure for the assessment of the approval status of any major repair or modification before embodiment. This will include the assessment of the need of a GCAA or design organisation approval. It should also identify the type of approval required, and the procedure to follow to have a repair or modification approved by the GCAA or design organisation.)

1.8 Defect reports

a) Analysis

(This paragraph should explain how the defect reports provided by the contracted maintenance organisations are processed by the continuing airworthiness management organisation. Analysis should be conducted in order to give elements to activities such as maintenance programme evolution and non-mandatory modification policy.)

b) Liaison with manufacturers and regulatory authorities

(Where a defect report shows that such defect is likely to occur to other aircraft, a liaison should be established with the manufacturer and the certification Authority, so that they may take all the necessary action.)

c) Deferred defect policy

(Defects such as cracks and structural defect are not addressed in the MEL and CDL. However, it may be necessary in certain cases to defer the rectification of a defect. This paragraph should establish the procedure to be followed in order to be sure that the deferment of any defect will not lead to any safety concern. This will include appropriate liaison with the manufacturer.)

1.9 Engineering activity

(Where applicable, this paragraph should expose the scope of the organisation's engineering activity in terms of approval of modification and repairs. It should set out a procedure for developing and submitting a modification/repair design for approval to the GCAA and include reference to the supporting documentation and forms used. It should identify the person in charge of accepting the design before submission to the GCAA

Where the organisation has a DOA capability under CAR 21, it should be indicated here and the related manuals should be referred to.)

1.10 Reliability programmes

(This paragraph should explain appropriately the management of a reliability programme. It should at least address the following:

- *extent and scope of the operator's reliability programmes,*
- *specific organisational structure, duties and responsibilities,*
- *establishment of reliability data,*
- *analysis of the reliability data,*
- *corrective action system (maintenance programme amendment),*
- *scheduled reviews (reliability meetings, the participation of the GCAA.)*

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

a) Airframe

b) Propulsion

c) Component)

1.11 Pre-flight inspections

(This paragraph should show how the scope and definition of pre-flight inspection, that are usually performed by the operating crew, is kept consistent with the scope of the maintenance performed by the contracted maintenance organisations. It should show how the evolution of the pre-flight inspection content and the maintenance programme are concurrent, each time necessary.)

(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) Sub-contracted ground handling function

c) Security of Cargo and Baggage loading

d) Control of refuelling, Quantity/Quality

e) Control of snow, ice, residues from de-icing or anti-icing operations, dust and sand contamination to an approved standard

1.12 Aircraft weighing

(This paragraph should state in which occasion 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 Maintenance Check flight (MCF) procedures

(The criteria for performing a MCF are normally included in the aircraft maintenance programme or derived by the scenarios described in GM CAR-M.301(i). This paragraph should explain how the MCF 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 an MCF.)

PART 2 QUALITY SYSTEM

2.1 Continuing airworthiness quality policy, plan, audit and non-conformity remedial action procedure

a) Continuing airworthiness quality policy

(This paragraph should include a formal Quality Policy statement; that is a commitment on what the Quality System is intended to achieve. It should include at the minimum monitoring compliance with CAR M and any additional standards specified by the organisation).

b) Continuing airworthiness Quality plan

(This paragraph should show how the quality plan is established. The quality plan will consist of a quality audit and sampling schedule that should cover all the areas specific to CAR M in a definite period of time. However, the scheduling process should also be dynamic and allow for special evaluations when trends or concerns are identified. In case of sub-contracting, this paragraph should also address the planning of the auditing of subcontractors at the same frequency as the rest of the organisation.)

c) Continuing Airworthiness Quality audit procedure

(The quality audit is a key element of the quality system. Therefore, the quality audit procedure should be sufficiently detailed to address all the steps of an audit, from the preparation to the conclusion, show the audit report format [e.g. by ref. to paragraph 5.1 "sample of document"], and explain the rules for the distribution of audits reports in the organisation [e.g.: involvement of the Quality Manager, Accountable Manager, Nominated Post holder, etc...].)

d) Continuing airworthiness quality audit remedial action procedure

(This paragraph should explain what system is put in place in order to ensure that the corrective actions are implemented on time and that the result of the corrective action meets the intended purpose. For instance, where this system consists in periodical corrective actions review, instructions should be given how such reviews should be conducted and what should be evaluated.)

2.2 Monitoring of continuing airworthiness management activities

(This paragraph should set out a procedure to periodically review the activities of the maintenance management personnel and how they fulfil their responsibilities, as defined in Part 0.)

2.3 Monitoring of the effectiveness of the maintenance programme(s)

(This paragraph should set out a procedure to periodically review that the effectiveness of the maintenance programme is actually analysed as defined in Part 1.)

2.4 Monitoring that all maintenance is carried out by an appropriate maintenance organisation

(This paragraph should set out a procedure to periodically review that the approval of the contracted maintenance organisations are relevant for the maintenance being performed on 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 sub-contractors used by the maintenance contractor

(This paragraph should set out a procedure to periodically review that the continuing airworthiness management personnel are satisfied that all contracted maintenance is carried out in accordance with the contract. This may include a procedure to ensure that the system allows all the personnel involved in the contract [including the contractors and his subcontractors] to be acquainted with its terms and that, for any contract amendment, relevant information is dispatched in the organisation and at the contractor.)

2.6 Quality audit personnel – qualification, training, experience and competence assessment

(This paragraph should establish the required training and qualification standards for auditors. Where persons act as a part time auditors, it should be emphasized that they must not be directly involved in the activity they are auditing.)

2.7 Continuing airworthiness management personnel – qualification, training, experience and competence assessment

(This paragraph should establish the required qualification, training, and experience standards of all personnel involved in continuing airworthiness management. It should also define the process for carrying out ongoing competence assessment for continuing airworthiness management personnel.

PART 3 CONTRACTED MAINTENANCE

3.1 Procedures for contracted maintenance

a) Procedures for the development of maintenance contracts

(This paragraph should explain the procedures that the organisation follows to develop the maintenance contract. The CAMO processes to implement the different elements described in Appendix XI to AMC CAR M.708(c) should be explained. In particular, it should cover responsibilities, tasks and interaction with the maintenance organisation and with the owner/operator.

This paragraph should also describe, when necessary, the use of work orders for unscheduled line maintenance and component maintenance as per CAR M.708(d). The organisation may develop a work order template to ensure that the applicable elements of Appendix XI to AMC CAR M.708(c) are considered. Such a template should be included in Part 5.1.)

b) Maintenance contractor selection procedure

(This paragraph should explain how a maintenance contractor is selected by the continuing airworthiness management organisation. Selection should not be limited to the verification that the contractor is appropriately approved for the type of aircraft, but also that the contractor has the industrial capacity to undertake the required maintenance. This selection procedure should preferably include a contract review process in order to insure that:

- *the contract is comprehensive and that it has no gap or unclear area,*
- *everyone involved in the contract [both at the continuing airworthiness management organisation and at the maintenance contractor] agrees with the terms of the contract and fully understands their responsibilities.*
- *that functional responsibilities of all parties are clearly identified.*

The CAMO should agree with the operator on the process to select a maintenance organisation before concluding any contract with a maintenance organisation.)

3.2 Quality audit of aircraft

(This paragraph should set out the procedure when performing a quality audit of an aircraft. It should set out the differences between an airworthiness review and 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 4A AIRWORTHINESS REVIEW PROCEDURES

4.1 Airworthiness review staff

(This paragraph should establish the working procedures for the assessment of the airworthiness review staff. The assessment addresses experience, qualification, training etc. A description shall be given regarding the issuance of authorisations for the airworthiness review staff and how records are kept and maintained.)

4.2 Review of aircraft records

(This paragraph should describe in detail the aircraft records that are required to be reviewed during the airworthiness review. The level of detail that needs to be reviewed shall be described as well as the number of records that need to be reviewed during a sample check should be described.)

4.3 Physical survey

(This paragraph should describe how the physical survey needs to be performed. It should list the topics that need to be reviewed, the physical areas of the aircraft to be inspected, which documents on-board the aircraft need to be reviewed etc.)

4.4 Additional procedures for recommendations to the GCAA for the import of aircraft

(This paragraph should describe the additional tasks regarding the recommendation for the issuance of an airworthiness review certificate in the case of import of aircraft. This shall include: communication with the CAA of the State of Registry, additional items to be reviewed during the airworthiness review of the aircraft, specification of maintenance required to be carried out etc.)

4.5 Recommendations to the GCAA for the issue of airworthiness review certificates

(This paragraph should stipulate the communication procedures with the GCAA in case of a recommendation for the issuance of an airworthiness review certificate. In addition the content of the recommendation should be described.)

4.6 Issuance of airworthiness review certificates

(This paragraph should set out the procedures for the issuance of the ARC. It should address record keeping, distribution of the ARC copies etc. This procedure should ensure that an ARC is issued only after an airworthiness review has been properly carried out.)

4.7 Airworthiness review records, responsibilities, retention and access

(This paragraph should describe how records are kept, duration of record keeping, location where the records are stored, access to records, and responsibilities.)

PART 4B — FLIGHT PERMIT PROCEDURES

4B.1 Conformity with approved flight conditions

(The procedure should indicate how conformity with approved flight conditions is established, documented and attested by an authorised person.)

4B.2 Application and Issue of the flight permit

(The procedure should describe the process to complete submit the application to the GCAA for the permit and how compliance with CAR 21.711(d) and (e) is established to support the application.

4B.3 Reserved

4B.4 Interface with the local authority for the flight

(The procedure should include provisions describing the communication with the local authority for flight clearance and compliance with the local requirements.)

4B.5 Flight Permit records, responsibilities, retention and access

(This paragraph should describe how records are kept, duration of record-keeping, location where records are stored, access to records, and responsibilities.)

PART 5 APPENDICES

5.1 Sample documents

(A self-explanatory paragraph)

5.2 List of airworthiness review staff

(A self-explanatory paragraph)

5.3 List of sub-contractors as per CAR M.711 (a) 3.

(A self-explanatory paragraph, in addition it should set out that the list should be periodically reviewed)

5.4 List of approved maintenance organisations contracted

(This paragraph should include the list of contracted maintenance organisations, detailing the scope of the contracted work. *In addition, it should set out that the list should be periodically reviewed)*

5.5 Copy of contracts for sub-contracted work (Appendix II to AMC CAR M.711 (a) 3)

(A self-explanatory paragraph)

5.6 Copy of contracts with approved maintenance organisations

(A self-explanatory paragraph)

APPENDIX VI - RESERVED

APPENDIX VII - RESERVED

APPENDIX VIII TO AMC CAR M.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 should be used.

Depending on the complexity of the small organisation (number and type of aircraft, number of different fleets, subcontracting of specialised services, etc.), the organisational review system may vary from a system using the principles and practices of a quality system (except for the requirement of independence) to a simplified system adapted to the low complexity of the organisation and the aircraft managed.

As a core minimum, the organisational review system should have the following features, which should be described in the Maintenance Organisation Manual (MOM):

a. Identification of the person responsible for the organisational review programme.
   By default, this person should be the accountable manager, unless he delegates this responsibility to (one of) the CAR M.606 (b) person(s).
b. Identification and qualification criteria for the person(s) responsible for performing the organisational reviews.
   These persons should have a thorough knowledge of the regulations and of the maintenance organisation procedures. They should also have knowledge of audits, acquired through training or through experience (preferably as an auditor, but also possibly because they actively participated in several audits conducted by the GCAA).
c. Elaboration of the organisational review programme:
   - Checklist(s) covering all items necessary to be satisfied that the organisation delivers a safe product and complies with the regulation. All procedures described in the MOM should be addressed.
   - A schedule for the accomplishment of the checklist items. Each item should be checked at least every 12 months. The organisation may choose to conduct one full review annually or to conduct several partial reviews.
d. Performance of organisational reviews

   Each checklist item should be answered using an appropriate combination of:
   - review of records, documentation, etc.
   - sample check of aircraft under contract or being maintained under a work order.
   - interview of personnel involved.
   - review of discrepancies and difficulty internal reports (e.g. notified difficulties in using current procedures and tools, systematic deviations from procedures, etc.).
   - review of complaints filed by customers after delivery.

e. Management of findings and occurrence reports.

- All findings should be recorded and notified to the affected persons.
- All level 1 findings, in the sense of CAR M.619(a), should be immediately notified to the GCAA and all necessary actions on aircraft in service should be immediately taken.
- All occurrence reports should be reviewed with the aim being continuous improvement of the system by identifying possible corrective and preventive actions. This should be done in order to find prior indicators (e.g., notified difficulties in using current procedures and tools, systematic deviations from procedures, unsafe behaviours, etc.), and dismissed alerts that, had they been recognised and appropriately managed before the event, could have resulted in the undesired event being prevented.
- Corrective and preventive actions should be approved by the person responsible for the organisational review programme and implemented within a specified time frame.
- Once the person responsible for the organisational review programme is satisfied that the corrective action is effective, closure of the finding should be recorded along with a summary of the corrective action.
- The accountable manager should be notified of all significant findings and, on a regular basis, of the global results of the organisational review programme.

Following is a typical example of a simplified organisational review checklist, to be adapted as necessary to cover the MOM procedures:

1. Scope of work

Check that:

- All aircraft and components under maintenance or under contract are covered in the approval certificate.
- The scope of work in the MOM does not disagree with the approval certificate.
- No work has been performed outside the scope of the approval certificate 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 any overdue items.

5. Certification of maintenance

- 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).

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,
  - GCAA 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 AW Form 1 or equivalent.

- Obtain a copy of the current approval certificate of the maintenance organisations contracted.

9. Maintenance sub-contracted

- Check that subcontractors for specialised services at are properly controlled by the organisation;

10. Technical records and record-keeping

- Have the maintenance actions been properly recorded?
- Have the certificates (AW 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.602 and AMC M.702 - APPLICATION FORMS

APPLICATION FOR CAR 145/CAR M SUBPART F APPROVAL

AWF-AMO-001

Note: Form not included, form can be downloaded from GCAA website

APPLICATION FOR CAR M SUBPART G APPROVAL

AWF-AMO-014A

Note: Form not included, form can be downloaded from GCAA website

APPENDIX X - APPLICATION FOR ACCEPTANCE OF NOMINATED PERSONNEL BY THE GCAA

GTF-NPA-001

Note: Form not included, form can be downloaded from GCAA website

APPENDIX XI TO AMC CAR M.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 should be addressed, when applicable, in a maintenance contract between the CAMO managing aircraft subject to CAR M and a maintenance organization approved in accordance with CAR 145 or Subpart F of CAR M. The following paragraphs only address technical matters and exclude matters such as costs, delay, warranty, etc...

When maintenance is contracted to more than one approved organisation (for example aircraft base maintenance to X, engine maintenance to Y and line maintenance to Z1, Z2&Z3), attention should be paid to the consistency of the different maintenance contracts.

A maintenance contract is not normally intended to provide appropriate detailed work instruction to personnel. Accordingly there must be established organisational responsibility, 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 responsibility and the procedures that apply. These procedures and routines can be included/appended to the CAME and maintenance organisation's Manual/MOE or can consist in separate procedures. In other words procedures and routines should reflect the conditions of the contract.

2. Aircraft/Engine maintenance

The following subparagraphs may be adapted to a maintenance contract that applies to aircraft base maintenance, aircraft line maintenance, and engine maintenance. Aircraft maintenance also includes the maintenance of the engines and APU while they are installed on the aircraft.

2.1. Scope of work

The type of maintenance to be performed by the maintenance organisation should be specified unambiguously. In case of line and/or base maintenance, the contract should specify the aircraft type and, preferably include the aircraft registrations.

In case of engine maintenance, the contract should specify the engine type.

2.2. Locations identified for the performance of maintenance/ Certificates held

The place(s) where base, line or engine maintenance, as applicable, will be performed should be specified. The certificate held by the maintenance organisation at the place(s) where the maintenance will be performed should be referred to in the contract. If necessary the contract may address the possibility of performing maintenance at any location subject to the need for such maintenance arising either from the unserviceability of the aircraft or from the necessity of supporting occasional line maintenance.

2.3. Subcontracting

The maintenance contract should specify under which conditions the maintenance organisation may subcontract tasks to a third party (regardless if this third party is approved or not). At least the contract should make reference to CAR M.615 and CAR 145.75. Additional guidance is provided by the associated AMC/GM. In addition the CAMO may require the maintenance organisation to obtain the CAMO approval before subcontracting to a third party. Access should be given to the CAMO to any information (especially the quality monitoring information) about the maintenance organisation's subcontractors involved in the contract. It should however be noted that under the CAMO responsibility both the CAMO and the GCAA are entitled to be fully informed about subcontracting, although the GCAA will normally only be concerned with aircraft, engine and APU subcontracting

2.4. Maintenance programme

The maintenance programme under which the maintenance has to be performed has to be specified. The CAMO should have that maintenance Programme approved by the GCAA.

2.5. Quality monitoring

The terms of the contract should include a provision allowing the CAMO to perform a quality surveillance (including audits) of the maintenance organisation. The maintenance contract should specify how the results of the Quality surveillance are taken into account by the maintenance organisation (See also para.2.22. "Meetings").

2.6. CAA(s) involvement

The contract should identify the authority(ies) responsible for the oversight of the aircraft, the operator, the CAMO, and the maintenance organisation. Additionally, the contract should allow the responsible authority(ies) access to the maintenance organisation.
When the contracted maintenace organisation is based outside of the UAE and has a primary maintenance approval granted by the Authority where the organisation is located, the operator and the contracted maintenance organisation have to ensure that the respective Authority 's responsibilities are properly defined and that, if necessary, delegations have been established.

2.7. Airworthiness data

The contract should specify the maintenance data and any other manual required for the fulfilment of the contract, and how these data and manuals are made available and kept current (regardless if they are provided by the CAMO or by the maintenance organisation).

This may include, but is not limited to:

- Maintenance Programme,
- Airworthiness Directives
- major repairs/modification data,
- aircraft Maintenance Manual,
- aircraft IPC,

- Wiring diagrams,
- Trouble shooting manual,
- Minimum Equipment List (normally on board the aircraft),
- Operations Manual
- Flight Manual
- Engine maintenance Manual
- Engine overhaul Manual

2.8. Incoming Conditions

The contract should specify in which condition the aircraft should be made available to the maintenance organisation. For extensive maintenance, it may be beneficial that a work scope planning meeting be organised so that the tasks to be performed may be commonly agreed (see also paragraph 2.23: "Meetings").

2.9. Airworthiness Directives and Service Bulletin/Modifications

The contract should specify what 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;
- Status of modifications and the decision to embody a Service Bulletins (SB's) or a modification.

In addition, the contract should specify the type of information the CAMO will need in return to complete the control of ADs and modification status.

2.10. Hours & Cycles control.

Hours and cycles control is the responsibility of the CAMO, and the contract should specify how the CAMO should provide the current hours and cycles to the maintenance organisation and whether the maintenance organisation should receive the current flight hours and cycles on a regular basis so that it may update the records for its own planning functions (see also paragraph 2.22: "Exchange of information").

2.11. Service Life limited parts and time-controlled **components**

The control of life-limited parts and time-controlled components is the responsibility of the CAMO.

The contract should specify whether the CAMO should provide the status of life-limited parts and time-controlled components to the maintenance organisation, and the information that the approved organisation will have to provide the CAMO about the removal/installation of the life-limited parts and time-controlled components so that the CAMO may update its records (see also paragraph 2.22 "Exchange of information").

2.12. Supply of parts.

The contract should specify whether a particular type of material or component is supplied by the CAMO or by the maintenance organisation, which type of component is pooled, etc. The contract should clearly state that it is the maintenance organisation's responsibility to be in any case satisfied that the component in question meets the approved data/standard and to ensure that the aircraft component is in a satisfactory condition for installation. Additional guidance on the acceptance of components is provided in CAR M.402 and CAR 145.42.

2.13. Pooled parts at line stations.

If applicable, the contract should specify how the subject of pooled parts at line stations should be addressed.

2.14. Scheduled maintenance

For planning scheduled maintenance checks, the support documentation to be given to the maintenance organisation should be specified. This may include, but is not limited to:

- applicable work package, including job cards;
- scheduled component removal list;
- modifications to be incorporated;

When the maintenance organisation determines, for any reason, to defer a maintenance task, it has to be formally agreed by the CAMO. If the deferment goes beyond an approved limit, refer to paragraph 2.17: "Deviation from the maintenance Schedule". This should be addressed, where applicable, in the maintenance contract.

2.15. Unscheduled maintenance/Defect rectification.

The contract should specify to which level the maintenance organisation may rectify a defect without reference to the CAMO. It should describe, as a minimum, the management of approval of repairs and the incorporation of major repairs. The deferment of any defect rectification should be submitted to the CAMO.

2.16. Deferred tasks.

See paragraphs 2.14 and 2.15 above, as well as CAR 145.50 (e) and CAR M.801(g). In addition, for aircraft line and base maintenance, the use of the Operator's MEL and the liaison with the CAMO in case of a defect that cannot be rectified at the line station should be addressed.

2.17. Deviation from the maintenance schedule.

Deviations from the maintenance schedule have to be managed by the CAMO in accordance with the procedure established in the maintenance programme. The contract should specify the support the maintenance organisation may provide to the operator in order to substantiate the deviation request.

2.18. Maintenance Check flight.

If any maintenance check flight is required after maintenance, it should be performed in accordance with the procedure established in the Continuing airworthiness management exposition or the operator's manual.

2.19. Bench/Cell Test

The contract should specify the acceptability criterion and whether a representative of the CAMO should witness an engine undergoing test.

2.20. Release to service documentation.

The release to service has to be performed by the maintenace organisation in accordance with its maintenance organization procedures. The contract should, however, specify which support forms have to be used (aircraft technical log, maintenance organisation's release format, etc...) and the documentation that the maintenance organisation should provide to the CAMO upon delivery of the aircraft/engine. This may include but is not be limited to:

- Certificate of release to service,
- Check flight report,
- list of modifications embodied,
- list of repairs,
- list of airworthiness directives accomplished,
- maintenance visit report,
- Test bench/cell report,

2.21. Maintenance records.

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 CAR M.711(a)(3) apply.

2.22. Exchange of information.

Each time exchange of information between the CAMO and the maintenance organisation is necessary, the contract should specify what information should be provided and when (i.e. in which case or at what frequency), how, by whom and to whom it has to be transmitted.

2.23. Meetings.

The maintenance contract should include the provision for a certain number of meetings to be held between the CAMO and the maintenance organization.

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 application 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 AD's, SB's, future modifications, major defects found during maintenance checks, reliability, etc...

2.23.4 Quality meeting.

Quality meetings may be organised in order to examine matters raised by the CAMO's quality surveillance and to agree upon necessary corrective actions.

2.23.5 Reliability meeting.

When a reliability programme exists, the contract should specify the CAMO's and the maintenance organisation's respective involvement in that programme, including the participation to reliability meetings.

APPENDIX XII TO AMC CAR M.706(f) - FUEL TANK SAFETY TRAINING

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

A. Effectivity:

- Large airplanes as defined 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 which contain CS25 amendment 1 or later in their certification basis.

B. Affected organisations:

- CAMOs involved in the continuing airworthiness management of aeroplanes specified in paragraph A).

C. Persons from affected organisations who should receive training:

Phase 1 only:

- The quality manager and quality personnel.

Phase 1 + Phase 2 + Continuation training:

- Personnel of the CAMO involved in the management and review of the continuing airworthiness of aircraft specified in paragraph A).

