

## CHAPTER 42. INSPECT PART 121/135 (TEN OR MORE) AND PART 129 OPERATOR'S MAINTENANCE RECORDS

### SECTION 1. BACKGROUND

#### 1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

*A. Maintenance:* 3634, 3649

*B. Avionics:* 5634, 5649

**3. OBJECTIVE.** This chapter provides guidance for inspecting an operator's aircraft maintenance records under Title 14 of the Code of Federal Regulations (14 CFR) part 121/135 (ten or more) and part 129, § 129.14 aircraft (U.S.-registered aircraft operated by a foreign operator).

#### 5. GENERAL.

*A. Records.* Aircraft maintenance records include any records that document work performed 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 recordkeeping system.

*B. Surveillance Criteria.* While inspecting an operator's aircraft maintenance records, principal inspectors (PI) must determine if all the work is based on instructions, procedures, or information that was approved previously or accepted by the Federal Aviation Administration (FAA). 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 programs
- Manufacturer/operator's approved engineering orders or authorizations
- Airworthiness Directives (AD)
- Other accepted documents

*C. Personnel Identification Recording Requirements.* The operator's manual must provide for a positive means of identification, such as an employee

identification number, for any person performing or approving work.

#### 7. RECORD REQUIREMENTS.

*A. Retaining Airworthiness Releases.*

(1) Airworthiness releases must be retained by the operator for 2 months.

(2) All of the records necessary to show that the requirements for the issuance of an airworthiness release are met must be retained until the work is repeated or superseded, or for 1 year.

*B. Total Time-in-Service Records.*

(1) Total time-in-service is a record starting from the date of manufacture and continuing for the life of the aircraft. Engine rebuilding and certifying to zero time-in-service must not be confused with a zero time-since-overhaul certification.

(2) Zero time-since-overhaul certification does not affect the calculation of total time-in-service. When an engine is rebuilt and certified to zero time, the total time-in-service is zero (14 CFR part 91, § 91.421).

**NOTE: Only the manufacturer or the manufacturer's representative can zero time an engine.**

*C. Life-Limited Parts.* Operators must have a 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 by work of equivalent scope and detail.

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

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

*F. Status of ADs.* The operator must maintain a record of the current status of all one-time/recurring ADs applicable to the operator's equipment. In addition to specific instructions provided in the AD, typical sources of procedures for compliance with ADs include:

- Service bulletins
- Service letters
- Approved operator/manufacturer's engineering orders or authorizations

**NOTE: Only data specifically approved for AD accomplishment by the appropriate Aircraft Certification Office is authorized.**

(1) The surveillance of ADs should be included in all work programs. 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 paperwork, such as Engineering Authorizations, Engineering Orders, workcards, maintenance manual

references, and service bulletins, to ensure that the AD is properly complied with.

(b) Physical verification of previous AD accomplishment.

(2) The PTRS comment code should relate to the Air Transport Association of America's (ATA) aircraft codes (ATA Spec 100 codes) of ADs being inspected. Comments should contain the numbers of each AD verified, the type of AD verified, and the complete inspection results.

*G. Major Repair and Major Alteration Record.*

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

(a) A copy of the major alteration report must be sent to the certificate-holding district office (CHDO) for review.

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

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

## **9. REPAIR STATION RECORDS OF WORK PERFORMED ON OPERATOR'S AIRCRAFT.**

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

## SECTION 2. PROCEDURES

### 1. PREREQUISITES AND COORDINATION REQUIREMENTS.

#### A. Prerequisites:

- Knowledge of the regulatory requirements of 14 CFR part 121, part 129, § 129.14, or part 135
- Successful completion of the Airworthiness Inspector Indoctrination course(s) or equivalent
- Familiarity with the type of operation being inspected

#### B. Coordination:

(1) This task requires coordination between the PIs, the operator, and with the Regulatory Support Division, Aviation Data Systems Branch, AFS-620, as applicable.

(2) If the task is performed by the office with geographic responsibility, coordinate with the CHDO PIs.

### 3. REFERENCES, FORMS, AND JOB AIDS.

#### A. References:

- Title 14 CFR parts 39, 43, 65, 91, 135, and 145, and § 129.14

#### B. Forms. None.

#### C. Job Aids:

- JTA: 2.3.99

### 5. PROCEDURES.

#### A. Review the Office File.

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

(1) A description of the work performed (data acceptable to the Administrator), 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) Airworthiness Releases.

(a) Ensure that the operator retains airworthiness releases for at least 2 months.

(b) Ensure that the airworthiness release signature is authorized by the operator.

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

(2) *Flight/Maintenance Logs.* Obtain and review the flight/maintenance logs to determine the effectiveness of the airworthiness release procedures following scheduled inspections and nonroutine maintenance. Review the 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 in accordance with (IAW) manual procedures.

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

(e) Deferred maintenance, as authorized by the minimum equipment list (MEL), is deferred IAW the operator's MEL and manual instructions.

(f) Required Inspection Items (RII) are signed off IAW the manual instructions.

(g) The inspector was authorized by the operator to perform the inspection.

(3) *Scheduled Inspections.* Select or obtain work packages for scheduled inspections and ensure the following:

(a) Scheduled inspections are properly signed off;

(b) Generated nonroutine items are properly signed off;

(c) RII are properly identified and signed off by properly authorized, qualified, certificated, and trained personnel; and

(d) Repairs are categorized correctly (major or minor) and approved data is being used, as required.

(4) *Total Time/Cycle-in-Service Records.* Compare the manual procedures with the actual accomplishment of the total time/cycle-in-service records for the airframe, engine, propeller, and rotor.

**NOTE: Although part 121 does not specifically call for time/cycle-in-service records of engines, propellers, and rotors, it is difficult for an operator to control the maintenance program without those records.**

(a) Select and obtain a total time/cycle-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 entries to determine the following:

- Overall accuracy
- The possible transposition of flight time/cycle-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 (TCDS) or in a manual referenced on the TCDS are noted.

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

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

(c) The time/cycle limits on the operator's list are the same as those on the TCDS.

(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 records show the time since the last overhaul
- The item was overhauled IAW the overhaul specifications by a qualified and authorized person
- The component was approved for return 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. Ensure that the recorded daily flight hours/cycles are used to obtain the current inspection status.

(b) Take a random sample of aircraft inspection records to ensure that scheduled inspection times/cycles were not exceeded (overflown).

(8) *One-Time/Recurring ADs.* 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) AD requirements were accomplished within the effective times of the AD.

**NOTE: Put a special emphasis on checking recurring ADs.**

(c) The AD record contains the 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.**

(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 work 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:

- Lists 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 IAW approved data

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

*D. Check the Operator's Procedures.* Ensure the operator has procedures that detail how all maintenance records generated at line maintenance facilities or other off-site stations will be transferred to the facility where records are normally held.

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

**7. TASK OUTCOMES.**

*A. File PTRS Data Sheet.* PTRS comments should include the numbers of each AD verified, the type of AD verified, and the complete inspection results.

*B. Complete the Task.* Completion of this task may result in the following:

- A report of any deficiencies submitted to the CHDO if the inspection was performed by the office having geographic responsibility
- A letter from the CHDO informing the operator of the results of the inspection
- An Enforcement Investigation Report, as applicable

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

**9. FUTURE ACTIVITIES.** Normal surveillance.