Subject: TECHNICAL GUIDANCE MATERIAL FOR MAINTENANCE RECORDS AND RECORD KEEPING SYSTEM

Effective Date: 26 JUNE 2013

A. PURPOSE:

This Guidance Material establishes the process for the Maintenance Records and Record Keeping System.

REFERENCES:
CAR 43.03.1
CAR 43.01.8
CAR 121.09.6
CAR 135.09.6
CAR 145.02.15
CAR 145.02.17

I. MAINTENANCE ORGANISATIONS RECORDS

1. Requirements
1.1 Any person who carries out maintenance on an aircraft or aircraft component shall record, on completion of the maintenance—

a) details of the maintenance including, where applicable, the type of inspection and any approved data used;
b) for a mandatory periodic, progressive or scheduled inspection, whether a detailed inspection or routine inspection of the particular components or areas of the aircraft was carried out;
c) the serial numbers, if any, of components removed or fitted;
d) details of measurements or test results obtained, including the results of any ground or air tests;
e) for an air speed indicator or altimeter system pilot static test and inspection, the date on which, and maximum altitude to which the altimeter has been tested;
f) the date of completion of such maintenance;
g) the references to the documents used to carry out the maintenance and their revision status;
h) the name of the person completing such maintenance, if other than the person certifying the release to service;
i) the location and, if applicable, the name of the facility where such maintenance was carried out; and
j) Where such maintenance has been carried out as a consequence of the failure of any equipment, or damage caused by forced landing or accident, the reasons for carrying out the maintenance.
1.2 The person who carries out the maintenance shall:—
   a) record the details referred to in (b) above in the appropriate logbook or in a maintenance record approved by the Director;
   b) where worksheets or other associated maintenance records are used to document the details of the maintenance, make a reference to those records in the logbook, flight folio or in the maintenance record approved by the Director.

1.3 The holder of an AMO approval shall keep adequate records of all maintenance performed by the AMO.

1.4 The records shall—
   a) indicate the name of each person who performed the work; and
   b) Indicate the name of each person who inspected the work.

1.5 The holder of an approval shall provide a copy of each certificate of release to service to the operator of the aircraft, together with a copy of any specific airworthiness data used for repairs or modifications carried out.

1.6 The holder of an approval shall establish a procedure for recording maintenance details and for the retention of such maintenance records.

1.7 Records pertaining to life-limited or previously used parts must be available and traceable. Parts with no historical record shall be considered to be unserviceable and such parts shall not be fitted to an aircraft.

1.8 The organisation shall record all details of maintenance work carried out. As a minimum, the organisation shall retain records necessary to prove that all requirements have been met for issuance of the certificate of release to service, including subcontractor's release documents.

1.9 The organisation shall retain a copy of all detailed maintenance records and any associated maintenance data for five years from the date the aircraft or component to which the work relates was released from the organisation.
   a) Records under this paragraph shall be stored in a safe way with regard to fire, flood and theft.
   b) Computer backup discs, tapes etc. shall be stored in a different location from that containing the working discs, tapes etc., in an environment that ensures they remain in good condition.
   c) Where an organisation approved under this Part terminates its operation, all retained maintenance records covering the last five years shall be distributed to the last owner or customer of the respective aircraft or component or shall be stored as specified by the CAA.

2. Guidance

2.1 Associated maintenance data is specific information such as repair and modification data. This does not necessarily require the retention of all Aircraft Maintenance Manual, Component Maintenance Manual, IPC etc. issued by the TC holder or STC holder. Maintenance records should refer to the revision status of the data used.

2.2 Properly executed and retained records provide owners, operators and maintenance personnel with information essential in controlling unscheduled and scheduled maintenance, and troubleshooting to eliminate the need for re-inspection and rework to establish airworthiness.
The prime objective is to have secure and easily retrievable records with comprehensive and legible contents. The aircraft record should contain basic details of all serialized aircraft components and all other significant aircraft components installed, to ensure traceability to such installed aircraft component documentation and associated maintenance data.

2.3 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.

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

2.5 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.