D. General requirements of the training courses

Phase 1 – Awareness

The training should be carried out before the person starts to work without supervision but not later than 6 months after joining the organisation. The persons who have already attended the Level 1 Familiarisation course in compliance with Appendix XII CAR M. 706 F are already in compliance with Phase 1.

Type: Should be an awareness course with the principal elements of the subject. It may take the form of a training bulletin, or other self-study or informative session. Signature of the reader is required to ensure that the person has passed the training.

Level: It should be a course at the level of familiarisation with the principal elements of the subject.

Objectives:

The trainee should, after the completion of the training:

1. Be familiar with the basic elements of the fuel tank safety issues.
2. Be able to give a simple description of the historical background and the elements requiring a safety consideration, using common words and showing examples of non-conformities.
3. Be able to use typical terms.

Content: The course should include:

- a short background showing examples of fuel tank safety accidents or incidents,
- the description of concept of fuel tank safety and CDCCL,
- some examples of manufacturers documents showing CDCCL items,
- typical examples of fuel tank safety defects,
- some examples of TC holders repair data
- some examples of maintenance instructions for inspection.

Phase 2 – Detailed training

A flexible period may be allowed by the competent authorities to allow organisations to set the necessary courses and impart the training to the personnel, taking into account the organisation's training schemes/means/practices. This flexible period should not extend beyond 31 December 2012.

The persons who have already attended the Level 2 Detailed training course in compliance with this appendix, 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 should have received Phase 2 training by 31 December 2012 or within 12 months of joining the organisation, whichever comes later.

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

Level: It should be a detailed course on the theoretical and practical elements of the subject.

The training may be made either:

- in appropriate facilities containing examples of components, systems and parts affected by Fuel Tank Safety (FTS) issues. The use of films, pictures and practical examples on FTS is recommended; or

- by attending a distance course (e-learning or computer based training) including a film when such film meets the intent of the objectives and content here below. An e-learning or computer based training should meet the following criteria:

- A continuous evaluation process should ensure the effectiveness of the training and its relevance;
- Some questions at intermediate steps of the training should be proposed to ensure that the trainee is authorised to move to the next step;
- The content and results of examinations should be recorded;
- Access to an instructor in person or at distance should be possible in case support is needed.

A duration of 8 hours for phase 2 is an acceptable compliance.

When the course is provided in a classroom, the instructor should be very familiar with the data in Objectives and Guidelines. To be familiar, an instructor should have attended himself a similar course in a classroom and made additionally some lecture of related subjects.

Objectives:

The attendant should, after the completion of the training:

- Have knowledge of the history of events related to fuel tank safety issues and the theoretical and practical elements of the subject, have an overview of the FAA regulations known as SFAR (Special FAR) 88 of the FAA and of JAA Temporary Guidance Leaflet TGL 47, be able to give a detailed description of the concept of fuel tank system ALI (including Critical Design Configuration Control Limitations CDCCL, and using theoretical fundamentals and specific examples;
- Have the capacity to combine and apply the separate elements of knowledge in a logical and comprehensive manner;
- Have knowledge on how the above items affect the aircraft;
- Be able to identify the components or parts or the aircraft subject to FTS from the manufacturer's documentation,
- Be able to plan the action or apply a Service Bulletin and an Airworthiness Directive.

Content: Following the guidelines described in paragraph E).

Continuation training:

The organisation should ensure that the continuation training is performed in each two years period. The syllabus of the training programme referred to in the Training policy of the Continuing Airworthiness Management Exposition (CAME) should contain the additional syllabus for this continuation training.

The continuation training may be combined with the phase 2 training in a classroom or at distance.

The continuing training should be updated when new instructions are issued which are related to the material, tools, documentation and manufacturer's or competent authority's directives.

E. Guidelines for preparing the content of Phase 2 courses.

The following guidelines should be taken into consideration when the phase 2 training programme are being established:

a) understanding of the background and the concept of fuel tank safety,
b) how the mechanics can recognise, interpret and handle the improvements in the instructions for continuing airworthiness that have been made or are being made regarding fuel tank systems,
c) awareness of any hazards especially when working on the fuel system, and when the Flammability Reduction System using nitrogen is installed.

Paragraphs a), b) and c) above should be introduced in the training programme addressing the following issues:

i) The theoretical background behind the risk of fuel tank safety: the explosions of mixtures of fuel and air, the behaviour of those mixtures in an aviation environment, the effects of temperature and pressure, energy needed for ignition etc.., the 'fire triangle', Explain 2 concepts to prevent explosions:
   (1) ignition source prevention and
   (2) flammability reduction,
ii) The major accidents related to fuel tank systems, the accident investigations and their conclusions,
iii) SFAR 88 of the FAA and JAA Interim Policy INT POL 25/12: ignition prevention program initiatives and goals, to identify unsafe conditions and to correct them, to systematically improve fuel tank maintenance),
iv) Explain briefly the concepts that are being used: the results of SFAR 88 of the FAA and JAA INT/POL 25/12: modifications, airworthiness limitation 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 manuals…),
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.
ix) The training should include a representative number of examples of defects and the associated repairs as required by the TC / STC holders maintenance data.

F. Approval of training

For CAMO the approval of the initial and continuation training programme and the content of the examination can be achieved by the change of the CAME exposition. The modification of the CAME should be approved as required by CAR M. 704(b). The necessary changes to the CAME to meet the content of this decision should be made and implemented at the time requested by the GCAA.

APPENDIX XIII to AMC to CAR M.712(f) – ORGANISATIONAL REVIEW

Organisational reviews may replace a full quality system in accordance with the provisions of CAR M.712 (f) and AMC CAR M.712 (f) and as described in the continuing airworthiness management exposition (CAME)

Depending on the complexity of the small organisation (number and type of aircraft, number of different fleets, privilege to perform airworthiness reviews, etc.), the organisational review system may vary from a system using the principles and practices of a quality system (except for the requirement of independence) to a simplified system adapted to the low complexity of the organisation and the aircraft managed.

As a core minimum, the organisational review system should have the following features, which should be described in the CAME:

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

   By default, this person should be the accountable manager, unless he delegates this responsibility to (one of) the CAR M.706 (c) person(s).

b. Identification and qualification criteria for the person(s) responsible for performing the organisational reviews:

   These persons should have a thorough knowledge of the regulations and of the continuing airworthiness management organisation (CAMO) procedures. They should also have knowledge of audits, acquired through training or through experience (preferably as an auditor, but also possibly because they actively participated in several audits conducted by the GCAA).

c. Elaboration of the organisational review programme:

   - Checklist(s) covering all items necessary to be satisfied that the organisation delivers a safe product and complies with the regulation. All procedures described in the CAME should be addressed.
   - A schedule for the accomplishment of the checklist items. Each item should be checked at least every 12 months. The organisation may choose to conduct one full review annually or to conduct several partial reviews.

d. Performance of organisational reviews:

   Each checklist item should be answered using an appropriate combination of:

- review of records, documentation, etc.
- sample check of aircraft under contract.
- interview of personnel involved.
- review of discrepancies and difficulty internal reports (e.g., notified difficulties in using current procedures and tools, systematic deviations from procedures, etc.).
- review of complaints filed by customers.

e. Management of findings and occurrence reports:

- All findings should be recorded and notified to the affected persons.
- All level 1 findings, in the sense of CAR M.716(a), should be immediately notified to the GCAA and all necessary actions on aircraft in service should be immediately taken.
- All occurrence reports should be reviewed with the aim for continuous improvement of the system by identifying possible corrective and preventive actions. This should be done in order to find prior indicators (e.g., notified difficulties in using current procedures and tools, systematic deviations from procedures, unsafe behaviours, etc.), and dismissed alerts that, had they been recognised and appropriately managed before the event, could have resulted in the undesired event being prevented.
- Corrective and preventive actions should be approved by the person responsible for the organisational review programme and implemented within a specified time frame.
- Once the person responsible for the organisational review programme is satisfied that the corrective action is effective, closure of the finding should be recorded along with a summary of the corrective action.
- The accountable manager should be notified of all significant findings and, on a regular basis, of the global results of the organisational review programme.

Following is a typical example of a simplified organisational review checklist, **to be adapted as necessary to cover the CAME procedures:**

1. Scope of work

- All aircraft under contract are covered in the form AWF-ARC-014.
- The scope of work in the CAME does not disagree with the form AWF-ARC-014.
- No work has been performed outside the scope of the form AWF-ARC-014 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 GCAA.
- 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 (GCAA or indirect approval)?
- Does the status of compliance with the maintenance programme reflect the latest approved maintenance programme?
- Has the use of maintenance programme deviations and tolerances been properly managed and approved?

4. Airworthiness Directives (and other mandatory measures issued by the GCAA)

- 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 CAR M.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 Annex 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,
  - GCAA publications,
  - the CAME and associated procedures,
  - the approved scope of work,
  - maintenance data (significant ADs, SBs, ICA amendments, etc.).

8. Maintenance contracted

- Sample check of maintenance records:
  - Existence and adequacy of the work order,
  - Data received from the maintenance organisation:
    - ❖ Valid CRS including any deferred maintenance
    - ❖ List of removed and installed equipment and copy of the associated Form 1 or equivalent.
- Obtain a copy of the current approval certificate (Form 3) of the maintenance organisations contracted.

9. Technical records and record-keeping

- Have the certificates (Form 1 and Conformity certificates) been properly collected and recorded?
- Perform a sample check of technical records to ensure completeness and storage during the appropriate periods.
- Is storage of computerised data properly ensured?

10. Occurrence reporting procedures

- Check that reporting is properly performed,

- Actions taken and recorded.

11. Airworthiness review

APPENDIX XIV to GM CAR M.702 - CAR M GUIDANCE MATERIAL CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATION APPROVALS

THIS DOCUMENT CONTAINS GUIDANCE MATERIAL RELATING TO THE APPROVAL AND OVERSIGHT OF CONTINUING AIRWORTHINESS MANAGEMENT ACTIVITIES FOR CAR M CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATIONS BASED IN THE UAE AND OUTSIDE THE UAE

1. PURPOSE

The purpose of this guidance material is to provide information to organisations on:

- How to process various applications,
- Detail information on the GCAA process involved,
- Additional information regarding the GCAA requirements for holding a CAR M approval.

2. INTRODUCTION

The GCAA CAR M 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 United Arab Emirates Civil Aircraft Registry; or

b) registered in a third country and used by a United Arab Emirates operator where the UAE GCAA has assumed responsibility for the oversight of the continued airworthiness management functions of such an aircraft.

This Appendix is designed to guide organisations applying for the initial issue, renewal or change of a GCAA CAR M approval. It also includes additional information on the way the GCAA intends to conduct its business with regard to the management and oversight of CAR M approval holders and the privileges that they may be granted as part of the approval held.

3. GUIDANCE TO CAR M.101

The UAE Civil Aviation Law – Article 30 states that the GCAA “shall approve national or foreign enterprises engaged in the maintenance and overhaul of aircraft registered in the State”.

This Article 30 mandates the enforcement of UAE CAR M regulation as prescribed by CAR M.101: 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.

4. APPLICABILITY:

This guidance material is applicable to all CAR M approval holders (see Note below).

For organisations based in the UAE applying for issuance/renewal/change of a CAR M Approval – Refer to Section A, B or C.

For organisations based outside the UAE applying for issuance/renewal/change of a CAR M Approval – Refer to Section D, E or F.

Note: for CAR M subpart F please refer to CAR 145 Guidance Material.

For inquiries relating to CAR M Approval, please email: carm@gcaa.gov.ae or Tel: +971 4 2111610.

A – APPLICATIONS FOR INITIAL ISSUANCE OF A CAR M APPROVAL FOR ORGANISATIONS LOCATED IN THE UAE

Applicable to applications for initial ISSUANCE of a CAR M Approval for organisations located in the UAE which are either stand alone or part of an Operator:

For Initial application the GCAA shall require the organisation to comply with the following:

Application:

1) Apply for Security Clearance on the GCAA Website. http://www.gcaa.gov.ae/en/pages/forms.aspx) **(see CAUTION 1).**

CAUTION 1:

The GCAA shall not process any application until the Security Clearance is issued, in some cases this is the same clearance required for the AOC. It is the responsibility of the organisation to process and complete the application with the GCAA Security Affairs department and provide evidence of the approval, once issued. The GCAA is not liable for any delay arising from this application.

2) Apply to http://www.gcaa.gov.ae/en/pages/register.aspx for a User ID to use Eservice and Q Pulse.

3) Subscribe to UAE GCAA publications including Civil Aviation Regulations (CARs). The organisation may apply through the GCAA web site:

   http://www.gcaa.ae/en/epublication/Pages/default.aspx

4) Complete an application form AWF-ARC-14a for CAR M subpart G (available on the website/eservices - http://www.gcaa.gov.ae/en/pages/forms.aspx)

   Enter clearly the proposed Scope of Work in the Application Form. Refer to Appendix 1 to the Application Form for guidance and Appendix VI to CAR M – Organisation Approval Class & Rating System. Submit the completed application form by email to: carm@gcaa.gov.ae and mail a hard copy to: General Civil Aviation Authority, Airworthiness Department, P. O. Box 30500, Dubai, UAE.

5) Reserved

6) Submit the application(s) for nominated post holder(s) using GCAA Form GTF-NPA-001 (available on the website/e-services - http://www.gcaa.gov.ae/en/pages/forms.aspx) together with copies of the applicant's CV, Employment Contract, Residence Visa and evidence of their qualification for the role. GCAA CAR M approval requires nominated senior staff, namely the Continuing Airworthiness Manager and Quality Manager, to be approved by the GCAA. A person or group of persons should represent the continuing airworthiness management structure of the organisation and be

responsible for all continuing airworthiness functions. Dependent on the size of the operation and the organisational set-up, the continuing airworthiness functions may be divided under individual managers or combined in nearly any number of ways. However, if a quality system is in place it should be independent from the other functions and must be defined in the CAME. This person or group of persons should only be employed by a contracted CAR 145 organisation under exceptional circumstances and only if accepted by the GCAA. Qualification requirements for the approval of personnel are contained in CAR M.706 and AMC CAR M.706. The approval of these nominated persons is crucial for issuance of the CAR M Approval, and as such only appropriately qualified persons should be nominated.

In the case of a Section A, Subpart G organisations intending to hold Subpart I privileges, an application form should also be submitted for the person or persons whom it is intended will be approved to carry out airworthiness reviews. Requirements for the approval of those personnel are contained in CAR M.707 and AMC CAR M.707.

Acceptance of the Accountable Manager will be approval of the Continuing Airworthiness Management Exposition with their signature on the Accountable Manager's statement.

7) In the case of a stand-alone organisation, submit a copy of the valid Trade License from the local authority for GCAA records. The Trade License should state clearly the type of activity.

8) Submit a draft continuing airworthiness management exposition (CAME) with completed forms AWF-ARC-002 "CAR M SUBPART G COMPLIANCE CHECKLIST" and AWF-AMA-003 "CAME COMPLIANCE CHECKLIST" (available on the GCAA website: http://www.gcaa.gov.ae/en/pages/forms.aspx).

9) Refer CAR M.704, AMC 704 and Appendix 1 to AMC CAR M.704 for guidance in preparing the draft CAME.

10) Submit a technical log, aircraft maintenance programme and minimum equipment list for each aircraft type applied for to obtain GCAA approval.

Process:

NOTE: GCAA may elect to hold informal meetings/discussions with the organisation during the security clearance process only to clarify and address their inquiries.

1. When the application package is received, the GCAA will assess the application to ensure adequacy of the documentation and satisfactory compliance with CAR M application regulations. The GCAA shall advise the organisation within 5 working days if any additional documentation is required.

   NOTE: The full evaluation/assessment of the application will not be completed until all of the required documents have been provided.

2. The Draft CAME will be reviewed by the GCAA and feedback will be provided to the organisation within 2 weeks from the date of the submission of the CAME.

NOTE: the CAME will not be approved until the satisfactory completion of the issue process.

3. Once the CAME is approved, the organisation is required to provide an electronic CD copy of the approved CAME, complete with the GCAA approval page, for the GCAA to upload into the Q Pulse documents module.

4. The evaluation/interview of nominated persons, who have applied in accordance with item 6) above, will be completed by the GCAA. The scheduling for the interview(s), is subject to agreement with the organisation to ensure that employment formalities have been completed. The approval of the nominated persons will be issued upon satisfactory completion of the evaluation/interview.

5. In preparation for the audit, checklist AWF-ARC-002 should be completed and submitted to the GCAA by the applicant, showing how the organisation complies with all relevant parts of the CAR M requirements. This checklist can be downloaded from the GCAA website at http://www.gcaa.gov.ae/en/pages/forms.aspx.

6. A pre-audit meeting between the organisation's senior staff and the GCAA may be required to determine the organisation's level of readiness. The organisation will also be required to demonstrate readiness by submitting an audit report carried out by its own quality assurance auditors or independent auditors, on the organisational compliance with GCAA CAR M requirements.

7. The GCAA will decide with the organisation, a suitable plan to audit the organisation's proposed Scope of Work. The organisation is required to provide access for GCAA Inspector(s) to the facility to perform this audit and any other visits relating to the approval. Following the audit, an audit report will be generated in the Q-Pulse system including any findings identified. The organisation is responsible for submitting an action plan/resolution to close any audit findings to the satisfaction of the GCAA, prior to any approval being granted.

8. The GCAA principle Airworthiness Inspector assigned to the organisation will process and issue the AWF-ARC-003 recommendation to the Manager Air Operators and CAMO after the closure of the audit, approval of all required post holders and documents, and satisfactory compliance with the CAR M requirements. Upon acceptance of the recommendation, the CAR M Subpart G Approval Certificate shall be issued in Format AWF-ARC-014 within 5 working days.

B – RESERVED

C - APPLICATIONS FOR CHANGE OF A CAR M APPROVAL FOR ORGANISATIONS LOCATED IN THE UAE

Applicable to applications for CHANGE of a CAR M Approval for organisations located in the UAE:

Organisations located in the UAE applying for a change to their CAR M approval, shall submit an application indicating the extent of the change being requested **(see NOTE).**

NOTE: Application for Extension of CAR M Approval – may cover any of the following:

- Addition of Subpart I privileges
- Addition or removal of an aircraft type(s)
- Change of approved location

Application:

1) Complete an Application Form AWF-ARC-14a (available on the GCAA website/e-Services – http://www.gcaa.gov.ae/en/pages/forms.aspx).
   Enter clearly the proposed Scope of Work in the Application Form. Refer to Appendix 1 to the Application Form for guidance and Appendix VI to CAR M – Organisation Approval Class & Rating System. Submit the completed application form by email to: carm@gcaa.gov.ae and mail a hard copy to: General Civil Aviation Authority, Airworthiness Department, P. O. Box 30500, Dubai, UAE.

2) Submit a Draft amendment to the CAME with the proposed changes and any other relevant documents/internal procedures affected by this amendment through Q Pulse.

3) Submit the necessary supporting evidence for the proposed extension of the scope of work covering the following requirements:
   - Technical log, aircraft maintenance programme and minimum equipment list for each new type applied for,
   - Availability of trained manpower,
   - Proposed Airworthiness Review staff details to be submitted on form GTF-NPA-001
   - Maintenance data and related documents,
   - Facility, as applicable, and
   - Others, as may be required by the GCAA.

4) Reserved

5) The GCAA may be required to carry out an audit to establish compliance with CAR M regulations before approval of the change is granted. An audit will not normally be required if the scope of an approval is being reduced.

Process:

1. When the application package is received, the GCAA will assess the application, to ensure adequacy of the documentation and satisfactory compliance with CAR M application regulations. The GCAA shall inform the organisation within 5 working days from the date of application if any additional documentation is required.

   Note: - the full evaluation/assessment of the application will not be completed until all of the required documents have been provided.

2. The GCAA shall advise the organisation within 2 weeks of the acceptance/rejection of the submitted CAME changes.

3. The evaluation/interview of any new nominated person(s) and Airworthiness Review signatories, who have applied in accordance with Section A item 3 above, will be completed by the GCAA. The scheduling for the interview(s), is subject to agreement with the organisation to ensure that employment formalities have been completed. The approval of the nominated persons will be issued upon satisfactory completion of the evaluation/interview.

   Note: - Item 3 above only relates to changes of nominated persons necessitated by a change of approval scope. A change that solely relates to the replacement of a nominated person should be dealt with through an amendment to the CAME and submission of form GTF-NPA-001 for the proposed replacement.

4. If the application relates to an increase in the scope of approval or a change of approved location an audit will be required. In preparation for the audit, checklist AWF-ARC-002 should be completed and submitted to the GCAA by the applicant, showing how the organisation complies with all relevant parts of CAR M requirements. This checklist can be downloaded from the GCAA website at http://www.gcaa.gov.ae/en/pages/forms.aspx .

5. A pre-audit meeting between the organisation's senior staff and the GCAA may be required to determine the organisation's level of readiness. The organisation will also be required to demonstrate readiness by submitting an audit report carried out by its own quality assurance auditors or independent auditors, on the organisational compliance with GCAA CAR M requirements.

6. The GCAA will decide with the organisation, a suitable plan to audit the organisation's proposed revised Scope of Work. The organisation is required to provide access for GCAA Inspector(s) to the facility to perform this audit and any other visits relating to the approval. Following the audit, an audit report will be generated in the Q-Pulse system including any findings identified. The organisation is responsible for submitting an action plan/resolution to close any audit findings to the satisfaction of the GCAA prior to any approval of the changes being granted.

The GCAA principle Airworthiness Inspector assigned to the organisation will process and issue the AWF-ARC-003 recommendation to the Manager Air Operators and CAMO after the closure of the audit, approval of all required post holders and documents, and satisfactory compliance with the CAR M requirements. Upon acceptance of the recommendation, the CAR M Subpart G Approval Certificate shall be issued in Format AWF-ARC-014 within 5 working days.

D - APPLICATIONS FOR INITIAL ISSUANCE OF A CAR M APPROVAL FOR ORGANISATIONS LOCATED OUTSIDE THE UAE

Applicable to applications for initial ISSUANCE of a CAR M Approval for organisations <u>located outside the UAE:</u>

Organisations based outside the UAE are required to be approved by the GCAA, whenever they carry out oversight of the continuing airworthiness of individual aircraft and the issue of recommendations for airworthiness review certificates for aircraft registered in the UAE, and are either contracted in accordance with CAR M.201(e) and (i), or sub-contracted in accordance with CAR M.201(f), (h) and (i).

CAUTION 2:
It is important that the organisation is aware of the requirements stipulated in GCAA CAR M and any related Information Bulletins (IB).

For inquiries relating to CAR M Approval, please email: carm@gcaa.gov.ae or Tel: +971 4 2111610.

NOTE:
The GCAA may accept, on a case by case basis, an EASA Part M CAMO Approval issued to an organisation located outside the UAE as a basis for issuing the GCAA CAR M Approval.

