CHAPTER 37

INSPECTION OF OPERATOR' S CONTINUOUS AIRWORTHINESS MAINTENANCE PROGRAMME RECORDS

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1.0 PURPOSE

This chapter provides guidance for inspecting an operator's aircraft maintenance records under continuous airworthiness maintenance programme. Reference: ICAO, Annex 6, Chapter 8, Sections 8.3.1 .6 ICAO Document 8335 - AN/879, Chapter 6, Paragraph 6.8 and Chapter 9, Paragraph 9.6.27. Nig. CARs Part 8.

2.0 GENERAL

A. Aircraft maintenance records include any records that document the performance of work on an aircraft. An Operator's aircraft maintenance records must be inspected periodically to ensure that they meet the requirements of the operator's approved record- keeping system.

B. *Surveillance Criteria.* While inspecting an operator's aircraft maintenance records, assigned inspectors must determine that all the work was based on instructions, procedures, or information that has been approved previously or accepted by the NCAA. Such data can be in the form of:

- Manufacturer's manuals.
- Service bulletins
- Service letters
- Data included in the operator's approved inspection and/or maintenance programmes.
- Approved Engineering Orders or Authorizations
- Airworthiness Directives (ADs)
- Other accepted documents

C. *Personnel Identification Recording Requirements.* The certificate holder's manual must provide for a positive means of identification, such as an employee identification number, for any person performing or approving work.

3.0 RECORD REQUIREMENTS

A. Retaining Certificate of Release to Service

(1) Maintenance releases must be preserved by the operator for two (2) years from the date of issue.

(2) All of the records necessary to show that the requirements of the issuance of a maintenance release have been met must be retained for two (2) years from date of issue.

B. Total Time in Service Records

(1) The total time in service record is a record starting from the date of manufacture and continuing through the life of the aircraft.

(2) When an engine is rebuilt and certified to zero time, total time in service becomes zero.

C. *Life-limited Parts.* Operators must have current record of the status of life-limited items. This record indicates the present accumulated time in service of each life- limited item.

NOTE: Life-limited parts may not be rebuilt and certified to zero time.

D. *Records of Overhaul.* An operator must maintain overhaul records of any item required to be overhauled. These records must be maintained until the work is superseded or repeated by work of equivalent scope and detail.

E. *Inspection Status.* Inspection status defines the work that has been and is scheduled to be performed per the inspection or maintenance programme. The inspection status records must show the following:

- Type of most recent inspection.
- The time at which that inspection was performed.
- The time since that most recent inspection expressed in terms of hours, cycles, or calendar time.
- The scheduled time and type of next inspection.

F. The operator must maintain a record of the current status of all applicable ADs for the operator's equipment. Some acceptable sources of procedures for compliance with ADs are:

- Service bulletins

- Service letters
- Specific instructions provided in the Airworthiness Directive.
- Approved Engineering Orders or Authorizations.

NOTE: Only data specifically approved for AD accomplishment by the appropriate regulatory authority where the aircraft was certified is authorized.

(1) The surveillance of ADs should be included in all work programmes where an operator performs maintenance. AD verification can be accomplished by the following methods:

(a) Actual surveillance of the AD being accomplished. This would also include a review of all paper work such as Engineering Authorizations, Engineering Orders, work cards, maintenance manual references and service bulletins to ensure that the Airworthiness Directive is properly complied with.

(b) Physical verification of previous Airworthiness Directive accomplishment.

G. Major Repair and Major Alteration Records.

(1) An operator must prepare a report of each major repair and major alteration.

(a) The major alteration report must be sent to the NCAA.

(b) A copy of the major repair report must be kept available for inspection.

(2) Additionally, the operator must keep a list of all current major alterations.

4.0 REPAIR STATION RECORDS OF WORK PERFORMED ON OPERATOR'S AIRCRAFT.

Since repair stations only have to retain records of work performed for two (2) years, some operators have reported that maintenance records are not always available from repair station beyond the two- (2) year retention period. Since the operator is always responsible for obtaining and retaining the records required by the NCAA, operators should be advised to require a copy of the work documentation from the repair station at the time that work is performed.

5.0 PREREQUISITES

- Knowledge of the requirements of the Nigeria Civil Aviation Regulations.
- Familiarity with the type of operation being inspected.

6.0 PROCEDURES

The assigned inspector:

A. Review the NCAA Office File.

B. *Inspect the Maintenance Records.* Ensure that the operator has retained the required maintenance/alteration/inspection records of each aircraft, including airframe, engine, propeller, and appliances. These records should include the following:

(1) A description of the work performed (data acceptable to the NCAA), including the date of completion.

(2) The name of the person performing the work if that person is not an employee of the operator.

(3) The name or other positive identification of the person approving the work.

C. *Inspect the Operator's Record System.* Inspect records to ensure that manual procedures are being followed. During inspection, document and photocopy any confusing areas, obvious omissions or apparent discrepancies. Records checked should include the following:

(1) Certificates of Release to Service (Airworthiness Releases)

(a) Ensure that the operator is retaining Certificates of Release to Service for at least two (2) years.

(b) Ensure that the Certificate of Release to Service signature is authorized by the operator.