III. OPERATOR’S AIRCRAFT CONTINUING AIRWORTHINESS RECORD SYSTEM

1. Requirements

1.1 At the completion of any maintenance, the associated certificate of release to service shall be entered in the aircraft continuing airworthiness records. All rectification away from base must be entered and certified in the aircraft’s flight folio and transferred in the appropriate logbook(s) within 48 hours after the aircraft returns to base.

1.2 The aircraft continuing airworthiness records shall consist of, as appropriate, an aircraft logbook, engine logbook(s) or engine module log cards, propeller logbook(s) and log cards, for any service life limited component and the operator’s technical log.

1.3 The aircraft type and registration mark, the date, together with total flight time and/or flight cycles and/or landings, as appropriate, shall be entered in the aircraft logbooks.

1.4 The aircraft continuing airworthiness records shall contain the current:

a) status of airworthiness directives, Service bulletins and measures mandated by the CAA in immediate reaction to a safety problem;

b) status of modifications and repairs;

c) status of compliance with maintenance programme;

d) status of service life limited components;

e) mass and balance report;

f) List of deferred maintenance, etc.

1.5 Records pertaining to life-limited or previously used parts must be available and traceable. Parts with no historical record shall be considered to be unserviceable and such parts shall not be fitted to an aircraft.

1.6 In addition to the authorised release document, component release form or equivalent, the following information relevant to any component installed shall be entered in the appropriate engine or propeller logbook, engine module or service life limited component log card:

a) identification of the component, and;

b) the type, serial number and registration of the aircraft to which the particular component has been fitted, along with the reference to the installation and removal of the component, and;
c) the particular component accumulated total flight time and/or flight cycles and/or landings and/or calendar time, as appropriate, and;

d) the current information applicable to the component.

1.7 The Owner or Operator's person responsible for the management of continuing airworthiness tasks and records shall control the records as detailed in this paragraph and present the records to the CAA upon request.

1.8 All entries made in the aircraft continuing airworthiness records shall be clear and accurate. When it is necessary to correct an entry, the correction shall be made in a manner that clearly shows the original entry and the use of tippex or similar correction methods is prohibited.

1.9 An owner or operator shall ensure that a system has been established to keep the following records for the periods specified unless the Director has prescribed a longer period in respect of an aircraft, its engine(s) or propeller(s) involved in an accident or incident.

a) all detailed maintenance records in respect of the aircraft and any life-limited component fitted thereto, at least 6 months after the aircraft or component was permanently withdrawn from service, and;

b) the total time and flight cycles as appropriate, of the aircraft and all life-limited components, at least 6 months after the aircraft or component has been permanently withdrawn from service;

c) the time and flight cycles as appropriate, since last scheduled maintenance of the component subjected to a service life limit, at least until the component scheduled maintenance has been superseded by another scheduled maintenance of equivalent work scope and detail;

d) the current status of compliance with maintenance programme such that compliance with the approved aircraft maintenance programme can be established, at least until the aircraft or component scheduled maintenance has been superseded by other scheduled maintenance of equivalent work scope and detail;

e) the current status of airworthiness directives applicable to the aircraft and components, at least 6 months after the aircraft or component has been permanently withdrawn from service, and;

f) Details of current modifications and repairs to the aircraft, engine(s), propeller(s) and any other component vital to flight safety, at least 6 months after they have been permanently withdrawn from service.

g) When an aircraft is exported and the logbooks are transported with the aircraft, a copy of the last major overhaul and repairs performed as well as copies of the defects rectification for the last six (6) months prior to export shall be retained by the exporter or the responsible aviation maintenance organisation, as the case may be.

2. Guidance

2.1 Information on times, dates, cycles etc. should give an overall picture on the state of maintenance of the aircraft and its components. The current status of all service life-limited aircraft components should indicate the component life limitation, total number of hours, accumulated cycles or calendar time and the number of hours/cycles/time remaining before the required retirement time of the component is reached.

2.2 The current status of ADs should identify the applicable AD including revision or amendment numbers. Where an AD is generally applicable to the aircraft or component type but is not applicable to the particular aircraft or component, then this should be identified.