For Initial application the GCAA shall require the organisation to comply with the following:

<u>Application:</u>

1) Apply to <u>http://www.gcaa.gov.ae/en/pages/register.aspx</u> for a User ID to use Eservice and Q Pulse.
2) Subscribe to UAE GCAA publications including Civil Aviation Regulations (CARs). The organisation may apply through the GCAA web site:

   <u>http://www.gcaa.ae/en/epublication/Pages/default.aspx</u>
3) Complete an application form AWF-ARC-14a for CAR M subpart G (available on the website/eservices - <u>http://www.gcaa.gov.ae/en/pages/forms.aspx)</u>

   Enter clearly the proposed Scope of Work in the Application Form. Refer to Appendix 1 to the Application Form for guidance and Appendix VI to CAR M – Organisation Approval Class & Rating System. Submit the completed application form by email to: carm@gcaa.gov.ae and mail a hard copy to: General Civil Aviation Authority, Airworthiness Department, P. O. Box 30500, Dubai, UAE.
4) Reserved

5) Submit the application(s) for nominated post holder(s) using GCAA Form GTF-NPA-001 (available on the website/e-services - http://www.gcaa.gov.ae/en/pages/forms.aspx), together with copies of the applicant's CV, evidence of continued EASA post holder approval if applicable, and evidence of their qualification for the role. GCAA CAR M approval requires nominated senior staff, namely the Continuing Airworthiness Manager and Quality Manager, to be approved by the GCAA. A person or group of persons should represent the continuing airworthiness management structure of the organisation and be responsible for all continuing airworthiness functions. Dependent on the size of the operation and the organisational set-up, the continuing airworthiness functions may be divided under individual managers or combined in nearly any number of ways. However, if a quality system is in place it should be independent from the other functions and must be defined in the CAME. This person or group of persons should only be employed by a contracted CAR 145 organisation under exceptional circumstances and only if accepted by the GCAA. Qualification requirements for the approval of personnel are contained in CAR M.706 and AMC CAR M.706. The approval of these nominated persons is crucial for issuance of the CAR M Approval, and as such only appropriately qualified persons should be nominated.

   In the case of a CAR M Subpart G organisation located outside the UAE, CAR M Subpart I privileges will not be granted. However the organisation will be able to recommend the renewal of an Airworthiness Review Certificate to the GCAA. This will be based upon a review process being carried out and the recommendation being signed by the Continuing Airworthiness Manager or an EASA member state approved Airworthiness Review signatory.

   Acceptance of the Accountable Manager will be approval of the Continuing Airworthiness Management Exposition with their signature on the Accountable Manager's statement.

6) Submit a draft continuing airworthiness management exposition (CAME) with completed forms AWF-ARC-002 "CAR M SUBPART G COMPLIANCE CHECKLIST" and AWF-AMA-003 "CAME COMPLIANCE CHECKLIST" (available on the GCAA website: http://www.gcaa.gov.ae/en/pages/forms.aspx).

   Refer CAR M.704, AMC 704 and Appendix 1 to AMC CAR M.704 for guidance in preparing the CAME.

   Organisations which hold EASA Part M approval shall submit a copy of the EASAS member state approved Continuing Airworthiness Management Exposition (CAME) at the latest revision status, preferably in CD Format. Such organisations will also be required to submit a GCAA CAME Supplement for review and approval. Refer to appendix 2 for the required layout.

7) Submit a baseline or generic aircraft maintenance programme each aircraft type applied for to obtain GCAA approval.

8) The organisation must liaise with the operator who intends to use the organisation's services. The operator must be requested to submit to the GCAA, the Quality Assurance department's satisfactory assessment audit report(s) and recommendation(s) on the capability of the contracted organisation

to provide the intended scope of work. The operator will also be required to submit a copy of the contract/sub-contract for approval including any interface procedures. In addition the applicant will also need to submit the following:

- A copy of the organisations EASA member state Part M approval certificate (if held),
- Details of approved management personnel and airworthiness review staff,
- Evidence of access to the operator's records, maintenance data and related documents,
- Records of training for all staff confirming provision of awareness training for operators' procedures,
- A copy of the applicants quality department audit covering CAR M requirements along with a copy of checklist AWF-ARC-002, and
- Any other documents/reports etc. as may be required by the GCAA **(see CAUTION 3).**

CAUTION 3: The operator's QA assessment/recommendation letter submitted to GCAA, shall identify the aircraft types/capability which the organisation shall be approved for. Failure to provide the operator's QA recommendation may result in the delay of the approval or exclusion of types of aircrafts applied for. On a case by case basis, the GCAA may exercise the discretion to accept the operator's QA assessment as an alternative to an immediate GCAA audit.

9) Submit evidence of organisation ARC staff compliance. This requirement may be satisfied by supplying copies of certifying staff Authorisation, issued to the staff in accordance with the procedure defined in the CAME.

10) Audit by UAE GCAA Inspector(s). The GCAA shall audit the facility prior to granting CAR M approval for which prior notice shall be served. The organisation shall be responsible to bear the cost of the audit and any periodic audit conducted by the GCAA in order to maintain the validity of the approval. The organisation must also facilitate access for GCAA personnel to the facility for the purpose of conducting audits and any matters relating to the approval.

Process:

NOTE: GCAA may elect to hold informal meetings/discussions with the organisation ahead of receipt of an application only to clarify and address their inquiries.

1. When the application package is received, the GCAA will assess the application to ensure adequacy of the documentation and satisfactory compliance with CAR M application regulations. The GCAA shall advise the organisation within 5 working days if any additional documentation is required.

   Note: The full evaluation/assessment of the application will not be completed until all of the required documents have been provided.

2. The draft CAME/EASA approved CAME and Supplement will be reviewed by the GCAA and feedback will be provided to the organisation within 2 weeks from the date of submission.

   Note: the CAME will not be approved until the satisfactory completion of the issue process.

3. Once the CAME/Supplement is approved, the organisation is required to provide an electronic CD copy of the approved CAME, complete with the GCAA approval page, for the GCAA to upload into the Q Pulse documents module.

4. The evaluation/interview of nominated persons, who have applied in accordance with item 6 above, will be completed by the GCAA. The scheduling for the interview(s), is subject to agreement with the organisation, and may be carried out during the audit visit. The approval of the nominated persons will be issued upon satisfactory completion of the evaluation/interview.

5. In preparation for the audit, checklist AWF-ARC-002 should be completed and submitted to the GCAA by the applicant, showing how the organisation complies with all relevant parts of the CAR M requirements. This checklist can be downloaded from the GCAA website at http://www.gcaa.gov.ae/en/pages/forms.aspx .

6. A pre-audit meeting between the organisation's senior staff and the GCAA may be required to determine the organisation's level of readiness. The organisation will also be required to demonstrate readiness by submitting an audit report carried out by its own quality assurance auditors or independent auditors, on the organisational compliance with GCAA CAR M requirements.

7. The GCAA will decide with the organisation, a suitable plan to audit the organisation's proposed Scope of Work. The organisation is required to provide access for GCAA Inspector(s) to the facility to perform this audit and any other visits relating to the approval. Following the audit, an audit report will be generated in the Q-Pulse system including any findings identified. The organisation is responsible for submitting an action plan/resolution to close any audit findings to the satisfaction of the GCAA, prior to any approval being granted.

8. The GCAA principle Airworthiness Inspector assigned to the organisation will process and issue the AWF-ARC-003 recommendation to the Manager Air Operators and CAMO after the closure of the audit, approval of all required post holders and documents, and satisfactory compliance with the CAR M requirements. Upon acceptance of the recommendation, the CAR M Subpart G Approval Certificate shall be issued in Format AWF-ARC-014 within 5 working days.

E – RESERVED

F - APPLICATIONS FOR CHANGE OF CAR M APPROVAL FOR ORGANISATIONS LOCATED OUTSIDE THE UAE

Applicable to applications for CHANGE of CAR M Approval for organisations located outside the UAE:

Organisations located outside the UAE applying for a change to their CAR M approval, shall submit an application indicating the extent of the change being requested: **(see NOTE)**

Note: Application for Extension of CAR M Approval – may cover any of the following:

- **Addition or removal of an aircraft type(s)**
- **Change of approved location**

Application:

1) Complete an application form AWF-ARC-14a (available on the GCAA website/e-Services – http://www.gcaa.gov.ae/en/pages/forms.aspx)

   Enter clearly the proposed Scope of Work in the Application Form. Refer to Appendix 1 to the Application Form for guidance and Appendix VI to CAR M – Organisation Approval Class & Rating System. Submit the completed application form by email to: carm@gcaa.gov.ae and mail a hard copy to: General Civil Aviation Authority, Airworthiness Department, P. O. Box 30500, Dubai, UAE.

2) Submit a Draft amendment to the CAME with the proposed changes and any other relevant documents/internal procedures affected by this amendment through Q Pulse.

3) Submit the necessary supporting evidence for the proposed extension of the scope of work covering the following requirements:

   - Technical log, aircraft maintenance programme and minimum equipment list for each new type applied for availability of trained manpower and/or ARC staff,
   - Maintenance data and related documents,
   - Facility, as applicable, and
   - Others, as may be required by the GCAA.

4) Reserved

5) The organisation must liaise with the operator who intends to use the organisation's services. The operator must be requested to submit to the GCAA, the Quality Assurance department's satisfactory assessment audit report(s) and recommendation(s) on the capability of the contracted organisation to provide the intended scope of work. The operator will also be required to submit a copy of the contract/sub-contract for approval including any interface procedures. In addition the applicant will also need to submit the following:

- A copy of the organisations EASA member state Part M approval certificate (if held),
- Details of approved management personnel and airworthiness review staff,
- Evidence of access to the operator's records, maintenance data and related documents,
- Records of training for all staff confirming provision of awareness training for operators' procedures,
- A copy of the applicants quality department audit covering CAR M requirements along with a copy of checklist AWF-ARC-002, and
- Any other documents/reports etc. as may be required by the GCAA **(see CAUTION 4).**

CAUTION 4:

The operator's QA assessment/recommendation letter submitted to GCAA, shall identify the aircraft types/capability which the organisation shall be approved for. Failure to provide the operator's QA recommendation may result in the delay of the approval or exclusion of types of aircrafts applied for. On a case by case basis, the GCAA may exercise the discretion to accept the QA assessment as an alternative to an immediate GCAA audit.

6) Submit evidence of organisation ARC staff compliance. This requirement may be satisfied by supplying copies of certifying staff Authorisation, issued to the staff in accordance with the procedure defined in the CAME.

7) The GCAA may be required to carry out an audit to establish compliance with CAR M regulations before approval of the change is granted. An audit will not normally be required if the scope of an approval is being reduced. The organisation shall be responsible to bear the cost of the audit.

PROCESS:

1. When the application package is received, the GCAA will assess the application, to ensure adequacy of the documentation and satisfactory compliance with CAR M application regulations. The GCAA shall inform the organisation within 5 working days from the date of application if any additional documentation is required.

   Note: - the full evaluation/assessment of the application will not be completed until all of the required documents have been provided.

2. The GCAA shall advise the organisation within 2 weeks of the acceptance/rejection of the submitted CAME changes.

3. The evaluation/interview of any new nominated person(s), who have applied in accordance with Section A item 6 above, will be completed by the GCAA. The scheduling for the interview(s), is subject to agreement with the organisation to ensure that employment formalities have been completed. The approval of the nominated persons will be issued upon satisfactory completion of the evaluation/interview.

4. If the application relates to an increase in the scope of approval or change of approved location an audit will be required. In preparation for the audit, checklist AWF-ARC-002 should be completed and submitted to the GCAA by the applicant, showing how the organisation complies with all relevant parts of CAR M requirements. This checklist can be downloaded from the GCAA website at http://www.gcaa.gov.ae/en/pages/forms.aspx.

5. A pre-audit meeting between the organisation's senior staff and the GCAA may be required to determine the organisation's level of readiness. The organisation will also be required to demonstrate readiness by submitting an audit report carried out by its own quality assurance auditors or independent auditors, on the organisational compliance with GCAA CAR M requirements.

6. The GCAA will decide with the organisation, a suitable plan to audit the organisation's proposed revised Scope of Work. The organisation is required to provide access for GCAA Inspector(s) to the facility to perform this audit and any other visits relating to the approval. Following the audit, an audit report will be generated in the Q-Pulse system including any findings identified. The organisation is responsible for submitting an action plan/resolution to close any audit findings to the satisfaction of the GCAA prior to any approval of the changes being granted.

7. The GCAA principle Airworthiness Inspector assigned to the organisation will process and issue the AWF-ARC-003 recommendation to the Manager Air Operators and CAMO after the closure of the audit, approval of all required post holders and documents, and satisfactory compliance with the CAR M requirements. Upon acceptance of the recommendation, the CAR M Subpart G Approval Certificate shall be issued in Format AWF-ARC-014 within 5 working days.

G - RESERVED

H - TECHNICAL LOG APPROVAL PROCEDURES

A technical log system is required to be established by an operator and be approved by the GCAA. The technical log system includes all 5 sections referred to in CAR M.306 and AMC M.306 and instructions to be used by flight crew and engineering personnel when completing the various sections to ensure compliance with CAR M.306.

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 such as a cabin defects log.

1. Application

1.1 The operator shall apply to the GCAA for a technical log system approval using form GAF-AMA-001 Application for Aircraft/Organisation Manual Approval, enclosing a copy of the proposed draft technical log system and the operator's instructions for completion of the technical log.

1.2 The airworthiness inspector may request a hard copy of the draft technical log page to facilitate document evaluation. As the GCAA AMC M.306 describes the exact format of the log book the airworthiness inspector shall ensure that all mandatory parameters are included in the operator's technical log book.

1.3 Each section of the technical log should be identified and controlled by a unique form number and the revision status of the form.

2. Basic Contents of the Technical Log

The Technical Log Book shall contain the following:

2.1 A Title Page with the registered name and address of the Operator, the aircraft type and full registration marks of the aircraft;

2.2 A copy of the last scheduled line or base maintenance inspection Certificate of Release to Service, and a Maintenance Statement of the next inspection due, to comply with inspection cycle of the approved Maintenance Program, and any out-of-phase inspection or component change due before that time. In certain circumstances the GCAA may agree to the Maintenance Statement being kept elsewhere.

2.3 A section containing sector record pages. Each page shall be pre-printed with the Operator's name and page serial number, and shall make provision for recording all of the parameters defined in AMC M.306 (a).

2.4 A readily identifiable section, or a separate book, containing acceptable deferred defect record pages. Each page shall be pre-printed with the operator's name and page serial number, and shall make provision for recording the following:

i. A cross reference for each deferred defect such that the original defect can be clearly identified in the sector record page,

ii. The original date of occurrence of the defect deferred,

iii. The details of the defect transferred verbatim from the original entry,

iv. A cross reference to the sector record page that contains the CRS for any investigation activity and/or rectification of the defect.

2.5 This section should provide up to date details of any in-house or contracted maintenance organisation(s) and the company procedures for contacting them should the aircraft commander experience technical difficulties away from a permanently supported location. If all communication is to be accomplished through a single point, such as a 'Maintrol' department, it is acceptable to only include procedures for communicating with this location.

3. Supplementary Technical Log Contents

3.1 It may be necessary to record additional information as may be required, for example, on helicopters and aging aircraft items for consideration may include:

i. Maximum or intermediate contingency power usage and duration

ii. The number of load lifts carried out between take-off and landing events

iii. The number of landings for the undercarriage or other component lives

iv. The number of pressure cycles if this is a factor in fuselage structural item lives.

4. Issuance of Technical Log Approval

4.1 When the Airworthiness Inspector is satisfied that the Technical Log system complies with GCAA requirements, he shall sign the applicable section in GAF-AMA-001 and forward it to the airworthiness assistants for preparing the approval control page.

4.2 Based on the airworthiness inspector's acceptance, the airworthiness assistant shall prepare and print out the Approval Control Page for the Airworthiness Inspector's signature. The control page should include the form number and revision status of each technical log section to ensure that any development of the technical log system can be properly tracked and subsequently approved.

4.3 The airworthiness inspector shall sign the approval control page and forward it to the airworthiness assistant who subsequently shall send the approval control page to the operator. Once received the operator should upload a copy of each approved section and the approval letter into Q Pulse for activation.

5. Amendment of the Technical Log

5.1 When an operator wants to amend the technical log system, either in part or in total, the Operator shall apply to the GCAA by uploading the amended page(s) into Q Pulse in the normal way.

5.2 When the Airworthiness Inspector is satisfied that the revised Technical Log system complies with GCAA requirements, he shall approve the amended pages within Q Pulse and activate them. He will then create an electronic approval page which should include the current form number and revision status of each technical log section, including those not updated as part of this process, to ensure that future development of the technical log system can be properly tracked and subsequently approved.

6. Approval of Electronic Technical Log Systems

6.1 When an operator wants to develop an electronic technical log as part of an electronic flight bag (EFB) system, the approval process will be broadly in line with the process described above but will also include approval of the hardware to be used and the installation of the equipment in the aircraft. Procedures will also need to be developed for:

i. The control of electronic forms within the EFB system,

ii. The management, limitation, control and security of electronic signatures for use by personnel authorised to do so within the EFB system,

iii. The transfer of data from, and back to, the operator's continuing airworthiness management team,

iv. System security and the control of compatibility of updates within the EFB system to ensure that all elements remain uncorrupted as a result of any update that is carried out, including updates to databases contained within the EFB system,

v. Procedures for replacement of hardware to ensure system continuity.

I - AIRCRAFT CONTINUING AIRWORTHINESS PRODUCT AUDIT

The Aircraft Continuing Airworthiness Product Audit programme will monitor the airworthiness status of the UAE fleet and will include surveys of aircraft sampled. A programme will be developed each year taking into account the number and types of aircraft operated by each organisation, fleet development and past surveillance activities.

The product audit will focus on a number of key risk airworthiness elements, and any findings identified will be notified in writing to the operator for rectification via corrective and preventive action. Findings may be raised against any GCAA civil aviation requirement or regulation if identified as a part of this audit programme.

Findings from the annual audit programme will be analysed each year to identify any operator or national trends as areas of focus for the coming year.

Scope of Product Audit

The GCAA will undertake sample product audits 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.

Depth of Product Audit

An Aircraft Continuing Airworthiness Product Audit is a sample inspection of the key risk elements (KREs) that fully encompass selected aspects of the aircraft's airworthiness. The following table provides guidance on KREs that can be used for planning and/or analysis of the inspections.

The survey should be a 'deep cut' through the elements or systems selected.

A physical inspection of the aircraft is necessary during each audit. Wherever possible, this should be an in-depth inspection, carried out during scheduled/extensive maintenance.

The record of the product audit should identify which KREs were inspected, what was observed and details of where findings have been identified.

Inspectors in conjunction with the operators and maintenance organisations should identify the root cause of each confirmed finding. When closing audit findings Inspectors should be satisfied that the root cause found and the corrective actions taken are adequate to correct the deficiency and to prevent re-occurrence.

Where the product audit visit can be linked to the oversight of an approved organisation then credit can be taken by the GCAA within the annual oversight process of that organisation.

Key Risk Elements

The following KREs should be used for aircraft continuing airworthiness monitoring:

(a) Type design and changes to type design

(b) Airworthiness limitations

(c) Airworthiness Directives

(d) Aircraft documents

(e) Flight Manual

(f) Mass & Balance

(g) Markings & placards

(h) Operational requirements

(i) Defect management

(j) Aircraft Maintenance Programme

(k) Component control

(l) Repairs

(m) Records

These KREs and their detailed components should be adapted to the complexity of the aircraft type being surveyed by retaining only those items that are applicable and relevant for the particular aircraft type.

The KREs define the scope of continuing airworthiness. The list of KREs is intended to provide the basis for planning and control of the ACAP audit 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 ACAP audit programme needs to ensure that there is no omission, i.e. that certain KRE are never inspected.

Findings from the annual audit programme will be analysed each year to identify any operator or national trends as areas of focus for the coming year.

	Title	Description
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. 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 State of Design, 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 21.3B)
B. Aircraft Operation		
B.1	**Aircraft documents**	Aircraft certificates and documents necessary for operations.
B.2	**Flight Manual**	A manual, associated with the certificate of airworthiness, containing limitations within which operation of the aircraft is to be considered airworthy and, instructions and information necessary to the flight crew members for the safe operation of the aircraft.
B.3	**Mass & balance**	Mass and balance data is required to make sure the aircraft is capable of operating within the approved envelope.
B.4	**Markings & placards**	Markings and placards are defined in the individual aircraft type design. Some information may also be found in the Type Certificate Data Sheet, the Supplemental Type Certificates, the Flight Manual, the Aircraft Maintenance Manual, the Illustrated Parts Catalogue, etc.
B.5	**Operational**	Items required to be installed to perform a specific type of operation

	requirements	
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. <u>Aircraft Maintenance</u>		
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, and/or the CMM). 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.
C.4	**Records**	Continuing Airworthiness records are defined in CAR M.305 and CAR M.306, and related AMCs.

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. 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 configuration and the design features of the product (i.e. the aircraft, its components, etc.) shown to comply with the applicable type-certification basis and environmental protection requirements; 2. information on materials and processes and on methods of manufacture and assembly of the product necessary to ensure the conformity of the product; 3. an approved Airworthiness Limitation Section (ALS) of the Instructions for Continued Airworthiness (ICA); and 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. 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. Depending on the product State of Design, Bilateral		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.). 2. Check that changes have been approved properly (approved data is used, and a direct relation to the approved data). 3. Check for unintentional deviations from the approved type design, sometimes referred to as concessions, divergences, or non-conformances, Technical Adaptations, Technical Variations, etc. 4. Check cabin configuration (LOPA). 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. a. Aircraft S/N applicable b. Applicable engines c. Applicable APU d. Max. certified weights e. Seating configuration f. Exits 6. Check that the individual aircraft design/configuration is properly established and used as a reference.