(c) Review the signatory's training record to ensure that the person is trained to the level identified in the operator's manual.

(2) Log Books.

Obtain and review the logbooks to determine the effectiveness of the Certificate of Release to Service Procedures following scheduled inspection and non-routine Release to Service records to ensure the following:

(a) Flight discrepancies are entered after each flight

(b) Corrective actions are related to the discrepancy.

(c) Corrective actions and sign-offs are entered in the maintenance record per manual procedures.

(d) Repetitive discrepancies are handled according to the manual.

(e) Deferred maintenance as authorized by the Minimum Equipment List (MEL) is deferred per the operator's MEL and manual instructions.

(f) RII items (duplicate inspections) are signed off per the manual instructions and the inspector is authorized by the operator to perform the inspection.

(3) *Schedule inspections.* Select or obtain work packages for schedule inspections and ensure the following:

(a) That schedule inspections are properly signed off.

(b) That generated non-routine items are properly signed off.

(b) That RII (duplicate inspection) items are properly identified and signed off by properly authorized, qualified, certificated and trained personnel.

(c) That repairs are categorized correctly (major or minor) and that approved data is being used.

(4) *Total time in service records.* Compare the manual procedures with the actual accomplishment of the total time/cycles in service records for the airframe, engine, propeller and rotor.

(a) Select and obtain a total time/cycles in service record for a sample number of aircraft to ensure that cumulative flight times/cycles are added to the record.

(b) Make a spot check of the cumulative total time/cycle in service against the flight logs to ensure that daily entries correspond to the flight log.

(c) If the operator maintains a handwritten maintenance record for engines, compare the record entries to the aircraft flight log for the following:

- Overall accuracy
- The possible transposition of flight time/cycles in service, numbers, etc.

(5) *Life-limited parts records.* Compare the manual procedures for life-limited parts with the actual recording of the current status of life-limited parts. Select a random sample of records and ensure the following:

(a) All life-limited parts described on type certificate data sheets or in a manual referenced on the type certificate data sheets are noted.

(b) The current status of each part is provided, to include:

- Total operating hours/cycle accumulated
- Life-limit (total service life).
- Remaining time/cycles.
- Modifications.

(c) The time/cycles limits on the operator's list are the same as those on the type certificate data sheets.

(d) Life-limits have not been exceeded. Select a sample of life-limited items that have been installed within the last 12 months and review records to ensure that life-limited time was carried forward from the previous service record.

(e) If overhauled, the overhaul record is available.

(f) The life-limit of an item has not been changed as a result of the overhaul.

(6) *Overhaul records.* Compare the manual procedures for maintaining the overhaul record with the actual overhaul record content.

(a) Select a random sample of overhauled items to ensure the following:

- Overhaul records are available for items selected
- The records contain a description of the overhaul.
- The item was overhauled per the overhaul specifications by a qualified and authorized person.
- The component was released to service by an authorized person.

(b) Review removal installation records of overhauled components to determine if the overhaul was done within the authorized time limits. Current regulations require these records to be maintained until the work is superseded by work of equivalent scope and detail.

(7) Inspection status records

(a) Compare the manual procedures for maintaining the current aircraft inspection status with available records to ensure that the recorded daily flight hours/cycles are used to obtain the current inspection status.

(c) Take a random sample of aircraft inspection records to ensure that schedule inspections times/cycles were not exceeded (over flown).

(8) *Airworthiness Directives.* Request a random sample of aircraft AD compliance records to ensure the following:

(a) The records contain all applicable ADs for the sampled aircraft.

(b) That AD requirements were accomplished within the effective times of the AD

NOTE: Special emphasis should be put on checking recurring ADs.

(c) The AD record contains current status and method of compliance. The current status must include the following:

- A list of all ADs applicable to the aircraft
- Date and time of compliance
- Time and/or date of next required action (if recurring AD)

(d) The record is being retained indefinitely

NOTE: If any ADs have an alternative method of compliance, ensure that the operator has obtained prior approval for that alternative method. Time extensions for ADs may only be approved by the Engineering Department of the Regulatory Authority of the country where the aircraft was manufactured.

(e) The method of compliance is the same as specified in the AD.

(f) The date of compliance is identical with the date on the current status list.

(g) The mechanic/inspector was properly trained and authorized to accomplish the work.

(h) The accomplishment was properly signed off

(9) Major alteration and major repair records

(a) Compare the manual procedures for maintaining a list of major alterations and the reports for major repairs with the actual records.

(b) Compare a random sample of major repair and alteration records to the alteration and repair list and/or reports to ensure the following:

- List and/or reports contain the date of accomplishment and a brief description of the work
- The respective maintenance records show that the work was accomplished per approved data.

NOTE: When major alterations or major repairs are identified and not recorded on the above-mentioned list or report, request the actual maintenance accomplished record and the approved data from the operator.

D. *Analyze the Findings.* Evaluate all deficiencies to determine if corrective actions will be required.

7.0 TASK OUTCOMES

A. Completion of this task may result in the following:

- A letter from the NCAA informing the operator of the results of the inspection.
- Enforcement Investigation Report, as applicable.

B. *Document the Task.* File all supporting paperwork in the operator's office file.

8.0 FUTURE ACTIVITIES.

Normal surveillance.