The AD status includes the date when the AD was accomplished, the method of compliance and where the AD is controlled by flight hours or flight cycles it should include the aircraft or engine or component total flight hours or cycles, as appropriate.
The status should also specify which part of a multi-part directive has been accomplished and the method of compliance, where a choice is available in the AD. For repetitive ADs, only the last application should be recorded in the AD status.

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

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

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

2.5 When an owner/operator arranges for the relevant maintenance organisation to retain copies of the continuing airworthiness records on their behalf, the owner/operator will continue to be responsible for the retention of records. In the event an aeroplane is leased or otherwise transferred temporarily to another operator, the records shall be made available to the new operator. If they cease to be the owner/operator of the aircraft, they also remain responsible for the transferring the records to any other person who becomes the owner/operator of the aircraft.

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

2.7 Paper systems should use robust material, which can withstand normal handling and filing. Computer systems should have at least one backup system, which should be updated at least within 24 hours of any maintenance. Each terminal is required to contain programme safeguards against the ability of unauthorised personnel to alter the database.

2.8 Details of current modifications and repairs include the data supporting compliance with the airworthiness requirements. This can be in the form of a STC, SB, SRM or similar document. Continuing airworthiness records should be stored in a safe way with regard to fire, flood, theft and alteration. 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.

2.9 Reconstruction of lost or destroyed records can be done by reference to other records which reflect the time in service, research of records maintained by repair facilities and reference to records maintained by individual mechanics etc. When these things have been done and the record is still incomplete, the owner/operator may make a statement in the new record describing the loss and establishing the time in service based on the research and the best estimate of time in service. The reconstructed records should be submitted to the CAA for acceptance.
NOTE: Additional maintenance may be required.

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

3. FALSIFICATION, REPRODUCTION OR ALTERATION OF MAINTENANCE DOCUMENTS

No person shall make or cause to be made:—

a) any fraudulent or false entry in any record, which is required to be made, kept, or used to show compliance with any requirement prescribed in this part; or
b) Any reproduction or alteration for fraudulent purposes, of any record or report made in terms of the provisions of this part.

4. LOSS OF LOGBOOKS

4.1 When the registered owner of an aircraft reports the loss of a logbook currently in use, a request to open a substitute logbook shall be made in writing to the Director accompanied by affidavit and appropriate data for the purpose of reconstructing the logbook.

4.2 When the Director approves the opening of a substitute logbook, the relevant authorisation shall be made a permanent part of that logbook.

4.3 The procedure to be followed for the opening of a substitute logbook is prescribed in section V below.

4.4 When a logbook has been lost, the relevant certificate of airworthiness or authority to fly shall be considered invalid until such time that all the requirements for the opening of a substitute logbook have been met.

5. PROCEDURE FOR OPENING NEW LOGBOOKS

5.1 The registered owner shall submit to the Director an affidavit detailing the circumstances leading to the loss of the logbook(s).

5.2 The person or organisation responsible for the opening of a new logbook –

a) may consult relevant records at the premises of the CAA and at the prescribed fee obtain copies of relevant pages;

b) obtain any further information required to open the substitute logbook(s) so that these comply with the relevant regulations and technical standards, copies of which shall be supplied to the Director;

c) shall provide proof of overhaul of all Class I and all installed Class II products;

d) shall research and certify that all relevant Airworthiness Directives, Service Bulletins or Service Letters declared mandatory by the Director have been complied with;

e) shall certify that the aircraft, its engine(s) and in particular its tubular engine mountings (if applicable) have been inspected for corrosion; and
f) shall in the substitute logbook(s) detail and certify the inspection(s) and test(s) carried out to ensure that the aircraft, engine or propeller and their components is indeed serviceable.

5.3 The total hours operated or the times since overhaul of the relevant aircraft, engine(s) or propeller(s) shall be mutually agreed upon between the owner, maintenance organisation(s) and the Director.

5.4 The substitute logbook(s) shall be inspected by an Airworthiness Inspector of the CAA who will date and insert the Director’s authorisation to open the substitute logbook.

In the event of all relevant documentation having been lost, all documents required for the issue of a Certificate of Airworthiness or Authority to Fly must be prepared in accordance with this technical standard, and the aircraft and its documents shall be re-inspected by an Airworthiness Inspector of the CAA.

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