Agreements and/or Agency decisions on acceptance of certification findings exist and should be taken into account.		
Reference documents:		▪ CAR 21.31 ▪ CAR 21.41 ▪ CAR 21.61 ▪ CAR 21.90 ▪ CAR M.304 ▪ CAR M.305 ▪ CAR M.401
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 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).		1. Check that the Aircraft Maintenance Programme (AMP) reflects airworthiness limitations and associated instructions (standard or alternative) issued by the relevant design approval holders and are approved by the GCAA. 2. Check that the aircraft and the components thereof comply with the approved AMP. 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.
Reference documents:		▪ CAR 21.31 ▪ CAR 21.61 ▪ EASA CS 22.1529 ▪ EASA CS 23.1529, Appendix G, para. G25.4 ▪ EASA CS 25.1529, Appendix H, para. H25.4 ▪ EASA CS 27.1529, Appendix A, para. A27.4 ▪ EASA CS 29.1529, Appendix A, para. A29.4 ▪ EASA CS 31HB.82 ▪ EASA CS- PU 30 ▪ EASA CS-E 2 ▪ EASA CS-P 40 ▪ EASA CS VLR.1529, Appendix A, para. A.VLR.4 ▪ CAR M.302 ▪ CAR M.305 ▪ CAR M.710(a)(7)
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 21.3B).
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 UAE, shall apply unless the GCAA has issued a different Decision before the date of entry into force of that airworthiness directive.		1. Check if all ADs applicable to the airframe, engine(s), propeller(s) and equipment have been incorporated in the AD-status, including their revisions. 2. Check records for correct AD applicability (including ADs incorrectly listed as non-applicable). 3. Check by sampling in the current AD status that applicable ADs have been or are planned to be (as appropriate) carried out within the requirements of these Airworthiness Directives, unless otherwise specified by the State of Design (AMOC). 4. Check that applicable ADs related to maintenance are included into the Aircraft Maintenance Programme. 5. Check that task-cards correctly reflect AD requirements or refer to procedures and standard practises referenced in ADs. 6. Sample during a physical survey some ADs for which compliance can be physically checked.
Reference documents:		▪ CAR 21.3B ▪ CAR 21.60 ▪ CAR 21.326 ▪ CAR 21.327 ▪ CAR M.201 & AMC M.201 (h) 4 ▪ CAR M.301 5 ▪ CAR M.303 ▪ CAR M.305 (d) & (h) ▪ CAR M.401 (a) & (b)

		▪ CAR M.501 (b) ▪ CAR M.503 (a) ▪ CAR M.504 (a) 2 ▪ CAR M.504 & AMC M.504 (c) 1 (f) ▪ CAR M.613 & AMC M.613 (a) 2.4.3, 2.5.2, 2.6.1(h) & 2.8(b) ▪ CAR M.708 (b)8 ▪ CAR M.709 (a) ▪ CAR M.710 (a)5 ▪ CAR M.801 & AMC M.801(h)
B.1	**Aircraft documents**	Aircraft certificates and documents necessary for operations.
Supporting information		**Typical inspection items**
The aircraft certificates and documents necessary for operations may include, but are not necessarily limited to: - Certificate of Registration; - Certificate of Airworthiness; - Noise certificate; - Aircraft certificate of release to service; - Technical log book, if required; - Airworthiness Review Certificate; - Etc.		1. Check that all certificates and documents pertinent to the aircraft and necessary for operations (or copies, as appropriate) are on board. 2. Check C of A, modification/Aircraft identification. 3. Check that noise certificate corresponds to aircraft configuration. 4. Check Permit to fly and Flight Conditions when necessary. 5. Check that there is an appropriate aircraft certificate of release to service.
Reference documents:		▪ CAR 21 Subpart H – 21.175 – 21.177 – 21.182 ▪ CAR 21 Subpart I ▪ CAR 21 Subpart P ▪ CAR 21 Subpart Q – 21.801

	– 21.807 ▪ CAR M.201(a)(3) ▪ CAR M 901

B.2	**<u>Flight Manual</u>**	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.
Supporting 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 wrong information. This may lead to errors and/or to override limitations that could contribute to severe failure.		1. Check the conformity of the Flight Manual (FM), latest issue, with aircraft configuration, including modification status, (AD, SB, STC etc.). 2. Check: – the FM approval, revision control, Supplement to FM; – the impact of modification status on noise and weight & balance; – additional required manuals (QRH/FCOM/OM-B etc.); – FM limitations.
Reference documents:		▪ CAR 21.174 (b), 2(iii), (b), 3(ii) ▪ CAR 21.204 (b)1(ii), (b)2(i) ▪ CAR M. 305, AMC M. 305(d) ▪ CAR M.710 (a), 2 ▪ CAR M.710 (c), 2 ▪ AMC M.710 (a), 1 ▪ AMC M.901 (d) and (g) ▪ AMC M.904 (a) 2 (c) and (k) ▪ AMC M.904 (c)
B.3	**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.	1. 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. 3. Check that equipment status is recorded on the mass and balance report. 4. Compare current mass and balance report with previous report for consistency.
Reference documents:	▪ CAR M.305 (d)5 ▪ CAR M.708 (b)(10) ▪ CAR M.710 (a)(9),AMC CAR M.710 (1) ▪ CAR OPS 1/3.605

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 information		**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 crew during flight. Markings and placards or instructions shall be provided to give any information that is essential to the ground handling in order to preclude the possibility of mistakes in ground servicing (e.g. towing, refuelling) that could pass unnoticed and that could jeopardise the safety of the aircraft in subsequent flights. Markings and placards or instructions shall be provided to give any information essential in the prevention of passenger injuries.		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. 2. Check that all installed placards are readable. 3. Check the Flight Manual versus the instruments. (General Aviation usually). 4. Check registration markings, including State of Registry fireproof nameplate. 5. Check product data plates. **Examples of markings & placards:** - door means of opening, - each compartment's weight/load limitation/placards stating limitation on contents, - passenger information signs, including no smoking signs, - emergency exit marking, - pressurised cabin warning,

National registration markings must be installed. They include registration, possible flag, fireproof registration plate. Product data plates must be installed. When markings and placards are missing, or unreadable, or not properly installed, mistakes or aircraft damages may occur and could subsequently contribute to a severe failure.		- calibration placards, - cockpit placards and instrument markings, - 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, - RVSM and static markings.
Reference documents:		▪ CAR 21.175 ▪ CAR 21.715 ▪ CAR 21.801 ▪ CAR 21.803 ▪ CAR 21.804 ▪ CAR 21.805 ▪ CAR 21.807 ▪ relevant CS for the aircraft type being inspected ▪ CAR M.501 ▪ CAR M.710 (c) ▪ AMC M.904 (a)(2) (f) & (k)
B.5	**Operational requirements**	Requirements for the type of operation are complied with (e.g. equipment, documents, approvals).
Supporting information		**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.		1. Check permits & approvals required for type of operation. 2. Check for the presence and serviceability of equipment required by operational approvals. 3. Check safety equipment, check that emergency equipment is readily accessible.

Reference documents:		▪ CAR M.201 (a)(2) ▪ CAR 21 Subpart I ▪ CAR OPS 1/3, Subpart K and L
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 addresses the effectiveness of defect management, it should also consider defects found during the physical inspection.		1. Check that the deferred defects have been identified, recorded, and rectified/deferred in accordance with approved procedures and within approved time limits. 2. Check that operations outside published approved data have only been performed under a Certificate of Fitness for Flight CAR Part V Chapter 2 Section **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 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.
Reference documents:		▪ CAR M.301 (2) ▪ AMC M.301-2 ▪ CAR M.403 ▪ AMC M.710 (a) 4 ▪ CAR 145.45 ▪ CAR 145.60 ▪ EASA AMC 20
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 information		**Typical inspection items**
The Aircraft Maintenance Programme (AMP) is intended to include scheduled maintenance tasks, the associated procedures and standard maintenance practises. It also includes the reliability programme, when required. Tasks included in the maintenance programme can originate from: - tasks for which compliance is mandatory: instructions specified in repetitive Airworthiness Directives (AD), or in the Airworthiness Limitations Section (ALS), which may include Certification Maintenance Requirements (CMRs). The ALS is included in the		**Review of AMP contents:** 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. 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 CAR M.301 point 7.

Instructions for Continuing Airworthiness (ICA) of a design approval holder; - tasks for which compliance is recommended: additional instructions specified in the Maintenance Review Board Report (MRBR), the Maintenance Planning Document (MPD), Service Bulletins (SB), or any other non-mandatory continuing airworthiness information issued by the design approval holder; - additional or alternative instructions proposed by the owner or the continuing airworthiness management organisation once approved in accordance with point M.302(d)(iii); The AMP shall contain details, including frequency, of all maintenance to be carried out, including any specific tasks linked to the type and the specificity of operations.	3. Check that the AMP properly reflects the maintenance tasks specified in repetitive ADs. 4. Check that the AMP properly reflects additional instructions for continuing airworthiness resulting from specific installed equipment or modifications embodied. 5. Check that the AMP properly reflects additional instructions for continuing airworthiness resulting from repairs embodied. 6. If applicable, check that the AMP properly reflects additional maintenance tasks required by specific approvals (e.g. RVSM, ETOPS, MNPS, B-RNAV). 7. Check for any additional scheduled maintenance measures required due to the use of the aircraft and the operational environment. 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 CAR M.803 point 3. 9. Check approval status of additional or alternative instructions CAR M.302(d)(iii)). 10. Check if a reliability programme is present and active when required. **Review of aircraft compliance with an AMP:** 1. Check if the AMP used is valid for the aircraft, is approved and is amended correctly. 2. Check if tasks are performed within the value(s) quoted in AMP and the source documents 3. Sample check that no task has been omitted without justifications accepted by the GCAA (at the time of decision). 4. Check the reporting of performed scheduled maintenance into the records system. 5. Analyse the effectiveness of the AMP and reliability by reviewing the unscheduled tasks.
Reference documents:	▪ CAR M.302 and its AMC.

		▪ CAR M.708 (a)(1), (2),(4)
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 information		**Typical inspection items**
Depending on each maintenance task, accomplishment is schedule or unscheduled. Refer to KRE C.1 'Aircraft Maintenance Programme'. Components affected by scheduled maintenance: Life -limited components are of two types: - components subject to a certified life limit; - components subject to a service life limit. Components with a certified life-limit must be permanently removed from service when, or before, their operating limitation is exceeded. The life limitation is controlled at the component level (in opposition to aircraft level). Components subject to a service life ('time controlled components') include the following: - components for which removal and restoration are scheduled, regardless of their level of failure resistance. Reference is made to hard time components: They are subject to periodic maintenance dealing with a deterioration that is assumed to be predictable (the overall reliability invariably decreases with age): Failure is less likely to occur before restoration is necessary;		1. Check that the mandatory maintenance tasks are identified as such and managed separately from recommendations. 2. Sample check installed components (PN and SN) against aircraft records: a. Correct Part Number and Serial Number installed. b. Correct authorised release document available. 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). c. 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. d. For components subject to an unscheduled task: the task description and reference, the accomplishment data (date, the component's total accumulated life in Hours, Cycles, Landings, Calendar time, as necessary). Pay attention to ETOPS and CDCCL components.

- components for which failure resistance can reduce and drop below a defined level: Inspections are scheduled to detect potential failures. Reference is made to 'On-condition' components: They are called such because components, which are inspected, are left in service (no further maintenance action taken) on the condition that they continue to meet specified performance standards. **Notes:** 1. Restoration tasks for hard time components are not the same as 'On-condition' tasks, since they do not monitor gradual deterioration, but are primarily done to ensure the item may continue to remain in service until the next planned restoration. 2. Components subject to 'condition-monitoring' are permitted to remain in service without preventive maintenance until functional failure occurs. Reference is made to 'fly-to-failure'. Such components are subject to unscheduled tasks.		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). b. If relevant for the determination of the remaining life, a full installation history indicating the number of hours, cycles or calendar time relevant to each installation on these different types of aircraft/engine. 5. Check if the aircraft maintenance programme and reliability programme results impact the component control. 6. Check that life-limited and time controlled components are correctly marked during a physical survey.
Reference documents:		▪ CAR 21.805 ▪ CAR M.302 ▪ CAR M.305 ▪ CAR M.501 ▪ CAR M.503 ▪ CAR M.710
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, and/or the CMM). 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 information		**Typical inspection items**
The data substantiating repairs should include, but is not limited to, the damage assessment, the rationale for the classification of the repair, the evidence the repair has been designed in accordance with approved data, i.e. by reference to the appropriate manual, procedure or to a CAR 21 repair design approval, the drawings/material and accomplishment instructions, as well as the maintenance and operational instructions. 'Repair status' means a list of: - the repairs embodied since the original delivery of (and still existent upon) the aircraft/engine/propeller/component; and - the un-repaired damage/degradations. It also includes, either directly or by reference to supporting documentation (i.e. repair files), the substantiating data supporting compliance with the applicable airworthiness requirements. The repair status should identify the repair file reference, the repair classification, the repaired item (i.e. aircraft/engine/propeller/component, and a precise location if necessary), and the date and total life in FH/FC accumulated by the item at the time of repair or finding of the un-repaired damage/degradations. Cross-reference to the aircraft maintenance programme should also be included, as necessary. Depending on the product State of Design, Bilateral Agreements and/or GCAA Decisions on acceptance of certification findings exist and should be taken into		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. 3. Check that repair instructions detailed in the repair file comply with published approved repair data. 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. 5. Check that new or amended maintenance instructions resulting from repairs have been considered for inclusion in the aircraft maintenance programme. 6. Compare the repair status and the physical status of the repaired aircraft/engine(s)/propeller(s), and their repaired components (physical survey) in order to confirm the accuracy of the repair status. Sample embodied repairs to check their conformity against the repair files (physical survey).

account for the determination of acceptable data for repairs.		
Reference documents:		▪ CAR 21.431 ▪ CAR M.304 ▪ AMC CAR M.304 ▪ CAR M.305 ▪ AMCs to CAR M.305 ▪ CAR M.401 ▪ AMCs to CAR M.401
C.4	**Records**	Continuing Airworthiness records are defined in CAR M.305 and CAR M.306, and related AMCs.
Supporting information		**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.		1. Check the aircraft continuing airworthiness record system: CAR M.305 and CAR M.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 over-speed, overweight operation, hard landing, excessive turbulence, and operation outside of Flight

	Manual limitations) has been performed, as applicable.
Reference documents:	▪ CAR M.305 ▪ CAR M.306 ▪ CAR M.307 ▪ CAR M.801 ▪ AMC to CAR M.305 ▪ AMC to CAR M.306 ▪ AMC to CAR M.307

J - OPERATOR RAMP AUDIT PROGRAMME

The operator ramp audit programme will monitor the airworthiness status of the UAE fleet by surveying aircraft and operations at the point of departure. A programme will be developed each year taking into account the number and types of aircraft operated by each organisation, fleet development and past surveillance activities.

The ramp survey will focus on a number of key risk areas that can be surveyed in the time available during flight preparation without unnecessarily delaying the aircraft. Any findings identified will be notified in writing to the operator for rectification via Q Pulse. Findings may be raised against any GCAA civil aviation requirement or regulation if identified as a part of this audit programme.

Scope of the Operator Ramp Audit Programme

1) The GCAA will undertake ramp 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) required documents are on-board, including the technical log and minimum equipment list,
   (c) operational and emergency equipment fitted is correctly installed and serviceable or clearly identified as unserviceable,
   (d) the pre-flight check has been accomplished to the required standard,
   (e) the aircraft is up to date with regard to scheduled maintenance due and deferred defects remaining within the MEL time limits,
   (f) Pre-flight preparation procedures are being carried out in a consistent manner to achieve the required standards,
   (g) Control and co-ordination of ground handling activities including aircraft loading, refuelling and aircraft start/pushback procedures.

(h) Use of the technical log system is being properly carried out, especially with regard to the reporting and control of defects, including defects noted in any cabin defects log

Depth of Ramp Survey Programme

1) The survey should be a broad observation of all of the pre-flight preparation activities; however some elements that have a direct effect on airworthiness will attract more focussed attention.

2) The record of a ramp survey should identify the activities examined, what was observed and details of where findings have been identified.

3) When performing a ramp survey, the inspector(s) should make all possible efforts to avoid an unreasonable delay of the aircraft inspected.

K - GUIDANCE ON DATING THE AIRWORTHINESS REVIEW CERTIFICATE

1) As defined in CAR M.901 (a), the validity of an Airworthiness Review Certificate (ARC) is 12 months. For example, if an ARC is issued any time on 01 July 2012 it will expire at midnight on 30 June 2013.

2) In accordance with CAR M.710 (d), accomplishment of the airworthiness review can be carried out up to 90 days prior to the date of expiry of the current ARC, "with any loss of continuity of the airworthiness review pattern". This means that if the next airworthiness review is carried out no earlier than 02 April 2013 the expiry date of the new certificate will be 30 June 2014.

Note: This date cannot be extended by carrying out the review less than 90 days early.

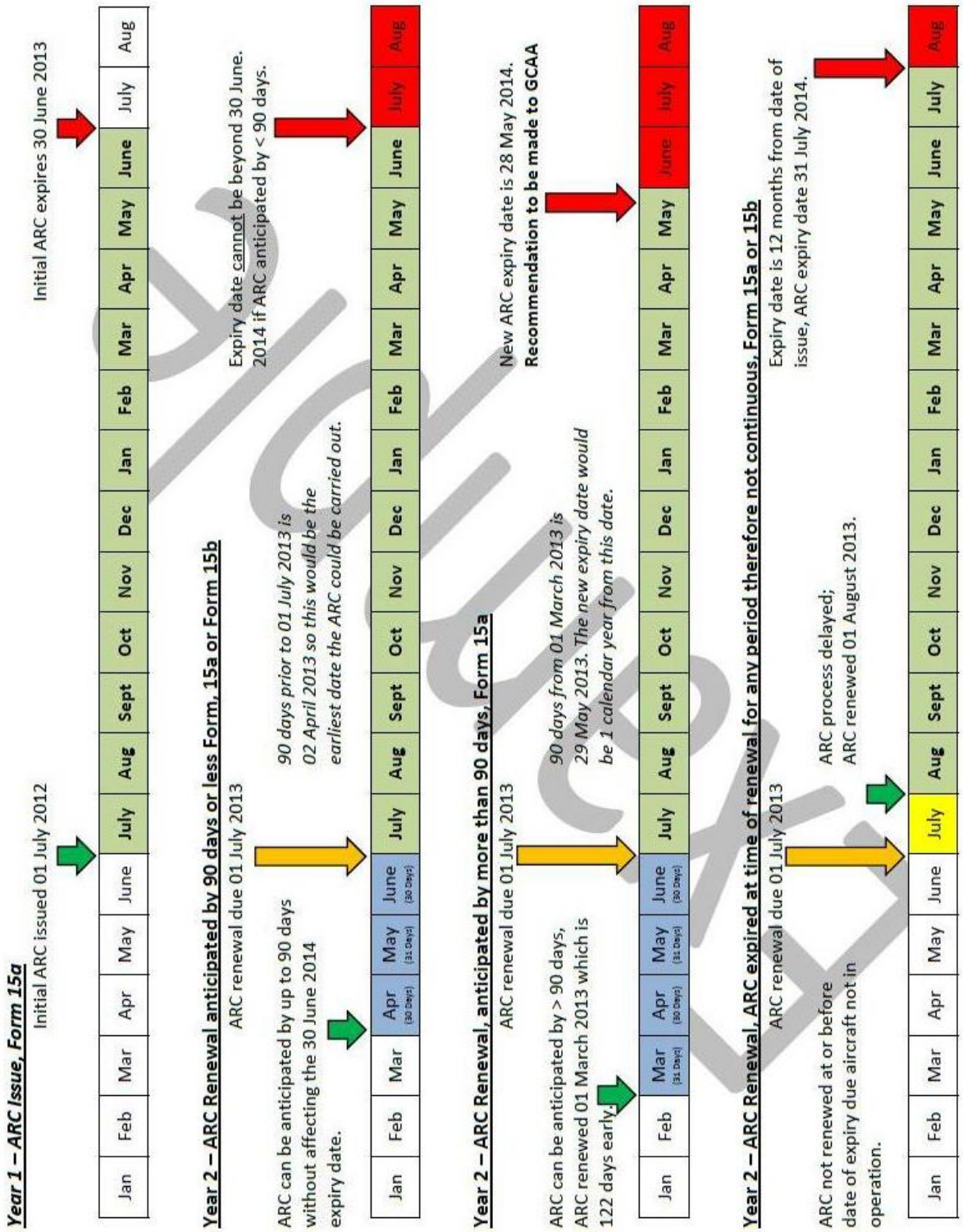
3) If an operator elects to carry out airworthiness review more than 90 days early for planning purposes, e.g. for work load management, aircraft availability or utilisation, they may do so. However, in accordance with AMC CAR M.710 (d) the aircraft would be considered to be outside of the controlled environment, and in these circumstances the operator will be required to make a recommendation to the GCAA for the issue of a Form 15a.

4) An ARC can be renewed once it has expired so long as the aircraft has remained under the control of the same continuing airworthiness management organisation. In these circumstances it can be dated for 12 months from the date of issue.

See Figure 1 below for a graphical example of how to date an airworthiness review certificate.

Note: The dates are only provided are to illustrate the example, therefore it should be noted that each certificate will have a different set of dates to apply these rules too.

Figure 1 – Dating the Airworthiness Review Certificate



ATTACHMENT 1: SUBPART G APPROVAL RECOMMENDATION REPORT

SECTION A, SUBPART G APPROVAL RECOMMENDATION REPORT AWF-ARC-003
Part 1: General Name of organisation: Approval reference: AWF-ARC-014 dated: Requested approval rating (if app.): Other approvals held (if app.): Address of facility(ies) audited: Audit period: from to : Date(s) of audit(s): Audit reference(s): Persons interviewed: Inspector Name(s): Signature(s): Date of AWF-ARC-003 part 1 completion: *delete as where applicable

SECTION A, SUBPART G APPROVAL RECOMMENDATION REPORT AWF-ARC-003

Part 2: CAR M Subpart G Compliance Audit Review

The five columns may be labeled and used as necessary to record the approval product line or facility, including subcontractor's, reviewed. Against each column used of the following CAR M Subpart G sub-paragraphs please either tick (✓) the box if satisfied with compliance or cross (X) the box if not satisfied with compliance and specify the reference of the Part 4 finding next to the box. Enter N/A where an item is not applicable, or N/R when applicable but not reviewed.

	Audit Reference Number(s):				
M.703	Extent of approval				
M.704	Continuing airworthiness management exposition (see Part 3)				
M.705	Facilities				
M.706	Personnel requirements				
M.707	Airworthiness review staff				
M.708	Continuing airworthiness				
M.201	Responsibilities				
M.202	Occurrence reporting				
M.301	Continuing airworthiness tasks				
M.302	Aircraft maintenance programme				
M.303	Airworthiness directives				
M.304	Data for modifications and repairs				
M.305	Aircraft continuing airworthiness record system				
M.306	Operator's technical log system				
M.307	Transfer of aircraft continuing airworthiness records				
M.401	Maintenance Data				
M.403	Aircraft defects				
M.503	Service life limited components				
M.709	Documentation				
M.710	Airworthiness review				
M.711	Privileges of the organisation				
M.712	Quality system				
M.713	Changes to the approved continuing airworthiness organisation				
M.714	Record keeping				

Inspector Name(s):	Signature(s):
Date of AWF-ARC-003 part 2 completion:	

SECTION A, SUBPART G APPROVAL RECOMMENDATION REPORT AWF-ARC-003

Part 3: Compliance with CAR M Subpart G continuing airworthiness management exposition (CAME)

Please either tick (✓) the box if satisfied with compliance; or cross (X) if not satisfied with compliance and specify the reference of the Part 4 finding; or enter N/A where an item is not applicable; or N/R when applicable but not reviewed

Part 0		**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 procedures to the GCAA regarding changes to the organisation's activities / scope of approval / location / personnel
0.6		Exposition amendment procedures
Part 1		**Continuing Airworthiness Management Procedures**
1.1		Aircraft technical log utilisation and MEL application (commercial air transport and private AOC operations)
		Aircraft continuing airworthiness record system utilisation (commercial activities)
1.2		Aircraft maintenance programme – development, amendment and approval
1.3		Time and continuing airworthiness records – responsibilities, retention and access
1.4		Airworthiness directives – assessment, control and accomplishment
1.5		Analysis of the effectiveness of the maintenance programme(s)
1.6		Non-mandatory modifications – embodiment policy, control and accomplishment
1.7		Major 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, audit and non-conformity procedures
2.2		Monitoring 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 approved maintenance organisation
2.5		Monitoring that all maintenance is carried out in accordance with the contract, including sub-contractors used by the maintenance contractor
2.6		Quality audit personnel – control of qualifications and experience
2.7		Continuing airworthiness management personnel – qualification, training and competence assessment
Part 3		**Contracted Maintenance**
3.1		Maintenance contractor selection procedure

3.2		Detailed list of maintenance contractors
3.3		Quality audit of aircraft

SECTION A, SUBPART G APPROVAL RECOMMENDATION REPORT AWF-ARC-003

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 the GCAA for the import of aircraft
4.5		Recommendations to the GCAA for the issue of airworthiness review certificates
4.6		Issuance of airworthiness review certificates
4.7		Airworthiness review records, responsibilities, retention and access
Part 5		**Appendices**
5.1		Sample documents
5.2		List of airworthiness review staff
5.3		List of sub-contractors as per CAR M.711(a)3 and AMC CAR M.201(h)1
5.4		List of approved maintenance organisations contracted
5.5		Copy of contracts for sub-contracted work as per Appendix 2 to CAR M.201(h)1
5.6		Copy of contracts with approved maintenance organisations

CAME Reference: CAME Issue/Amendment:

Inspector Name(s): Signature(s):

Date of AWF-ARC-003 part 3 completion:

SECTION A, SUBPART G APPROVAL RECOMMENDATION REPORT AWF-ARC-003

Part 4: Findings regarding CAR M Subpart G compliance status

Each level 1 and 2 finding should be recorded whether it has been rectified or not and should be identified by a simple cross reference to the Part 2 requirement. All non-rectified findings should be copied in writing to the organisation for the necessary corrective action.

Audit Reference(s):

I have reviewed Q Pulse records for this organisation and I can confirm that with regard to any audit findings, all findings are:

- closed,
- and/or are level 2 or 3 findings still within the agreed timescale for closure

Note: Not applicable for grant or change of an approval

I can confirm that there are no open Level 1 findings, or findings that are open beyond the agreed timescale for closure.

Inspector Name(s): Signature(s):

Date of AWF-ARC-003 part 4 completion:

SECTION A, SUBPART G APPROVAL RECOMMENDATION REPORT AWF-ARC-003

Part 5: CAR M Subpart G approval or continued approval or change recommendation*

Note: Recommendation actions cannot be combined. Please use separate forms for each action.

Name of organisation:
Approval reference:

Audit reference(s):

The following CAR M Subpart G scope of approval is recommended for this organisation:*

Aircraft type/series/group	Airworthiness review authorised	Organisation(s) working under the quality system	**A = Add R = Remove**

Or, it is recommended that the CAR M Subpart G scope of approval specified in AWF-ARC-014 referenced .....be continued.*

Name of recommending GCAA Inspector:

Signature of recommending GCAA Inspector:

Date of AWF-ARC-003 part 5 completion:

ATTACHMENT 2: CAR M - CONTINUING AIRWORTHINESS MANAGEMENT EXPOSITION SUPPLEMENT

UAE GCAA – CAR M
Continuing Airworthiness Management Exposition Supplement

LOGO OF ORGANISATION

UAE GCAA – CAR M

Continuing Airworthiness Management Exposition Supplement

Name of Organisation

Address:
(This should be the Organisation's registered office and principle place of business)

Telephone Number
Facsimile Number:
Email Address:

GCAA CAR M Approval No:

EASA Part M CAME Reference No:

Supplement Reference No:

Revision No. Date:

UAE GCAA – CAR M
Continuing Airworthiness Management Supplement

LOGO OF ORGANISATION

INTRODUCTION

This supplement, in conjunction with the latest revision of the EASA approved CAME, defines the organisation and procedures upon which compliance with the Civil Aviation Regulation (CAR) of the United Arab Emirates is based and shall form the basis of acceptance by the UAE General Civil Aviation Authority (GCAA) to perform and control the continuous airworthiness management of UAE registered aircraft and recommend to the GCAA the Airworthiness Review Certificate (ARC) in accordance with CAR-M.

Whenever there is an amendment to the EASA Part M, the Quality department shall send a copy of the revised and approved EASA CAME in the form of a CD to the UAE GCAA. The Same copy of the CD should contain the latest approved UAE GCAA CAME supplement.

The supplement shall be amended as necessary to remain in compliance with the requirements of the UAE GCAA Civil Aviation Regulations to qualify for GCAA CAR M approval. This supplement and any subsequent amendment shall be approved by the GCAA.

SUPPLEMENT REQUIREMENTS & COMPLIANCE REFERENCE MATRIX

The "Supplement Requirements & Compliance reference Matrix" provides reference on procedures documented in the Organisations approved EASA Part M CAME. It also outlines the additional requirements of UAE GCAA Civil Aviation Regulations (CARs).

Instructions on how to complete the Matrix

For each of the requirements listed on the matrix below, you are required to indicate, in the left-hand column, the procedure reference number where compliance with that particular requirement is demonstrated in your approved EASA Part M CAME. If there are differences or additional procedures required to comply with UAE GCAA CAR M regulations, with reference to the requirements listed in the matrix below, the additional procedure(s) is (are) required to be included in this supplement.

Where fields in the right hand column are greyed out the GCAA does necessarily expect specific procedures to be written however, if the CAMO writes specific CAR M procedures for any of these paragraphs then these should also be included in this column and the numbering adjusted as necessary.

EASA PART M Compliance Ref.	*REQUIREMENT*	*UAE GCAA CAR M Ref*
PART 0 - General organisation		
	Corporate commitment by the accountable manager.	***0.1***
	General information.	
	Management personnel.	***0.2***
	Management organisation chart.	
	Notification procedure to the GCAA regarding changes to the organisation's activities / approval / location / personnel.	***0.3***
	Exposition amendment procedures.	
PART 1 – Continuing Airworthiness Management Procedures		
	Aircraft technical log utilization and MEL application (commercial air transport). Aircraft continuing airworthiness record system utilization (non commercial air transport).	
	Aircraft maintenance programmes – development amendment and approval.	***1.1***
	Time and continuing airworthiness records, responsibilities, retention, access.	
	Accomplishment and control of airworthiness directives.	***1.2***
	Analysis of the effectiveness of the maintenance programme(s).	
	Non mandatory modification embodiment policy.	
	Major modification standards.	***1.3***
	Defect reports.	***1.4***
	Engineering activity.	
	Reliability programmes.	***1.5***
	Pre-flight inspections.	
	Aircraft weighing.	***1.6***
	Check flight procedures.	
PART -2 Quality system		
	Continuing airworthiness quality policy, plan, audit and non-conformity control procedures.	
	Monitoring of continuing airworthiness management activities.	***2.1***
	Monitoring of the effectiveness of the maintenance programme(s).	
	Monitoring that all maintenance is carried out by an appropriate maintenance organisation	***2.2***
	Monitoring that all contracted maintenance is carried out in accordance with the contract, including sub-contractors used by the maintenance contractor	
	Quality audit personnel	
PART 3 Contracted Maintenance		
	Maintenance contractor selection procedure.	***3.1***

	Quality audit of aircraft.	***3.2***
PART 4 Airworthiness review procedures		
	Airworthiness review staff.	
	Review of aircraft records.	
	Physical survey	
	Additional procedures for recommendations to the GCAA for the import of aircraft.	
	Recommendations to the GCAA for the issue of ARC.	***4.1***
	Issuance of ARC	
	Airworthiness review records, responsibilities, retention and access.	***4.2***
PART 5 – Appendices		
	Sample documents.	***5.1***
	List of airworthiness review staff.	***5.2***
	List of sub-contractors as per AMC CAR M.201 (h) 1 and CAR M.711 (a) 3.	***5.3***
	List of approved maintenance organisations contracted.	***5.4***
	Copy of contracts for sub-contracted task (appendix 2 to AMC CAR M.201 (h) 1).	***5.5***
	Copy of contracts with approved maintenance organisations.	***5.6***

PART 0 GENERAL ORGANISATION

0.1 Corporate commitment by the accountable manager

(The accountable manager's exposition statement should embrace the intent of the following paragraph and in fact this statement may be used without amendment. Any modification to the statement should not alter the intent.) This exposition defines the organisation and procedures upon which the Section 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 the continuing airworthiness activities including maintenance for aircraft managed by Joe Bloggs is 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 GCAA from time to time where these new or amended regulations are in conflict with these procedures.

The GCAA will approve this organisation whilst the GCAA is satisfied that the procedures are being followed. It is understood that the GCAA reserves the right to suspend, vary or revoke the Section A, Subpart G continuing airworthiness management approval of the organisation, as applicable, if the GCAA has evidence that the procedures are not followed and the standards not upheld. In the case of commercial air transport, suspension or revocation of the approval of the CAR M Subpart G continuing airworthiness management approval would invalidate the AOC.

0.2 Management personnel

a) Accountable manager

(This paragraph should address the duties and responsibilities of the accountable manager as far as CAR Section A, subpart G is concerned and demonstrate that he has corporate authority for ensuring that all continuing airworthiness activities can be financed and carried out to the required standard.)

b) Nominated post holder for continuing airworthiness (for commercial air transport)
(This paragraph should:
- Emphasize that the nominated post holder for continuing airworthiness is responsible to ensure that all maintenance is carried out on time to an approved standard.
- Describe the extent of his authority as regards his CAR M responsibility for continuing airworthiness.
This paragraph is not necessary for organisations not holding an AOC)

c) Continuing airworthiness coordination
(This paragraph should list the job functions that constitute the "group of persons" as required by CAR M.706(c) in enough detail 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 Post holder for continuing airworthiness constitutes himself the "group of persons", this paragraph may be merged with the previous one.)

d) Duties and responsibilities
(This paragraph should further develop the duties and responsibilities of:
- the personnel listed in paragraphs c): "Continuing airworthiness coordination ",
- the quality manager, as regards the quality monitoring of the maintenance system [which includes the approved maintenance organisation(s)].

0.3 Notification procedure to the GCAA regarding changes to the organisation's activities / approval / location / personnel

(This paragraph should explain in which occasion the company should inform the GCAA prior to incorporating proposed changes; for instance: The accountable manager (or any delegated person such as the engineering director or the quality manager) will notify to the GCAA any change concerning:

(1) the company's name and location(s)
(2) the group of person as specified in paragraph 0.2 a to c)
(3) operations, procedures and technical arrangements, as far as they may affect the approval.

Joe Bloggs will not incorporate such change until the change have been assessed and approved by the GCAA.)

PART 1 CONTINUING AIRWORTHINESS MANAGEMENT PROCEDURES

1.1 Aircraft maintenance programmes – development, amendment and approval

a) General
(This introductory paragraph should remind that the purpose of a maintenance programme is to provide maintenance planning instructions necessary for the safe operation of the aircraft.)

b) Content

(This paragraph should explain what is [are] the format[s] of the company's aircraft maintenance programme[s]. Appendix I to AMC CAR M.302 (a) should be used as a guideline to develop this paragraph.)

c) Development

(1) Sources

(This paragraph should explain what are the sources [MRB, MPD, Maintenance Manual, etc..] used for the development of an aircraft maintenance programme.)

(2) Responsibilities

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

(3) Manual amendments

(This paragraph should demonstrate that there is a system for ensuring the continuing validity of the aircraft maintenance programme. Particularly, it should show how any relevant information is used to update the aircraft maintenance programme. This should include, as applicable, MRB report revisions, consequences of modifications, manufacturers and GCAA recommendations, in service experience, and reliability reports.)

(4) Acceptance by the GCAA

(This paragraph should explain who is responsible for the submission of the maintenance programme to the GCAA and what the procedure to follow is. This should in particular address the issue of the GCAA approval for variation to maintenance periods. This may include, if agreed by the GCAA the possibility for the approved organisation to approve internally certain changes. The paragraph should then specify what types of changes are concerned and what the approval procedures are.)

1.2 Accomplishment and control of Airworthiness Directives

(This paragraph should demonstrate that there is a comprehensive system for the management of airworthiness directives. This paragraph may for instance include the following Sub-paragraphs:)

a) Airworthiness directive information

(This paragraph should explain what the AD information sources are and who receives them in the company. Where available, redundant sources [e.g. EASA+ GCAA + manufacturer or association] may be useful.)

b) Airworthiness directive decision

(This paragraph should explain how and by whom the AD information is analysed and what kind of information is provided to the contracted maintenance organisations in order to plan and to perform the airworthiness directive. This should as necessary include a specific procedure for emergency airworthiness directive management)

c) Airworthiness directive control

(This paragraph should specify how the organisation manages to ensure that all the applicable airworthiness directives are performed and that they are performed on time. This should include a close 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 Airworthiness Directive is not yet performed but the time limit is not overdue,

- the Airworthiness Directive is performed, and any repetitive inspection are identified and performed. This may be a continuous process or may be based on scheduled reviews.)

1.3 Major modification standards

(This paragraph should set out a procedure for the assessment of the approval status of any major modification before embodiment. This will include the assessment of the need of a GCAA or design organisation approval. It should also identify the type of approval required, and the procedure to follow to have a modification approved by the Authority of design.)

1.4 Defect reports

a) Analysis
(This paragraph should explain how the defect reports provided by the contracted maintenance organisations are processed by the continuing airworthiness management organisation. Analysis should be conducted in order to give elements to activities such as maintenance programme evolution and non-mandatory modification policy.)

b) Liaison with manufacturers and regulatory authorities
(Where a defect report shows that such defect is likely to occur to other aircraft, a liaison should be established with the manufacturer and the certification Authority, so that they may take all the necessary action.) Refer to AMC-22 (Reporting of Safety incident ROSI)

c) Deferred defect policy
(Defects such as cracks and structural defect are not addressed in the MEL and CDL. However, it may be necessary in certain cases to defer the rectification of a defect. This paragraph should establish the procedure to be followed in order to be sure that the deferment of any defect will not lead to any safety concern. This will include appropriate liaison with the manufacturer.)

1.5 Reliability programmes

(This paragraph should explain appropriately the management of a reliability programme. It should at least address the following:
-extent and scope of the operator's reliability programmes,
-specific organisational structure, duties and responsibilities,
-establishment of reliability data,
-analysis of the reliability data,
-corrective action system (maintenance programme amendment),
-scheduled reviews (reliability meetings, the participation of the GCAA.)
(This paragraph may be, where necessary, subdivided as follows:)
a) Airframe
b) Propulsion
c) Component

1.6 Aircraft weighing

(This paragraph should state in which occasion 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 into the organisation.)

PART 2 QUALITY SYSTEM

2.1 Monitoring Of Continuous Airworthiness Management Activities

(This paragraph should set out a procedure to periodically review the activities of the CAR M maintenance management personnel and how they fulfil their responsibilities to the GCAA, as defined in Part 0.)

2.2 Monitoring That All Maintenance Is Carried Out By An Appropriate Maintenance Organisation

(This paragraph should set out a procedure to periodically review that the GCAA maintenance approval(s) of the contracted maintenance organisations are relevant for the maintenance being performed on 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)

PART 3 CONTRACTED MAINTENANCE

3.1 Maintenance contractor selection procedure

(This paragraph should explain how a maintenance contractor is selected by the continuing airworthiness management organisation. Selection should not be limited to the verification that the contractor is appropriately approved for the type of aircraft, but also that the contractor has the industrial capacity to undertake the required maintenance. This selection procedure should preferably include a contract review process in order to insure that:

- *the contract is comprehensive and that no gap or unclear area remains,*
- *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 understand his responsibility.*
- *that functional responsibilities of all parties are clearly identified.*
- *the contract is signed by the owner/lessee of the aircraft in the case of non-commercial air transport. In the case of non commercial air transport, this activity should be carried in agreement with the owner.)*

3.2 Quality audit of aircraft

(This paragraph should set out the procedure when performing a quality audit of an aircraft. It should set out the differences between an airworthiness review and 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 Recommendations to the GCAA for the issue of airworthiness review certificates

(This paragraph should stipulate the communication procedures with the GCAA in case of a recommendation for the issuance of an airworthiness review certificate. In addition the content of the recommendation should be described.)

4.2 Airworthiness review records, responsibilities, retention and access

(This paragraph should describe how records are kept, the periods of record keeping, location where the records are being stored, access to the records and responsibilities.)

PART 5 APPENDICES

5.1 Sample documents

(A self explanatory paragraph)

5.2 List of Airworthiness Review Staff

(Please include a list of staff who will be making recommendations to the GCAA for renewal of the airworthiness review certificate)

5.3 List of sub-contractors as per CAR M.201 (h) 1 and CAR M.711 (a) 3.

(A self explanatory paragraph, in addition it should set out that the list should be periodically reviewed)

5.4 List of approved maintenance organisations contracted

(A self explanatory paragraph, in addition it should set out that the list should be periodically reviewed)

5.5 Copy of contracts for sub-contracted airworthiness tasks (appendix II to CAR M.201 (h) 1)

(A self explanatory paragraph)

5.6 Copy of contracts with approved maintenance organisations

(A self explanatory paragraph)

SUPPLEMENT S-1 ORGANISATION REQUIREMENTS

S-1 CAMO.005 Scope

This supplement (S-1) establishes the additional requirements to be met by a CAMO organization managing the continuing airworthiness of CMPA and/or Air Carriers or other Commercial Operations(excluding with Non-CMPA) for the issue or continuation of a certificate for the management of continuing airworthiness of an aircraft and of components for installation. For other CAMOs, the requirements in this supplement may apply on optional basis.

S-1 CAMO.105 (Reserved)

S-1 CAMO.115 (Reserved)

S-1.CAMO.120 Means of compliance

(a) Alternative means of compliance to the AMC adopted by the GCAA may be used by an organisation to establish compliance with the Regulation.

(b) When an organisation wishes to use an alternative means of compliance, it shall, prior to using it, provide the GCAA with a full description of the alternative means of compliance. The description shall include any revisions to manuals or procedures that may be relevant, as well as an assessment demonstrating compliance with the applicable Regulation.

The organisation may use these alternative means of compliance subject to prior approval by the GCAA, and upon receipt of the notification of such approval.

S-1.CAMO.125 (Reserved)

S-1.CAMO.130 Changes to the organisation

(a) The following changes to the organisation shall require prior approval:

(1) changes that affect the scope of the certificate or the terms of approval of the organisation;

(2) changes to the nominated personnel;

(3) changes to the reporting lines between the nominated personnel and the accountable manager;

(4) the procedure as regards changes not requiring prior approval referred to in point (c).

(b) For any changes requiring prior approval, the organisation shall apply for and obtain an approval issued by the GCAA. The application shall be submitted before any such change takes place, in order to enable the GCAA to determine continued compliance with Regulation, if necessary, the organisation certificate and related terms of approval attached to it. The organisation shall provide the GCAA with any relevant documentation.

The change shall only be implemented upon receipt of formal approval by the GCAA. The organisation shall operate under the conditions established by the GCAA during such changes, as applicable.

(c) All changes not requiring prior approval shall be managed and notified to the GCAA as defined in the procedure approved by the GCAA.

AMC1 S-1.CAMO.130 Changes to the organisation

APPLICATION TIME FRAMES

(a) The application for the amendment of an organisation certificate should be submitted at least 30 working days before the date of the intended changes.

(b) In the case of a planned change of a nominated person, the organisation should inform the GCAA at least 20 working days before the date of the proposed change.
(c) Unforeseen changes should be notified at the earliest opportunity, in order to enable the GCAA to determine whether there is continued compliance with the applicable requirements, and to amend, if necessary, the organisation certificate and related terms of approval.

AMC2 S-1.CAMO.130 Changes to the organisation

MANAGEMENT OF CHANGES

The organisation should manage the safety risks related to any changes to the organisation in accordance with AMC1 S-1.CAMO.200(a)(3) point (e). For changes requiring prior approval, it should conduct a risk assessment and provide it to the GCAA upon request.

GM1 S-1.CAMO.130 Changes to the organisation

CHANGES REQUIRING OR NOT REQUIRING PRIOR APPROVAL

S-1.CAMO.130 is structured as follows:

- Point (a) introduces an obligation of prior approval (by the GCAA) for specific cases listed under (1) to (4).
- Point (b) address all instances (including (a)) where the Regulation explicitly requires an approval by the GCAA (e.g. CAME procedure for the completion of an airworthiness review under supervision, ref. S-1.CAMO.310(c)). Changes relevant to these instances should be considered as changes requiring a prior approval (see list in GM1 S-1.CAMO.130(b)), unless otherwise specified by the Regulation.
- Point (b) also indicates how all changes requiring prior approval are to be handled.
- Point (c) introduces the possibility to agree with the GCAA that certain changes to the organisation (other than those covered by (a) or (b)) can be implemented without prior approval depending on the compliance and safety performance of the organisation, and in particular, on its capability to apply change management principles.

GM1 S-1.CAMO.130(a)(1) Changes to the organisation

CHANGES THAT AFFECT THE SCOPE OF THE CERTIFICATE OR THE TERMS OF APPROVAL

Typical examples of such changes are listed below (not exhaustive):

(1) the name of the organisation;
(2) the organisation's principal place of business;
(3) additional aircraft type/series/group;
(4) the accountable manager referred to in S-1.CAMO.305(a);
(5) additional subcontracted organisation.

GM2 S-1.CAMO.130(a)(1) Changes to the organisation

CHANGE OF THE NAME OF THE ORGANISATION

A change of the name requires the organisation to submit a new application as a matter of urgency. If this is the only change to report, the new application can be accompanied by a copy of the documentation that was previously submitted to the GCAA under the previous name, as a means of demonstrating how the organisation complies with the applicable requirements.

GM1 S-1.CAMO.130(b) Changes to the organisation

CHANGES REQUIRING PRIOR APPROVAL (OTHER THAN THOSE COVERED BY S-1.CAMO.130(a))

Following are some examples of changes that require prior approval by the GCAA (other than covered by S-1.CAMO.130(a)), as specified in the applicable regulations:

(a) changes to the alternative means of compliance [S-1.CAMO.120(b)]

(b) changes to the CAME procedure for the completion of an airworthiness review under supervision of the organisation's authorised airworthiness review staff (ARS) [S-1.CAMO.310(c)]

(c) changes to the procedure to establish and control the competency of personnel [S-1.CAMO.305(g)]

(d) changes to the system for reporting to the GCAA on the safety performance and regulatory compliance of the organisation (in the case of an extension beyond 36 months of the oversight planning cycle)

(e) changes to the procedure for the indirect approval of the maintenance programme of [CAR-M.302(c)]

S-1.CAMO.135 (Reserved)

S-1.CAMO.140 (Reserved)

S-1.CAMO.150 Findings

(a) After receipt of notification of findings, the organisation shall:

(1) identify the root cause or causes of and contributing factors to the non-compliance;

(2) define a corrective action plan;

(3) demonstrate corrective action implementation to the satisfaction of the GCAA.

(b) Actions referred to in points (a)(1), (a)(2) and (a)(3) shall be performed within the period agreed with the GCAA.

AMC1 S-1.CAMO.150 Findings

GENERAL

The action plan defined by the organisation should address the effects of the non-compliance, as well as its root cause(s) and contributing factor(s).
Depending on the issues, the action plan should address correction/containment of the issue, corrective action and preventive action.

GM1 S-1.CAMO.150 Findings

CAUSAL ANALYSIS

(a) It is important that the analysis does not primarily focus on establishing who or what caused the non-compliance, but on why it was caused. Establishing the root cause or causes of a non-compliance often requires an overarching view of the events and circumstances that led to it, to identify all the possible systemic and contributing factors (regulatory, human factors (HF), organisational factors, technical, etc.) in addition to the direct factors.

(b) A narrow focus on single events or failures, or the use of a simple, linear model, such as a fault tree, to identify the chain of events that led to the non-compliance, may not properly reflect the complexity of the issue, and therefore there is a risk that important factors that must be addressed in order to prevent a reoccurrence will be ignored.

Such an inappropriate or partial causal analysis often leads to defining 'quick fixes' that only address the symptoms of the non-conformity. A peer review of the results of the causal analysis may increase its reliability and objectivity.

(c) A system description of the organisation that considers the organisational structures, processes and their interfaces, procedures, staff, equipment, facilities and the environment in which the organisation operates, will support both effective causal (reactive) and hazard (proactive) analyses.

S-1.CAMO.155 Immediate reaction to a safety problem

The organisation shall implement:

(a) any safety measures mandated by the GCAA;
(b) any relevant mandatory safety information issued by the Authority of the State of Design (SOD) of a UAE registered Aircraft.

S-1.CAMO.160 Occurrence reporting

(a) As part of its management system the organisation shall implement an occurrence reporting system.
(b) Without prejudice to point (a), the organisation shall ensure that any incident, malfunction, technical defect, exceeding of technical limitations, occurrence that would highlight inaccurate, incomplete or ambiguous information contained in data established in accordance with CAR-21 or other irregular circumstance that has or may have endangered the safe operation of the aircraft and that has not resulted in an accident or serious incident are reported to the GCAA and to the organisation responsible for the design of the aircraft.
(c) The reports referred to in points (a) and (b) shall be made in a form and manner established by the GCAA and shall contain all pertinent information about the condition known to the organisation.
(d) Reports shall be made as soon as possible, but in any case within 72 hours of the organization identifying the condition to which the report relates, unless exceptional circumstances prevent this.
(e) Where relevant, the organisation shall produce a follow-up report to provide details of actions it intends to take to prevent similar occurrences in the future, as soon as these actions have been identified. This report shall be produced in a form and manner established by the GCAA.

AMC1 S-1.CAMO.160 Occurrence reporting

GENERAL

(a) Where the organisation holds one or more additional organisation certificates within the scope of CAR:

(1) the organisation may establish an integrated occurrence reporting system covering all certificate(s) held; and
(2) single reports for occurrences should only be provided if the following conditions are met:
  (i) the report includes all relevant information from the perspective of the different organisation certificates held;
  (ii) the report addresses all relevant specific mandatory data fields and clearly identifies all certificate holders for which the report is made;

(iii) Such single reporting was agreed with the GCAA.

(b) The organisation should assign responsibility to one or more suitably qualified persons with clearly defined authority, for coordinating action on airworthiness occurrences and for initiating any necessary further investigation and follow-up activity.

(c) If more than one person are assigned such responsibility, the organisation should identify a single person to act as the main focal point for ensuring a single reporting channel is established with the accountable manager. This should in particular apply to organisations holding one or more additional organisation certificates within the scope of CAR where the occurrence reporting system is fully integrated with that required under the additional certificate(s) held.

AMC2 S-1.CAMO.160 Occurrence reporting

The organisation should share relevant safety-related occurrence reports with the design approval holder of the aircraft in order to enable it to issue appropriate service instructions and recommendations to all owners or operators. Liaison with the design approval holder is recommended to establish whether published or proposed service information will resolve the problem or to obtain a solution to a particular problem.

GM1 S-1.CAMO.160 Occurrence reporting

MANDATORY REPORTING – GENERAL

(a) AMC-22, Incident Reporting, laydown a list classifying occurrences in civil aviation to be mandatorily reported. This list should not be understood as being an exhaustive collection of all issues that may pose a significant risk to aviation safety and therefore reporting should not be limited to items listed in the AMC-22.

(b) Reserved.

GM1 S-1.CAMO.160(b) Occurrence reporting

DESIGN APPROVAL HOLDER

Depending on the case, the 'organisation responsible for the design of the aircraft' will be the holder of a type-certificate, a restricted type-certificate, a supplemental type-certificate, a Technical Standard Order (TSO) authorisation, an approval for a repair or a change to the type design or any other relevant approval or authorisation for products, parts and appliances deemed to have been issued under CAR-21.

S-1.CAMO.200 Management system

(a) The organisation shall establish, implement, and maintain a management system that includes:

(1) clearly defined lines of responsibility and accountability throughout the organisation, including a direct safety accountability of the accountable manager;

(2) a description of the overall philosophies and principles of the organisation with regard to safety, referred to as the safety policy;

(3) the identification of aviation safety hazards entailed by the activities of the organisation, their evaluation and the management of associated risks, including taking actions to mitigate the risks and verify their effectiveness;

(4) maintaining personnel trained and competent to perform their tasks;

(5) documentation of all management system key processes, including a process for making personnel aware of their responsibilities and the procedure for amending this documentation;
(6) a function to monitor compliance of the organisation with the relevant requirements. Compliance monitoring shall include a feedback system of findings to the accountable manager to ensure effective implementation of corrective actions as necessary;
(7) any additional requirements that are laid down in the CAR.

(b) The management system shall correspond to the size of the organisation and the nature and complexity of its activities, taking into account the hazards and associated risks inherent in these activities.

(c) Where the organisation holds one or more additional organisation certificates, the management system may be integrated with that required under the additional certificate(s) held.

(d) Notwithstanding point (c), for CAT Air Operators, the management system provided for in the CAR shall be an integrated part of the operator's management system.

GM1 S-1.CAMO.200 Management system

GENERAL

Safety management seeks to proactively identify hazards and to mitigate the related safety risks before they result in aviation accidents and incidents. Safety management enables an organisation to manage its activities in a more systematic and focused manner. When an organisation has a clear understanding of its role and contribution to aviation safety, it can prioritise safety risks and more effectively manage its resources and obtain optimal results.

The principles of the requirements in S-1.CAMO.200, S-1.CAMO.202, S-1.CAMO.205 and the related AMC constitute the management system framework for aviation safety management. This framework addresses the core elements of the ICAO safety management system (SMS) framework defined in Appendix 2 to Annex 19, and it promotes an integrated approach to the management of an organisation. It facilitates the introduction of the additional safety management components, building upon the existing management system, rather than adding them as a separate framework.

This approach is intended to encourage organisations to embed safety management and risk-based decision-making into all their activities, instead of superimposing another system onto their existing management system and governance structure. In addition, if the organisation holds multiple organisation certificates, it may choose to implement a single management system to cover all of its activities. An integrated management system may not only be used to capture multiple certification requirements, but also to cover other business management systems such as security, occupational health and environmental management systems. Integration will remove any duplication and exploit synergies by managing safety risks across multiple activities. Organisations may determine the best means to structure their management systems to suit their business and organisational needs.

The core part of the management system framework (S-1.CAMO.200) focuses on what is essential for safety management, by mandating the organisation to:

(a) clearly define accountabilities and responsibilities;
(b) establish a safety policy and the related safety objectives;
(c) implement safety reporting procedures in line with just culture principles;
(d) ensure the identification of aviation safety hazards entailed by its activities, ensure their evaluation, and the management of associated risks, including:
(1) taking actions to mitigate the risks;
(2) verifying the effectiveness of the actions taken to mitigate the risks;

(e) monitor compliance, while considering any additional requirements that are applicable to the organisation;
(f) keep their personnel trained, competent, and informed about significant safety issues; and
(g) document all the key management system processes.

Compared to the CAR-M Subpart G quality system 'framework', the new elements that are introduced in the supplement are, in particular, those addressed under points (b) to (d). Points (c) and (d)(1) address component 2 'Safety Risk Management' of the ICAO SMS framework. Points (d)(2) and (e) address component 3 'Safety Assurance' thereof.
S-1.CAMO.200 defines the following as key safety management processes; these are further specified in the related AMC and GM:

- Hazard identification;
- Safety risk management;
- Internal investigation;
- Safety performance monitoring and measurement;
- Management of change;
- Continuous improvement;
- Immediate safety action and coordination with the aircraft operator's Emergency Response Plan (ERP).

It is important to recognise that safety management will be a continuous activity, as hazards, risks and the effectiveness of safety risk mitigations will change over time.
These key safety management processes are supported by a compliance monitoring function as an integral part of the management system for safety. Most aviation safety regulations constitute generic safety risk controls established by the 'regulator'. Therefore, ensuring effective compliance with the regulations during daily operations and independent monitoring of compliance are fundamental to any management system for safety. The compliance monitoring function may, in addition, support the follow-up of safety risk mitigation actions. Moreover, where non-compliances are identified through internal audits, the causes will be thoroughly assessed and analysed. Such an analysis in return supports the risk management process by providing insights into causal and contributing factors, including HF, organisational factors and the environment in which the organisation operates. In this way, the outputs of compliance monitoring become some of the various inputs to the safety risk management functions. On the other hand, the safety risk management processes may be used to determine focus areas for compliance monitoring. In this way, internal audits will inform the organisation's management of the level of compliance within the organisation, whether safety risk mitigation actions have been implemented, and where corrective or preventive action is required. The combination of safety risk management and compliance monitoring should lead to an enhanced understanding of the end-to-end process and the process interfaces, exposing opportunities for increased efficiencies, which are not limited to safety aspects.
As aviation is a complex system with many organisations and individuals interacting together, the primary focus of the key safety management processes is on the organisational processes and procedures, but it also relies on the humans in the system. The organisation and the way in which it operates can have a significant impact on human performance. Therefore, safety management necessarily addresses how humans can contribute both positively and negatively to an organisation's safety outcomes, recognising that human behaviour is influenced by the organisational environment.
The effectiveness of safety management largely depends on the degree of commitment of the senior management to create a working environment that optimises human performance and encourages personnel to actively engage in and contribute to the organisation's management processes. Similarly,

a positive safety culture relies on a high degree of trust and respect between the personnel and the management, and it must therefore be created and supported at the senior management level. If the management does not treat individuals who identify hazards and report adverse events in a consistently fair and just way, those individuals are unlikely to be willing to communicate safety issues or to work with the management to effectively address the safety risks. As with trust, a positive safety culture takes time and effort to establish, and it can be easily lost.

It is further recognised that the introduction of processes for hazard identification and risk assessment, mitigation and verification of the effectiveness of such mitigation actions will create immediate and direct costs, while related benefits are sometimes intangible and may take time to materialise. Over time, an effective management system will not only address the risks of major occurrences, but also identify and address production inefficiencies, improve communication, foster a better organisation culture, and lead to more effective control of contractors and suppliers. In addition, through an improved relationship with the authority, an effective management system may result in a reduced oversight burden.

Thus, by viewing safety management and the related organisational policies and key processes as items that are implemented not only to prevent incidents and accidents, but also to meet the organisation's strategic objectives, any investment in safety should be seen as an investment in productivity and organisational success.

AMC1 S-1.CAMO.200(a)(1) Management system

ORGANISATION AND ACCOUNTABILITIES

(a) The management system should encompass safety by including a safety manager, and a safety review board in the organisational structure. The functions of the safety manager are those defined in AMC1 S-1.CAMO.305(a)(4);(a)(5).

(b) Safety review board

(1) The safety review board should be a high-level committee that considers matters of strategic safety in support of the accountable manager's safety accountability.

(2) The board should be chaired by the accountable manager and composed of the person or group of persons nominated under point S-1.CAMO.300(a) and (b).

(3) The safety review board should monitor:

(i) safety performance against the safety policy and objectives;

(ii) that any safety action is taken in a timely manner; and

(iii) the effectiveness of the organisation's management system processes.

(4) The safety review board may also be tasked with:

(i) reviewing the results of compliance monitoring;

(ii) monitoring the implementation of related corrective and preventive actions.

(c) The safety review board should ensure that appropriate resources are allocated to achieve the established safety objectives.

(d) The safety manager or another person designated by the safety manager may attend, as appropriate, safety review board meetings. He or she may communicate to the accountable manager all information, as necessary, to allow decision-making based on safety data.

(e) Notwithstanding point (a), where justified by the size of the organisation and the nature and complexity of its activities and subject to a risk assessment and agreement by the GCAA, the organisation may not need to establish a formal safety review board. In this case, the tasks normally allocated to the safety review board should be allocated to the safety manager.

GM1 S-1.CAMO.200(a)(1) Management system

SAFETY ACTION GROUP

(a) Depending on the size of the organisation and the nature and complexity of its activities, a safety action group may be established as a standing group or as an ad-hoc group to assist, or act on behalf of the safety manager or the safety review board.
(b) More than one safety action group may be established, depending on the scope of the task and the specific expertise required.
(c) The safety action group usually reports to, and takes strategic direction from, the safety review board, and may be composed of managers, supervisors and personnel from operational areas.
(d) The safety action group may be tasked with or assist in:
    (1) monitoring safety performance;
    (2) defining actions to control risks to an acceptable level;
    (3) assessing the impact of organisational changes on safety;
    (4) ensuring that safety actions are implemented within agreed timescales;
    (5) reviewing the effectiveness of previous safety actions and safety promotion.

GM2 S-1.CAMO.200(a)(1) Management system

MEANING OF THE TERMS 'ACCOUNTABILITY' AND 'RESPONSIBILITY'

In the English language, the notion of accountability is different from the notion of responsibility. Whereas 'accountability' refers to an obligation which cannot be delegated, 'responsibility' refers to an obligation that can be delegated.

AMC1 S-1.CAMO.200(a)(2) Management system

SAFETY POLICY & OBJECTIVES

(a) The safety policy should:
    (1) reflect organisational commitments regarding safety, and its proactive and systematic management, including the promotion of a positive safety culture;
    (2) include internal reporting principles, and encourage personnel to report continuing airworthiness-related errors, incidents and hazards;
    (3) recognise the need for all personnel to cooperate with the compliance monitoring and internal investigations referred to under point (c) of AMC1 S-1.CAMO.200(a)(3);
    (4) be endorsed by the accountable manager;
    (5) be communicated, with visible endorsement, throughout the organisation; and
    (6) be periodically reviewed to ensure it remains relevant and appropriate for the organisation.
(b) The safety policy should include a commitment to:
    (1) comply with all applicable legislation, to meet all the applicable requirements, and adopt practices to improve safety standard;
    (2) provide the necessary resources for the implementation of the safety policy.
    (3) apply HF principles;
    (4) enforce safety as a primary responsibility of all managers; and
    (5) apply 'just culture' principles to internal safety reporting and the investigation of occurrences and, in particular, not to make available or use the information on occurrences:

(i) to attribute blame or liability to front line staff or other persons for actions, omissions or decisions taken by them that are commensurate with their experience and training; or
(ii) for any purpose other than the maintenance or improvement of aviation safety.

(c) Senior management should continually promote the safety policy to all personnel, demonstrate its commitment to it, and provide necessary human and financial resources for its implementation.

(d) Taking due account of its safety policy, the organisation should define safety objectives. The safety objectives should:
(1) form the basis for safety performance monitoring and measurement;
(2) reflect the organisation's commitment to maintain or continuously improve the overall effectiveness of the management system;
(3) be communicated throughout the organisation; and
(4) be periodically reviewed to ensure they remain relevant and appropriate for the organisation.

GM1 S-1.CAMO.200(a)(2) Management system

SAFETY POLICY

(a) The safety policy is the means whereby the organisation states its intention to maintain and, where practicable, improve safety levels in all its activities and to minimise its contribution to the risk of an aircraft accident or serious incident as far as is reasonably practicable. It reflects the management's commitment to safety, and should reflect the organisation's philosophy of safety management, as well as be the foundation on which the organisation's management system is built. It serves as a reminder of 'how we do business here'. The creation of a positive safety culture begins with the issuance of a clear, unequivocal policy.

(b) The commitment to apply 'just culture' principles forms the basis for the organisation's internal rules describing how 'just culture' principles are guaranteed and implemented.

(c) Reserved.

AMC1 S-1.CAMO.200(a)(3) Management system

SAFETY MANAGEMENT KEY PROCESSES

(a) Hazard identification processes
(1) A reporting scheme for both reactive event and proactive hazards should be the formal means of collecting, recording, analysing, acting on, and generating feedback about hazards and the associated risks that may affect safety.
(2) The identification should include:
(i) hazards that may be generated from HF issues that affect human performance; and
(ii) hazards that may stem from the organisational set-up or the existence of complex operational and maintenance arrangements (such as when multiple organisations are contracted, or when multiple levels of contracting/subcontracting are included).

(b) Risk management processes
(1) A formal safety risk management process should be developed and maintained that ensures that there is:
(i) analysis (e.g. in terms of the probability and severity of the consequences of hazards and occurrences);
(ii) assessment (in terms of tolerability); and
(iii) control (in terms of mitigation) of risks to an acceptable level.

(2) The levels of management who have the authority to make decisions regarding the tolerability of safety risks, in accordance with (b)(1)(ii), should be specified.

(c) Internal investigation

(1) In line with its just culture policy, the organisation should define how to investigate incidents such as errors or near misses, in order to understand not only what happened, but also how it happened, to prevent or reduce the probability and/or consequence of future recurrences (refer to AMC1 S-1.CAMO.202).

(2) The scope of internal investigations should extend beyond the scope of the occurrences required to be reported to the GCAA in accordance with point S-1.CAMO.160, to include the reports referred to in S-1.CAMO.202(b).

(d) Safety performance monitoring and measurement

(1) Safety performance monitoring and measurement should be the process by which the safety performance of the organisation is verified in comparison with the safety policy and the safety objectives.

(2) This process may include, as appropriate to the size, nature and complexity of the organisation:

(i) safety reporting, addressing also the status of compliance with the applicable requirements;

(ii) safety reviews, including trends reviews, which would be conducted during the introduction of new products and their components, new equipment/technologies, the implementation of new or changed procedures, or in situations of organisational changes that may have an impact on safety;

(iii) safety audits focusing on the integrity of the organisation's management system, and on periodically assessing the status of safety risk controls; and

(iv) safety surveys, examining particular elements or procedures in a specific area, such as problem areas identified, or bottlenecks in daily continuing airworthiness management activities, perceptions and opinions of management personnel, and areas of dissent or confusion.

(e) Management of change

The organisation should manage the safety risks related to a change. The management of change should be a documented process to identify external and internal changes that may have an adverse effect on the safety of its continuing airworthiness management activities. It should make use of the organisation's existing hazard identification, risk assessment and mitigation processes.

(f) Continuous improvement

The organisation should continuously seek to improve its safety performance and the effectiveness of its management system. Continuous improvement may be achieved through:

(1) audits carried out by external organisations;

(2) assessments, including assessments of the effectiveness of the safety culture and management system, in particular to assess the effectiveness of the safety risk management processes;

(3) staff surveys, including cultural surveys, that can provide useful feedback on how engaged personnel are with the management system;

(4) monitoring the recurrence of incidents and occurrences;

(5) evaluation of safety performance indicators and review of all the available safety performance information; and

(6) identification of lessons learnt.

(g) Immediate safety action and coordination with the operator's Emergency Response Plan (ERP)

(1) A procedure should be implemented to enable the organisation to act promptly when it identifies safety concerns with the potential to have immediate effect on flight safety, including clear instructions on who to contact at the owner/operator, and how to contact them, including outside normal business hours. These provisions are without prejudice to the occurrence reporting required by point S-1.CAMO.160.

(2) If applicable, a procedure should be implemented to enable the organisation to react promptly if the ERP is triggered by the operator and it requires the support of the CAMO.

GM1 S-1.CAMO.200(a)(3) Management system

SAFETY RISK MANAGEMENT — INTERFACES BETWEEN ORGANISATIONS

(a) Safety risk management processes should specifically address the planned implementation of, or participation of the organisation in, any complex operational and maintenance arrangements (such as when multiple organisations are contracted, or when multiple levels of contracting/subcontracting are included).

(b) Hazard identification and risk assessment start with an identification of all the parties involved in the arrangement, including independent experts and non-approved organisations. This identification process extends to cover the overall control structure, and assesses in particular the following elements across all subcontract levels and all parties within such arrangements:

(1) coordination and interfaces between the different parties;

(2) applicable procedures;

(3) communication between all the parties involved, including reporting and feedback channels;

(4) task allocation, responsibilities and authorities; and

(5) the qualifications and competency of key personnel with reference to point S-1.CAMO.305.

(c) Safety risk management should focus on the following aspects:

(1) clear assignment of accountability and allocation of responsibilities;

(2) that only one party is responsible for a specific aspect of the arrangement, with no overlapping or conflicting responsibilities, in order to eliminate coordination errors;

(3) the existence of clear reporting lines, both for occurrence reporting and progress reporting;

(4) the possibility for staff to directly notify the organisation of any hazard that suggests an obviously unacceptable safety risk as a result of the potential consequences of this hazard.

(d) The safety risk management processes should ensure that there is regular communication between all the parties involved to discuss work progress, risk mitigation actions, and changes to the arrangement, as well as any other significant issues.

GM2 S-1.CAMO.200(a)(3) Management system

MANAGEMENT OF CHANGE

(a) Unless they are properly managed, changes in organisational structure, facilities, the scope of work, personnel, documentation, policies and procedures, etc. can result in the inadvertent introduction of new hazards, and expose the organisation to new or increased risk. Effective organisations seek to improve their processes, with conscious recognition that changes can expose the organisation to potentially latent hazards and risks if they are not properly and effectively managed.

(b) Regardless of the magnitude of change, large or small, its safety implications should always be proactively considered. This is primarily the responsibility of the team that proposes and/or implements the change. However, a change can only be successfully implemented if all the personnel

affected by the change are engaged, are involved and participate in the process. The magnitude of a change, its safety criticality, and its potential impact on human performance should be assessed in any change management process.

(c) The process for the management of change typically provides principles and a structured framework for managing all aspects of the change. Disciplined application of the management of change can maximise the effectiveness of the change, engage the staff, and minimise the risks that are inherent in a change.

(d) The introduction of a change is the trigger for the organisation to perform their hazard identification and risk management process.

Some examples of change include, but are not limited to:

(1) changes to the organisational structure;
(2) the inclusion of a new aircraft type in the terms of approval;
(3) the addition of aircraft of the same or a similar type;
(4) significant changes in personnel (affecting key personnel and/or large numbers of personnel, high turn-over);
(5) new or amended regulations;
(6) changes in the security arrangements;
(7) changes in the economic situation of an organisation (e.g. commercial or financial pressure);
(8) new schedule(s), location(s), equipment, and/or operational procedures; and
(9) the addition of new subcontractors.

(e) A change may have the potential to introduce new, or to exacerbate pre-existing, HF issues. For example, changes in computer systems, equipment, technology, personnel changes, including changes in management personnel, procedures, work organisation, or work processes are likely to affect performance.

(f) The purpose of integrating HF into the management of change is to minimise potential risks by specifically considering the impact of the change on the people within a system.

(g) Special consideration, including any HF issues, should be given to the 'transition period'. In addition, the activities utilised to manage these issues should be integrated into the change management plan.

(h) Effective management of change should be supported by the following:

(1) Implementation of a process for formal hazard identification/risk assessment for major operational changes, major organisational changes, changes in key personnel, and changes that may affect the way continuing airworthiness management is carried out.
(2) Identification of changes that are likely to occur in business which would have a noticeable impact on:
  (i) resources — material and human;
  (ii) management direction — policies, processes, procedures, training; and
  (iii) management control.
(3) Safety cases/risk assessments that are aviation-safety focused.
(4) Involvement of key stakeholders in the change management process as appropriate.
  (i) During the management of change process, previous risk assessments, and existing hazards are reviewed for possible effect.

AMC1 S-1.CAMO.200(a)(4) Management system

COMMUNICATION ON SAFETY

(a) The organisation should establish communication about safety matters that:

(1) ensures that all personnel are aware of the safety management activities, as appropriate, for their safety responsibilities;
(2) conveys safety-critical information, especially related to assessed risks and analysed hazards;
(3) explains why particular actions are taken; and
(4) explains why safety procedures are introduced or changed.

(b) Regular meetings with personnel at which information, actions, and procedures are discussed, may be used to communicate safety matters.

GM1 S-1.CAMO.200(a)(4) Management system

SAFETY PROMOTION

(a) Safety training, combined with safety communication and information sharing, forms part of safety promotion.
(b) Safety promotion activities support:
(1) the organisation's policies, encouraging a positive safety culture, creating an environment that is favourable to the achievement of the organisation's safety objectives;
(2) organisational learning; and
(3) the implementation of an effective safety reporting scheme and the development of a just culture.
(c) Depending on the particular safety issue, safety promotion may also constitute or complement risk mitigation actions.
(d) Qualification and training aspects are further specified in the AMC and GM to S-1.CAMO.305.

GM1 S-1.CAMO.200(a)(5) Management system

MANAGEMENT SYSTEM DOCUMENTATION

(a) The organisation may document its safety policy, safety objectives and all its key management system processes in a separate manual (e.g. Safety Management Manual or Management System Manual) or in its CAME (AMC1 S-1.CAMO.300, Part 2 'Management system procedures'). Organisations that hold multiple organisation certificates may prefer to use a separate manual in order to avoid duplication. That manual or the CAME, depending on the case, should be the key instrument for communicating the approach to the management system for the whole of the organisation.
(b) The organisation may also choose to document some of the information that is required to be documented in separate documents (e.g. policy documents, procedures). In that case, it should ensure that the manual or the CAME contains adequate references to any document that is kept separately. Any such documents are to be considered as integral parts of the organisation's management system documentation.

AMC1 S-1.CAMO.200(a)(6) Management system

COMPLIANCE MONITORING — GENERAL

(a) The primary objectives of compliance monitoring are to provide an independent monitoring function on how the organisation ensures compliance with the applicable requirements, policies and procedures, and to request action where non-compliances are identified.
(b) The independence of the compliance monitoring should be established by always ensuring that audits and inspections are carried out by personnel who are not responsible for the functions, procedures or products that are audited or inspected.

AMC2 S-1.CAMO.200(a)(6) Management System

COMPLIANCE MONITORING — INDEPENDENT AUDIT

Refer to AMC to CAR M.712(b) Quality System

AMC3 S-1.CAMO.200(a)(6) Management system

COMPLIANCE MONITORING — CONTRACTING OF THE INDEPENDENT AUDIT

(a) If external personnel are used to perform independent audits:

(1) any such audits are performed under the responsibility of the compliance monitoring manager; and

(2) the organisation remains responsible for ensuring that the external personnel have the relevant knowledge, background, and experience that are appropriate to the activities being audited, including knowledge and experience in compliance monitoring.

(3) The organisation retains the ultimate responsibility for the effectiveness of the compliance monitoring function, in particular for the effective implementation and follow-up of all corrective actions.

AMC4 S-1.CAMO.200(a)(6) Management system

COMPLIANCE MONITORING — FEEDBACK SYSTEM

(a) An essential element of the compliance monitoring is the feedback system.

(b) The feedback system should not be contracted to external persons or organisations.

(c) When a non-compliance is found, the compliance monitoring function should ensure that the root cause(s) and contributing factor(s) are identified (see GM1 S-1.CAMO.150), and that corrective actions are defined. The feedback part of the compliance monitoring function should define who is required to address any non-compliance in each particular case, and the procedure to be followed if the corrective action is not completed within the defined time frame. The principal functions of the feedback system are to ensure that all findings resulting from the independent audits of the organisation are properly investigated and corrected in a timely manner, and to enable the accountable manager to be kept informed of any safety issues and the extent of compliance with the CAR.

(d) The independent audit reports referred to in AMC2 S-1.CAMO.200(a)(6) should be sent to the relevant department(s) for corrective action, giving target closure dates. These target dates should be discussed with the relevant department(s) before the compliance monitoring function confirms the dates in the report. The relevant department(s) are required to implement the corrective action and inform the compliance monitoring function of the status of the implementation of the action.

(e) Unless the review of the results from compliance monitoring is the responsibility of the safety review board (ref. AMC1 S-1.CAMO.200(a)(1) point (b)(4)), the accountable manager should hold regular meetings with staff to check the progress of any corrective actions. These meetings may be delegated to the compliance monitoring manager on a day-to-day basis, provided that the accountable manager:

(1) meets the senior staff involved at least twice per year to review the overall performance of the compliance monitoring function; and

(2) receives at least a half-yearly summary report on non-compliance findings.

(f) All records pertaining to the independent audit and the feedback system should be retained for the period specified in point S-1.CAMO.220(b) or for such periods as to support changes to the audit planning cycle in accordance with AMC2 S-1.CAMO.200(a)(6), whichever is the longer.

GM1 S-1.CAMO.200(a)(6) Management system

COMPLIANCE MONITORING FUNCTION

The compliance monitoring function is one of the elements that is required to be in compliance with the applicable requirements. This means that the compliance monitoring function itself should be subject to independent monitoring of compliance in accordance with point S-1.CAMO.200(a)(6).

S-1.CAMO.202 Internal safety reporting scheme

(a) As part of its management system, the organisation shall establish an internal safety reporting scheme to enable the collection and evaluation of such occurrences to be reported under point S-1.CAMO.160.
(b) The scheme shall also enable the collection and evaluation of those errors, near misses, and hazards reported internally that do not fall under point (a).
(c) Through this scheme, the organisation shall:
  (1) identify the causes of and contributing factors to any errors, near misses, and hazards reported and address them as part of safety risk management in accordance with point (a)(3) of point S-1.CAMO.200;
  (2) ensure evaluation of all known, relevant information relating to errors, the inability to follow procedures, near misses, and hazards, and a method to circulate the information as necessary.
(d) The organisation shall provide access to its internal safety reporting scheme to any subcontracted organisation.
(e) The organisation shall cooperate on safety investigations with any other organisation having a significant contribution to the safety of its own continuing airworthiness management activities.

AMC1 S-1.CAMO.202 Internal safety reporting scheme

GENERAL

(a) Each internal safety reporting scheme should be confidential and enable and encourage free and frank reporting of any potentially safety-related occurrence, including incidents such as errors or near misses, safety issues and hazards identified. This will be facilitated by the establishment of a just culture.
(b) The internal safety reporting scheme should contain the following elements:
  (1) clearly identified aims and objectives with demonstrable corporate commitment;
  (2) a just culture policy as part of the safety policy, and related just culture implementation procedures;
  (3) a process to:
    (i) identify those reports which require further investigation; and
    (ii) when so identified, investigate all the causal and contributing factors, including any technical, organisational, managerial, or HF issues, and any other contributing factors related to the occurrence, incident, error or near miss that was identified;
    (iii) if adapted to the size and complexity of the organisation, analyse the collective data showing the trends and frequencies of the contributing factor;

(4) appropriate corrective actions based on the findings of investigations;
(5) initial and recurrent training for staff involved in internal investigations;
(6) where relevant, the organisation should cooperate with the owner or operator on occurrence investigations by exchanging relevant information to improve aviation safety.

(c) The internal safety reporting scheme should:
(1) ensure confidentiality to the reporter;
(2) be closed-loop, to ensure that actions are taken internally to address any safety issues and hazards; and
(3) feed into the recurrent training as defined in AMC2 S-1.CAMO.305(g) whilst maintaining appropriate confidentiality.

(d) Feedback should be given to staff both on an individual and a more general basis to ensure their continued support of the safety reporting scheme.

GM1 S-1.CAMO.202 Internal safety reporting scheme

GENERAL

(a) The overall purpose of the internal safety reporting scheme is to collect information reported by the organisation personnel and use this reported information to improve the level of compliance and safety performance of the organisation. The purpose is not to attribute blame.

(b) The objectives of the scheme are to:
(1) enable an assessment to be made of the safety implications of each relevant incident (errors, near miss), safety issue and hazard reported, including previous similar issues, so that any necessary action can be initiated; and
(2) ensure that knowledge of relevant incidents, safety issues and hazards is shared so that other persons and organisations may learn from them.

(c) The scheme is an essential part of the overall monitoring function and should be complementary to the normal day-to-day procedures and 'control' systems; it is not intended to duplicate or supersede any of them. The scheme is a tool to identify those instances in which routine procedures have failed or may fail.

(d) All reports should be retained, as the significance of such reports may only become obvious at a later date.

(e) The collection and analysis of timely, appropriate and accurate data will allow the organization to react to information that it receives, and apply the necessary action.

S-1.CAMO.205 Contracting and subcontracting

(a) The organisation shall ensure that when contracting maintenance or when subcontracting any part of its continuing airworthiness management activities:
(1) these activities conform to the applicable requirements; and
(2) any aviation safety hazards associated with such contracting or subcontracting are considered as part of the organisation's management system.

(b) When the organisation subcontracts any part of its continuing airworthiness management activities to another organisation, the subcontracted organisation shall work under the approval of the organisation. The organisation shall ensure that the GCAA is given access to the subcontracted organisation, to determine continued compliance with the applicable requirements.

GM1 S-1.CAMO.205 Contracting and subcontracting

RESPONSIBILITY WHEN CONTRACTING MAINTENANCE OR SUBCONTRACTING CONTINUING AIRWORTHINESS MANAGEMENT TASKS

(a) Regardless of the approval status of the subcontracted organisations, the CAMO is responsible for ensuring that all subcontracted activities are subject to hazard identification and risk management, as required by point S-1.CAMO.200(a)(3), and to compliance monitoring, as required by point S-1.CAMO.200(a)(6).

(b) A CAMO is responsible for identifying hazards that may stem from the existence of complex operational and maintenance arrangements (such as when multiple organisations are contracted, or when multiple levels of contracting/subcontracting are included) with due regard to the organisations' interfaces (see GM1 S-1.CAMO.200(a)(3)). In addition, the compliance monitoring function should at least check that the approval of the contracted maintenance organisation(s) effectively covers the contracted activities, and that it is still valid.

(c) A CAMO is responsible for ensuring that interfaces and communication channels are established with the contracted maintenance organisation for occurrence reporting. This does not replace the obligation of the contracted organisation to report to the GCAA in accordance with CAR.

For subcontracted activities, interfaces and communication channels are also needed for the purpose of the internal safety reporting scheme (S-1.CAMO.202).

S-1.CAMO.215 (Reserved)

S-1.CAMO.220 Record-keeping

(a) Continuing airworthiness management records

(1) The organisation shall ensure that records required by points CAR M.305, CAR ML.305 and, if applicable point CAR M.306, are retained.

(2) The organisation shall record all details of work carried out.

(3) (Reserved)

(4) (Reserved)

(5) The organisation shall retain a copy of all records referred to in point (a)(2) until 3 years after the responsibility for the aircraft in accordance with points CAR M.201 or CAR ML.201 has been permanently transferred to another person or organisation.

(6) Where the organisation terminates its operation, all retained records shall be transferred to the owner of the aircraft.

(b) Management system, contracting and subcontracting records

(1) The organisation shall ensure that the following records are retained:

(i) records of management system key processes as defined in point S-1.CAMO.200;

(ii) contracts, both for contracting and subcontracting, as defined in point S-1.CAMO.205;

(2) Management system records, as well as any contracts pursuant to point S-1.CAMO.205, shall be kept for a minimum period of 5 years.

(c) Personnel records

(1) The organisation shall ensure that the following records are retained:

(i) records of qualification and experience of personnel involved in continuing airworthiness management, compliance monitoring and safety management;

(ii) records of qualification and experience of all airworthiness review staff.

(2) The records of all airworthiness review staff shall include details of any appropriate qualification held together with a summary of the relevant continuing airworthiness management experience and training and a copy of the authorisation.

(3) Personnel records shall be kept as long as the person works for the organisation, and shall be retained until 3 years after the person has left the organisation.

(d) The organisation shall establish a system of record-keeping that allows adequate storage and reliable traceability of all activities developed.

(e) The format of the records shall be specified in the organisation's procedures.

(f) Records shall be stored in a manner that ensures protection from damage, alteration and theft.

AMC1 S-1.CAMO.220 Record-keeping

GENERAL

(a) The record-keeping system should ensure that all records are accessible within a reasonable time whenever they are needed. These records should be organised in a manner that ensures their traceability and retrievability throughout the required retention period.

(b) Records should be kept in paper form, or in electronic format, or a combination of the two. Records that are stored on microfilm or in optical disc formats are also acceptable. The records should remain legible throughout the required retention period. The retention period starts when the record is created or was last amended.

(c) Paper systems should use robust materials which can withstand normal handling and filing. Computer record systems should have at least one backup system, which should be updated within 24 hours of any new entry. Computer record systems should include safeguards to prevent unauthorised personnel from altering the data.

(d) All computer hardware that is used to ensure the backup of data should be stored in a different location from the one that contains the working data, and in an environment that ensures that the data remains in good condition. When hardware or software changes take place, special care should be taken to ensure that all the necessary data continues to be accessible through at least the full period specified in the relevant provision. In the absence of any such indications, all records should be kept for a minimum period of 3 years.

AMC2 S-1.CAMO.220 Record-keeping

CONTINUING AIRWORTHINESS MANAGEMENT RECORDS

(a) The CAMO should ensure that it always receives a complete certificate of release to service from the approved maintenance organisation, independent certifying staff and/or from the Pilot-owner such that the required records can be retained. The system to keep the continuing airworthiness records should be described in the CAME.

(b) When a CAMO 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 point CAMO.220 relating to the preservation of records. If it ceases to be the CAMO of the aircraft, it also remains responsible for transferring the records to any other person or organisation managing continuing airworthiness of the aircraft.

GM1 S-1.CAMO.220 Record-keeping

RECORDS

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

AMC1 S-1CAMO.220(c)(1)(ii) (Reserved)

S-1.CAMO.300 Continuing airworthiness management exposition (CAME)

(a) The organisation shall provide the GCAA with a CAME and, where applicable, any referenced associated manuals and procedures, containing all of the following information:
  (1) a statement signed by the accountable manager confirming that the organisation will at all times work in accordance with CAR M or CAR-ML, as applicable, and with the approved CAME. When the accountable manager is not the chief executive officer of the organisation, then such chief executive officer shall countersign the statement;
  (2) the organisation's safety policy as defined in point (a)(2) of point S-1.CAMO.200;
  (3) the organisation's scope of work relevant to the terms of approval;
  (4) a general description of the manpower resources and of the system in place to plan the availability of staff as required by point (d) of point S-1.CAMO.305;
  (5) the title(s) and name(s) of person(s) referred to in points (a)(3) to (a)(5), (b)(2) and (f) of point S-1.CAMO.305;
  (6) the duties, accountabilities, responsibilities and authorities of the persons nominated under points (a)(3) to (a)(5), (b)(2), (e) and (f) of point S-1.CAMO.305;
  (7) an organisation chart showing the associated chains of accountability and responsibility between all the person(s) referred to in points (a)(3) to (a)(5), (b)(2), (e) and (f) of point S-1.CAMO.305, and related to point (a)(1) of point S-1.CAMO.200;
  (8) a list of staff authorised to issue airworthiness review certificates or recommendations referred to in point (e) of point S-1.CAMO.305;
  (9) a general description and location of the facilities;
  (10) the description of the internal safety reporting scheme as required by point S-1. CAMO.202;
  (11) the procedures specifying how the organisation ensures compliance with CAR M and CAR ML, as applicable, including in particular:
    (i) the documentation of management system key processes as required by point S-1.CAMO.200;
    (ii) procedures defining how the organisation controls any contracted and subcontracted activities as required by point S-1.CAMO.205 and point (a)(3) of CAR M.711;
    (iii) continuing airworthiness management, airworthiness review and flight permit procedures, as applicable;
    (iv) the procedure defining the scope of changes not requiring prior approval and describing how such changes will be managed and notified, as required by point (c) of point S-1.CAMO.130;
    (v) the CAME amendment procedures.
  (12) the list of approved aircraft maintenance programmes for those aircraft for which a continuing airworthiness management contract exists in accordance with point CAR M.201 or CAR ML.201;
  (13) the list of maintenance contracts in accordance with point;

(14)the list of currently approved alternative means of compliance.

(b) The initial issue of the CAME shall be approved by the GCAA. It shall be amended as necessary to remain an up-to-date description of the organisation.

(c) Amendments to the CAME shall be managed as defined in the procedures referred to in points (a)(11)(iv) and (a)(11)(v). Any amendments not included in the scope of the procedure referred to in point (a)(11)(iv), as well as amendments related to the changes listed in point S-1.CAMO.130(a), shall be approved by the GCAA.

AMC1 S-1.CAMO.300 Continuing airworthiness management exposition (CAME)

This AMC provides an outline of the layout of an acceptable CAME. Where an organisation uses a different format, for example, to allow the exposition to serve for more than one approval within the scope of CAR, then the exposition should contain a cross-reference Annex using this list as an index with an explanation as to where the subject matter can be found in the exposition.

The information required by S-1.CAMO.300 should be provided, directly or by reference, in the CAME.

Part 0 General organisation, safety policy and objectives

0.1 Safety policy, objectives and accountable manager statement

0.2 General information and scope of work

0.3 Management personnel

0.4 Management organisation chart

0.5 Procedure for changes requiring prior approval

0.6 Procedure for changes not requiring prior approval

0.7 Procedure for alternative means of compliance (AltMoC)

Part 1 Continuing airworthiness management procedures

1.1a Use of aircraft continuing airworthiness record system and if applicable, aircraft technical log (ATL) system

1.1b MEL application

1.2 Aircraft maintenance programme (AMP) — development amendment and approval

1.3 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 and inspections

1.7 Repairs and modifications

1.8 Defect reports

1.9 Engineering activity

1.10 Reliability programmes

1.11 Pre-flight inspections

1.12 Aircraft weighing

1.13 Maintenance check flight procedures

Part 2 Management system procedures

2.1 Hazard identification and safety risk management schemes

2.2 Internal safety reporting and investigations

2.3 Safety action planning

2.4 Safety performance monitoring

2.5 Change management

2.6 Safety training and promotion

2.7 Immediate safety action and coordination with operator's Emergency Response Plan (ERP)

2.8 Compliance monitoring

2.8.1 Audit plan and audit procedure

2.8.2 Monitoring of continuing airworthiness management activities

2.8.3 Monitoring of the effectiveness of the maintenance programme(s)

2.8.4 Monitoring that all maintenance is carried out by an appropriate maintenance organisation

2.8.5 Monitoring that all contracted maintenance is carried out in accordance with the contract, including subcontractors used by the maintenance contractor

2.8.6 Compliance monitoring personnel

2.9 Control of personnel competency

2.10 Management system record-keeping

2.11 Occurrence reporting

Part 3 Contracted maintenance — management of maintenance

3.1 Maintenance contractor selection procedure

3.2 Product audit of aircraft

Part 4 Airworthiness review procedures

4.1 Airworthiness review staff

4.2 Documented review of aircraft records

4.3 Physical survey

4.4 Additional procedures for recommendations to the GCAA for the import of aircraft

4.5 ARC recommendations to the GCAA

4.6 Issue of ARC

4.7 Airworthiness review records, responsibilities, retention and access

4.8 ARC extension

Part 4B Flight Permit procedures

4B.1 Conformity with approved flight conditions

4B.2 Application for issue of the flight permit

4B.3 (Reserved)

4B.4 Interface with the local authority for the flight

4B.5 Flight Permit records, responsibilities, retention and access

Part 5 Supporting documents

5.1 Sample documents, including the template of the ATL system

5.2 List of airworthiness review staff

5.3 List of subcontractors

5.4 List of contracted maintenance organisations and list of maintenance contracts as per point S-1.CAMO.300(a)(13)

5.5 Copy of contracts for subcontracted work

5.6 List of approved maintenance programme as per point S-1.CAMO.300(a)(12)

5.7 List of currently approved alternative means of compliance as per point S-1.CAMO.300(a)(13)

AMC2 S-1.CAMO.300 Continuing airworthiness management exposition (CAME)

(a) Personnel should be familiar with those parts of the continuing airworthiness management exposition that are relevant to their tasks.

(b) The CAMO should designate the person responsible for monitoring and amending the CAME, including associated procedure's manuals, in accordance with point S-1.CAMO.300(c).

(c) The CAMO may use electronic data processing (EDP) for the publication of the CAME. Attention should be paid to the compatibility of the EDP systems with the necessary dissemination, both internally and externally, of the CAME.

GM1 S-1.CAMO.300 Continuing airworthiness management exposition (CAME)

The purpose of the CAME is to:

- specify the scope of work and shows how the organisation intends to comply with this CAR; and
- provides all the necessary information and procedures for the personnel of the organisation to perform their duties.
- Complying with its contents will ensure the organisation remains in compliance with S-1.CAMO and, as applicable, CAR-M and/or CAR-ML.

AMC1 S-1.CAMO.300(a)(1) Continuing airworthiness management exposition (CAME)

ACCOUNTABLE MANAGER STATEMENT

1. Part 0 'General organisation, safety policy and objectives' of the CAME should include a statement, signed by the accountable manager (and countersigned by the chief executive officer, if different), confirming that the CAME and any associated manuals will be complied with at all times.
2. The accountable manager's exposition statement as specified in point S-1.CAMO.300(a)(1) should embrace the intent of the following paragraph, and in fact, this statement may be used without amendment. Any amendment to the statement should not alter its intent:

'This exposition and any associated referenced manuals define the organisation and procedures upon which the GCAA's CAMO approval is based.
These procedures are endorsed by the undersigned and must be complied with, as applicable, in order to ensure that all continuing airworthiness activities, including maintenance of the aircraft managed, are carried out on time to an approved standard. 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 approval of the organisation is based on the continuous compliance of the organisation with S-1.CAMO, CAR-M and CAR-ML, as applicable, and with the organisation's procedures described in this exposition. GCAA is entitled to limit, suspend, or revoke the approval certificate if the organisation fails to fulfil the obligations imposed by S-1.CAMO, CAR-M and CAR-ML, as applicable, or any conditions according to which the approval was issued.
In the case of air carriers, suspension or revocation of the CAMO certificate will invalidate the AOC.

Signed .....

Dated .....

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

Chief Executive Officer …
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.

S-1.CAMO.305 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 the CAR. The accountable manager shall:
   (1) ensure that all necessary resources are available to manage continuing airworthiness in accordance with CAR-M and CAR-ML, as applicable, to support the organization approval certificate;
   (2) establish and promote the safety policy specified in point S-1.CAMO.200;
   (3) nominate a person or group of persons with the responsibility of ensuring that the organisation always complies with the applicable continuing airworthiness management, airworthiness review and permit to fly requirements of this CAR, CAR-M and CAR-ML;
   (4) nominate a person or group of persons with the responsibility for managing the compliance monitoring function as part of the management system;
   (5) nominate a person or group of persons with the responsibility for managing the development, administration, and maintenance of effective safety management processes as part of the management system;
   (6) ensure that the person or group of persons nominated in accordance with points (a)(3) to (a)(5) and (b)(2) of point S-1.CAMO.305 have direct access to keep him/her properly informed on compliance and safety matters;
   (7) demonstrate a basic understanding of this Regulation.

(b) For organisations also approved as CAT Air Operator, the accountable manager shall in addition:
   (1) be the person appointed as accountable manager for the air carrier as required by point (a) of point ORO.GEN.210 of PART-ORO;
   (2) nominate a person responsible for the management and supervision of continuing airworthiness, who shall not be employed by an organisation approved in accordance with CAR-145 under contract to the operator, unless specifically agreed by the GCAA.

(c) The person or persons nominated in accordance with points (a)(3) to (a)(5) and (b)(2) of point S-1.CAMO.305 shall be able to demonstrate relevant knowledge, background and satisfactory experience related to aircraft continuing airworthiness management and demonstrate a working knowledge of this Regulation. Such person(s) shall be ultimately responsible to the accountable manager.

(d) The organisation shall have a system in place to plan the availability of staff to ensure that the organisation has sufficient appropriately qualified staff to plan, perform, supervise, inspect and monitor the organisation's activities in accordance with the terms of approval.

(e) To be approved to carry out airworthiness reviews or recommendations, the organisation shall have airworthiness review staff qualified and authorised in accordance with the requirements in CAR-M.

(f) (Reserved)

(g) The organisation shall establish and control the competency of personnel involved in compliance monitoring, safety management, continuing airworthiness management, airworthiness reviews or recommendations, in accordance with a procedure and to a standard agreed by the GCAA. In

addition to the necessary expertise related to the job function, competency must include an understanding of safety management and human factors principles appropriate to the person's function and responsibilities in the organisation.

AMC1 S-1.CAMO.305(a) Personnel requirements

ACCOUNTABLE MANAGER

Accountable manager is normally intended to mean the chief executive officer of the CAMO, who by virtue of his or her 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 necessarily required to be knowledgeable on technical matters, as the CAME defines the continuing airworthiness standards. When the accountable manager is not the chief executive officer, the organisation should demonstrate to the GCAA that the accountable manager has direct access to the chief executive officer and has the necessary funding allocation for the continuing airworthiness management activities sought.

AMC1 S-1.CAMO.305(a)(3) Personnel requirements

MANAGEMENT STRUCTURE FOR CONTINUING AIRWORTHINESS MANAGEMENT

The person or group of persons nominated under point S-1.CAMO.305(a)(3) with the responsibility for ensuring compliance should represent the management structure of the organisation, and be responsible for the daily operation of the organisation, for all continuing airworthiness management functions.

Dependent on the size of the operation and the organisational set-up, the continuing airworthiness management functions may be divided under individual managers or combined in any number of ways.

GM1 S-1.CAMO.305(a)(3) Personnel requirements

RESPONSIBILITY FOR ENSURING COMPLIANCE

The person(s) nominated in accordance with S-1.CAMO.305(a)(3) are responsible, in the day-to-day continuing airworthiness management activities, for ensuring that the organization personnel work in accordance with the applicable procedures and regulatory requirements.

These nominated persons should demonstrate a complete understanding of the applicable regulatory requirements, and ensure that the organisation's processes and standards accurately reflect the applicable requirements. It is their role to ensure that compliance is proactively managed, and that any early warning signs of non-compliance are documented and acted upon.

AMC1 S-1.CAMO.305(a)(4);(a)(5) Personnel requirements

SAFETY MANAGEMENT AND COMPLIANCE MONITORING FUNCTION

(a) Safety management

If more than one person is designated for the development, administration and maintenance of effective safety management processes, the accountable manager should identify the person who acts as the unique focal point, i.e. the 'safety manager'. The functions of the safety manager should be to:

(i) facilitate hazard identification, risk assessment and management;

(ii) monitor the implementation of actions taken to mitigate risks, as listed in the safety action plan, unless action follow-up is addressed by the compliance monitoring function;

(iii) provide periodic reports on safety performance to the safety review board (the functions of the safety review board are those defined in AMC1 S-1.CAMO.200(a)(1));
(iv) ensure the maintenance of safety management documentation;
(v) ensure that there is safety training available, and that it meets acceptable standards;
(vi) provide advice on safety matters; and
(vii) ensure the initiation and follow-up of internal occurrence investigations.

(b) Compliance monitoring function

If more than one person is designated for the compliance monitoring function, the accountable manager should identify the person who acts as the unique focal point, i.e. the 'compliance monitoring manager'.

(1) The role of the compliance monitoring manager should be to ensure that:
(i) the activities of the organisation are monitored for compliance with the applicable requirements and any additional requirements as established by the organisation, and that these activities are carried out properly under the supervision of the nominated persons referred to in points S-1.CAMO.305(a)(3) to (a)(5).
(ii) any contracted maintenance is monitored for compliance with the contract or work order;
(iii) an audit plan is properly implemented, maintained, and continually reviewed and improved; and
(iv) corrections and corrective actions are requested as necessary.

(2) The compliance monitoring manager should:

(i) not be one of the persons referred to in point S-1.CAMO.305(a)(3);
(ii) be able to demonstrate relevant knowledge, background and appropriate experience related to the activities of the organisation, including knowledge and experience in compliance monitoring; and
(iii) have access to all parts of the organisation, and as necessary, any subcontracted organisation.

(c) If the functions related to compliance monitoring or safety management are combined with other duties, the organisation should ensure this does not result in any conflicts of interest. In particular, the compliance monitoring function should be independent from the continuing airworthiness management functions.
(d) If the same person is designated to manage both the compliance monitoring function and safety management-related processes and tasks, the accountable manager, with regard to his or her direct accountability for safety, should ensure that sufficient resources are allocated to both functions, taking into account the size of the organisation, and the nature and complexity of its activities.
(e) Subject to a risk assessment and/or mitigation actions, and agreement by the GCAA, with due regard to the size of the organisation and the nature and complexity of its activities, the compliance monitoring manager role and/or safety manager role may be exercised by the accountable manager, provided that he or she has demonstrated the related competency as defined in point (b)(2)(ii).

GM1 S-1.CAMO.305(a)(5) Personnel requirements

SAFETY MANAGER

(a) Depending on the size of the organisation and the nature and complexity of its activities, the safety manager may be assisted by additional safety personnel in performing all the safety management tasks as defined in AMC1 S-1.CAMO.200(a)(1).

(b) Regardless of the organisational set-up, it is important that the safety manager remains the unique focal point for the development, administration, and maintenance of the organisation's safety management processes.

AMC1 S-1.CAMO.305(b)(2) Personnel requirements

POST HOLDER

(a) When the CAT Air Operator intends to nominate a CAMO post holder who is also employed by a CAR-145 organisation, it should justify why such nomination is being made and support it through a risk assessment and/or mitigation actions.

(b) This paragraph only applies to contracted maintenance and therefore does not affect situations where the organisation approved under CAR-145 and the air carrier are the same organisation.

AMC1 S-1.CAMO.305(c) Personnel requirements

KNOWLEDGE, BACKGROUND AND EXPERIENCE OF NOMINATED PERSON(S)

Persons or group of persons nominated in accordance with points S-1.CAMO.305(a) and S-1.CAMO.305(b) should have:

(a) practical experience and expertise in the application of aviation safety standards and safe operating practices;

(b) a comprehensive knowledge of:
  (i) relevant parts of operational requirements and procedures;
  (ii) the AOC holder's operations specifications when applicable;
  (iii) the need for, and content of, the relevant parts of the AOC holder's operations manual when applicable.

(c) knowledge of:
  (i) HF principles;
  (ii) safety management systems based on CAR-X (including compliance monitoring) and ICAO Annex 19.

(d) 5 years of relevant work experience, of which at least 2 years should be from the aeronautical industry in an appropriate position;

(e) a relevant engineering degree or an aircraft maintenance technician qualification with additional education that is acceptable to the GCAA. 'Relevant engineering degree' means an engineering degree from aeronautical, mechanical, electrical, electronic, avionic or other studies that are relevant to the maintenance and/or continuing airworthiness of aircraft/aircraft components;

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

(f) thorough knowledge of the organisation's CAME;

(g) knowledge of a relevant sample of the type(s) of aircraft gained through a formalised training course. These courses should be at least at a level equivalent to CAR-66 Appendix III Level 1 General Familiarisation and could be provided by a CAR-147 organisation, by the manufacturer, or by any

other organisation accepted by the GCAA. 'Relevant sample' means that these courses should cover typical aircraft and aircraft systems that are within the scope of work. For all balloons and any other aircraft of 2 730 kg MTOM or less, the formalised training courses may be replaced by a demonstration of the required knowledge by providing documented evidence, or by an assessment performed by the GCAA. This assessment should be recorded.

(h) knowledge of maintenance methods;

(i) knowledge of the applicable regulations.

AMC1 S-1.CAMO.305(d) Personnel requirements

SUFFICIENT NUMBER OF PERSONNEL

(a) 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, nature 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.

(b) To implement a system to plan the availability of staff and to enable the GCAA to accept the number of persons and their qualifications, the organisation should make an analysis of the tasks to be performed, the way in which it intends to divide and/or combine these tasks, indicate how it intends to assign responsibilities and establish the number of man/hours and the qualifications needed to perform the tasks. This analysis should be kept up to date and reviewed in case of significant changes to the organisation.

(c) In addition, as part of its management system in accordance with point S-1.CAMO.200, the organisation should have a procedure to assess and mitigate risks:

(1) when actual staff availability is less than the planned staffing level for any particular work shift or period;

(2) in case of a temporary increase of the proportion of contracted staff for the purpose of meeting specific operational needs.

GM1 S-1.CAMO.305(f) Personnel requirements

(Reserved)

AMC1 S-1.CAMO.305(g) Personnel requirements

COMPETENCY ASSESSMENT OBJECTIVES

The procedure referred to in point S-1.CAMO.305(g) should require amongst others that technical support personnel such as, planners, engineers, and technical record staff, supervisors, post-holders, airworthiness review staff, whether employed or contracted, are assessed for competency before unsupervised work commences and competency is controlled on a continuous basis.

Competency should be assessed by the evaluation of:

- on-the-job performance and/or testing of knowledge by appropriately qualified personnel;
- records for basic, organisational, and/or product type and differences training; and
- experience records.

Validation of the above could include a confirmation check with the organisation(s) that issued such document(s). For that purpose, experience/training may be recorded in a document such as a logbook.
As a result of this assessment, an individual's qualification should determine:

- which level of ongoing supervision would be required and whether unsupervised work could be permitted;
- whether there is a need for additional training.

A record should be kept of each individual's qualifications and competency assessment (refer also to point S-1.CAMO.220(c)). This should include copies of all documents that attest to their qualifications, such as an authorisation held, as applicable.
For a proper competency assessment of its personnel, the organisation should consider the following:

(a) In accordance with the job function, adequate initial and recurrent training should be provided and recorded to ensure continued competency so that it is maintained throughout the duration of the employment/contract.
(b) All staff should be able to demonstrate knowledge of, and compliance with, the CAMO procedures, as applicable to their duties.
(c) All staff should be able to demonstrate an understanding of safety management principles including HF, related to their job function and be trained as per AMC3 S-1.CAMO.305(g).
(d) To assist in the assessment of competency and to establish the training needs analysis, job descriptions are recommended for each job function in the organisation. Job descriptions should contain sufficient criteria to enable the required competency assessment.
(e) Criteria should allow the assessment to establish that, among other aspects (titles might be different in each organisation):
    (1) Managers are able to properly manage processes, resources and priorities described in their assigned duties, accountabilities and responsibilities in accordance with the safety policy and objectives and in compliance with the applicable requirements and procedures.
    (2) Maintenance programme engineers are able to interpret source data (norms, data issued by the holder of a design approval or by the GCAA, etc.) and use them to develop the aircraft maintenance programme.
    (3) Engineering staff are able to interpret source data (norms, data issued by the holder of a design approval or by the GCAA, etc.) and use them as needed (e.g. to make work cards).
    (4) Planners are able to organise maintenance activities in an effective and timely manner.
    (5) Compliance monitoring staff are able to monitor compliance with this Regulation and to identify non-compliances in an effective and timely manner so that the organisation may remain in compliance with this Regulation.
    (6) Staff who have been designated safety management responsibilities are familiar with the relevant processes in terms of hazard identification, risk management, and the monitoring of safety performance.
    (7) All staff are familiar with the safety policy and the procedures and tools that can be used for internal safety reporting.

(f) The competency assessment should be based upon the procedure specified in GM1 S-1.CAMO.305(g).

AMC2 S-1.CAMO.305(g) Personnel requirements

COMPETENCY ASSESSMENT PROCEDURE

(a) The organisation should develop a procedure that describes the process for conducting competency assessment of personnel. The procedure should specify:

(1) the persons who are responsible for this process;
(2) when the assessment should take place;
(3) how to give credit from previous assessments;
(4) how to validate qualification records;
(5) the means and methods to be used for the initial assessment;
(6) the means and methods to be used for the continuous control of competency, including to gather feedback on the performance of personnel;
(7) the aspects of competencies to be observed during the assessment in relation to each job function;
(8) the actions to be taken if the assessment is not satisfactory; and
(9) how to record assessment results.

(b) Competency may be assessed by having the person work under the supervision of another qualified person for a 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 their intended duties. If the person has been recruited from another approved CAMO, it is reasonable to accept a written confirmation from the previous organisation.

(c) All prospective continuing airworthiness management staff should be assessed for their competency related to their intended duties.

AMC3 S-1.CAMO.305(g) Personnel requirements

SAFETY TRAINING (INCLUDING HUMAN FACTORS)

(a) With respect to the understanding of the application of safety management principles (including HF), all organisation personnel should be assessed for the need to receive initial safety training. Personnel involved in the delivery of the basic continuing airworthiness management services of the organisation should receive both initial and recurrent safety training, appropriate for their responsibilities.

This should include at least the following staff members:

- nominated persons, line managers;
- persons involved in any compliance monitoring and/or safety management related processes and tasks, including application of HF principles, internal investigations and safety training;
- airworthiness review staff;
- technical support personnel such as, planners, engineers, and technical record staff;
- personnel involved in developing and amending/reviewing the AMP, in assessing its effectiveness and/or working on reliability programme; and
- contract staff in the above categories.

The generic term 'line managers' refers to departmental head or person responsible for operational departments or functional units directly involved in the delivery of the basic continuing airworthiness management services of the organisation.

(b) Initial safety training should cover all the topics of the training syllabus specified in GM2 S-1.CAMO.305(g) either as a dedicated course or else integrated within other training. The syllabus may be adjusted to reflect the particular nature of the organisation. The syllabus may also be adjusted to suit the particular nature of work for each function within the organisation. Initial safety training compliant with the organisation's training standards should be provided to personnel identified in accordance with point (a) of this AMC within 6 months of joining the organisation, but temporary staff may need to be trained shortly after joining the organization to cope with the duration of employment. Personnel being recruited from another organisation, and temporary staff should be assessed for the need to receive any additional safety training.

(c) The purpose of recurrent safety training is primarily to ensure that staff remain current in terms of SMS principles and HF, and also to collect feedback on safety and HF issues. Consideration should be given to involving compliance monitoring staff and key safety management personnel in this training to provide a consistent presence and facilitate feedback. There should be a procedure to ensure that feedback is formally reported by the trainers through the internal safety reporting scheme to initiate action where necessary.

Recurrent safety training should be delivered either as a dedicated course or else integrated within other training. It should be of an appropriate duration in each 2-year period, in relation to the relevant compliance monitoring audit findings and other internal/external sources of information available to the organisation on safety and HF issues.

(d) Safety training may be conducted by the organisation itself, independent trainers, or any training organisations acceptable to the GCAA.

AMC4 S-1.CAMO.305(g) Personnel requirements

OTHER TRAININGS

(a) The organisation should assess the need for particular training; for example, with regard to the competency standards established for the 'Electrical Wiring Interconnection System' (EWIS), the 'Continuing Structural Integrity Programme' or the 'Critical Design Configuration Control' (CDCCL).

(b) Guidance on fuel tank safety training is provided in Appendix III to AMC4 S-1.CAMO.305(g).

(c) Those responsible for managing the compliance monitoring function should receive training on this task. Such training should cover the requirements of compliance monitoring, manuals and procedures related to the task, audit techniques, reporting, and recording.

(d) Personnel involved in developing and amending/reviewing the AMP, in assessing its effectiveness and/or working on reliability programme, should have knowledge of or be trained on statistical analysis and reliability method and the applicable methodology used in developing, as part of the instructions for continuing airworthiness (ICA), the manufacturer recommended maintenance programme (such as maintenance steering group logic).

AMC5 S-1.CAMO.305(g) Personnel requirements

INITIAL AND RECURRENT TRAINING

(a) Adequate initial and recurrent training should be provided and recorded to ensure that staff remain competent.
(b) Recurrent training should take into account certain information reported through the internal safety reporting scheme (see point (c)(3) of AMC1 S-1.CAMO.202).

GM1 S-1.CAMO.305(g) Personnel requirements

SAFETY TRAINING (INCLUDING HUMAN FACTORS)

(a) The scope of the safety training and the related training programme will differ significantly depending on the size and complexity of the organisation. Safety training should reflect the evolving management system, and the changing roles of the personnel who make it work.
(b) In recognition of this, training should be provided to management and staff at least:
  (1) during the initial implementation of safety management processes;
  (2) for all new staff or personnel recently allocated to any safety management related task;
  (3) on a regular basis to refresh their knowledge and to understand changes to the management system;
  (4) when changes in personnel affect safety management roles, and related accountabilities, responsibilities, and authorities; and

NOTE: In the context of safety management, the term 'authority' is used in relation to the level of management in the organisation that is necessary to make decisions related to risk tolerability.

  (5) when performing dedicated safety functions in domains such as safety risk management, compliance monitoring, internal investigations.

(c) Safety training is subject to the record-keeping requirements in point S-1.CAMO.220(c).

GM2 S-1.CAMO.305(g) Personnel requirements

TRAINING SYLLABUS FOR INITIAL SAFETY TRAINING

The training syllabus below identifies the topics and subtopics that should be addressed during the safety training.

The CAMO may combine, divide, or change the order of any of the subjects in the syllabus to suit its own needs, as long as all the subjects are covered to a level of detail that is appropriate for the organisation and its personnel, including the varying level of seniority of that personnel.
Some of the topics may be covered in separate training courses (e.g. health and safety, management, supervisory skills, etc.) in which case duplication of the training is not necessary.
Where possible, practical illustrations and examples should be used, especially accident and incident reports.
Topics should be related to existing legislation, where relevant. Topics should be related to existing guidance/advisory material, where relevant (e.g. ICAO HF Digests and Training Manual).
Topics should be related to continuing airworthiness management and maintenance engineering where possible; too much unrelated theory should be avoided.

1. General/Introduction to safety management and HF

1.1 Need to address safety management and HF

1.2 Statistics

1.3 Incidents

1a. Safety risk management

1a.1. Hazard identification

1a.2. Safety risk assessment

1a.3. Risk mitigation and management

1a.4. Effectiveness of safety risk management

2. Safety Culture/Organisational factors

2.1 Justness/Trust

2.2 Commitment to safety

2.3 Adaptability

2.4 Awareness
2.5 Behaviour

2.6 Information

3. Human error

3.1 Error models and theories

3.2 Types of errors in continuing airworthiness management and maintenance tasks

3.3 Violations

3.4 Implications of errors

3.5 Avoiding and managing errors

3.6 Human reliability

4. Human performance & limitations

4.1 Vision

4.2 Hearing

4.3 Information-processing

4.4 Attention and perception

4.5 Situational awareness

4.6 Memory

4.7 Claustrophobia and physical access

4.8 Motivation

4.9 Fitness/Health

4.10 Stress

4.11 Workload management

4.12 Fatigue

4.13 Alcohol, medication, drugs

4.14 Physical work

4.15 Repetitive tasks/complacency

5. Environment

5.1 Peer pressure

5.2 Stressors

5.3 Time pressure and deadlines

5.4 Workload

5.5 Shift work

5.6 Noise and fumes

5.7 Illumination

5.8 Climate and temperature

5.9 Motion and vibration

5.10 Complex systems

5.11 Other hazards in the workplace

5.12 Lack of manpower

5.13 Distractions and interruptions

6. Procedures, information, tools and practices

6.1 Visual inspection

6.2 Work logging and recording

6.3 Procedure — practice/mismatch/norms

6.4 Technical documentation — access and quality

7. Communication

7.1 Shift/Task handover

7.2 Dissemination of information

7.3 Cultural differences

8. Teamwork

8.1 Responsibility

8.2 Management, supervision and leadership

8.3 Decision-making

9. Professionalism and integrity

9.1 Keeping up to date; currency

9.2 Avoiding error-provoking behaviour

9.3 Assertiveness

10. Organisation's safety programme

10.1 Safety policy and objectives, just culture principles

10.2 Reporting errors and hazards, internal safety reporting scheme

10.3 Investigation process

10.4 Action to address problems

10.5 Feedback and safety promotion

GM3 S-1.CAMO.305(g) Personnel requirements

COMPETENCY OF THE SAFETY MANAGER

The competency of a safety manager should include, but not be limited to, the following:

(a) knowledge of ICAO standards and European requirements on safety management;
(b) an understanding of management systems, including compliance monitoring systems;
(c) an understanding of risk management;
(d) an understanding of safety investigation techniques and root cause methodologies;
(e) an understanding of HF;
(f) understanding and promotion of a positive safety culture;
(g) operational experience related to the activities of the organisation;
(h) safety management experience;
(i) interpersonal and leadership skills, and the ability to influence staff;
(j) oral and written communications skills;

(k) data management, analytical and problem-solving skills.

S-1.CAMO.310 Refer to CAR-M707(b)
S-1.CAMO.315 Continuing airworthiness management

(a) The organisation shall ensure that all continuing airworthiness management is carried out in accordance with Subpart C of CAR-M, or Subpart C of CAR-ML, as applicable.

(b) For every aircraft managed, the organisation shall in particular:
  (1) Refer to CAR-M 302
  (2) (Reserved);
  (3) ensure that data used for any modification and repairs complies with CAR M.304;
  (4) establish a procedure to assess non-mandatory modifications and/or inspections and decide on their application, making use of the organisation's safety risk management process as required by point (a)(3) of point S-1.CAMO.200;
  (5) ensure that the aircraft, engine(s), propeller(s) and components thereof are taken to an appropriately approved maintenance organisation referred to in CAR 145 whenever necessary;
  (6) order maintenance, supervise activities, and coordinate related decisions to ensure that any maintenance is carried out properly and is appropriately released for the determination of aircraft airworthiness.

(c) Ensure the written maintenance contract complies with requirement specified in CAR-M 708(c)

(d) Ensure the written maintenance contract format complies with requirement specified in CAR-M 708(d)

(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.

AMC1 S-1.CAMO.315 (Reserved).

GM1 S-1.CAMO.315 (b) Continuing airworthiness management

AIRCRAFT MAINTENANCE PROGRAMME

In accordance with CAR M.302 and CAR ML.302, the CAMO requirement to 'control' the AMP includes in particular:

(i) in the case of aircraft complying with CAR-ML, the approval of the AMP and its amendments;
(ii) in the case of aircraft complying with CAR-M, the presentation of the AMP and its amendments to the GCAA for approval, unless the approval is covered by an indirect approval procedure in accordance with CAR M.302(c).

AMC1 S-1.CAMO.315(b)(3) (Reserved)
AMC1 S-1.CAMO.315(b)(4) Continuing airworthiness management

ASSESSMENT OF NON-MANDATORY INFORMATION

The CAMO managing the continuing airworthiness of the aircraft should establish and work according to a policy, which assesses non-mandatory information (modification or inspections) related to the airworthiness of the aircraft. Non-mandatory information refers to service bulletins, service letters and

other information that is produced for the aircraft and its components by an approved design organisation, the manufacturer or the GCAA.

GM1 S-1.CAMO.315(b)(5) 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 continuing airworthiness of the aircraft.

AMC S-1.CAMO.315(c) Refer to AMC to CAR-M 708 (c)

GM S-1.CAMO.315(c) Refer to GM to CAR-M 708 (c)
GM S-1.CAMO.315(d) Refer to AMC to CAR-M 708 (d)

S-1.CAMO.320 (Reserved)
S-1.CAMO.325 (Reserved)

AMC S-1.CAMO.325 (Reserved)

GM S-1.CAMO.325 (Reserved)