

VOLUME 3 GENERAL TECHNICAL ADMINISTRATION**CHAPTER 31 ELECTRONIC SIGNATURES, ELECTRONIC RECORDKEEPING SYSTEMS, AND ELECTRONIC MANUAL SYSTEMS****Section 6 Safety Assurance System: Evaluate a Part 91K Non-CAMP Program Manager's, § 125.247 Operator's, and § 135.411(a)(1) Certificate Holder's Maintenance Records****3-3101 REPORTING SYSTEM(S).**

A. Program Tracking and Reporting Subsystem (PTRS). For Title 14 of the Code of Federal Regulations (14 CFR) part 91K and 125, use PTRS activity codes: 3634 and 5634.

B. Safety Assurance System (SAS). For part 135, use SAS automation. This section is related to SAS Element 4.2.4 (AW), Recordkeeping.

3-3102 OBJECTIVE. This section provides guidance to ensure that the program manager/operator/applicant creates, preserves, and retrieves the maintenance records required by the regulations.

3-3103 GENERAL.**A. Definitions.**

1) Life-Limited Part. An aircraft part whose service life is limited to a specific number of operating hours, operating cycles, or a specified calendar period.

2) Approved Data. The Federal Aviation Administration (FAA) Administrator (Airworthiness inspectors, FAA engineering, manufacturing, or a Designated Engineering Representative (DER)) approves drawings, methods, techniques, and materials used to accomplish major repairs or alterations.

3) Person. An individual, firm, partnership, corporation, company, association, joint stock association, or governmental entity. It includes a trustee, receiver, assignee, or similar representative of any of them (refer to 14 CFR part 1, § 1.1).

B. Document Completion Assurance. To comply with the maintenance recording requirements of the regulations, the operator's maintenance manual must identify and contain procedures that ensure that it has completed all applicable documents in use.

C. Maintenance Recordkeeping Requirements. Title 14 CFR part 91, § 91.417 details maintenance recordkeeping requirements for the following:

1) Part 91 requires the current status of applicable Airworthiness Directives (AD), including the date and method of compliance, recurring AD actions, and the time and date when the next action is required.

2) Part 91 has requirements to maintain total time in service records for airframe, engines, propellers, and rotors.

D. Procedures for Document Completion. To comply with the maintenance recording requirements of 14 CFR, the applicant's company manual, as defined in 14 CFR part 125, §§ 125.71, 125.73, 125.75, and 125.249, must identify and contain procedures to complete all applicable documents as specified in parts 91 and 125.

E. Procedures for Recordkeeping. The manual should contain procedures for the recordkeeping system. The procedures should address the following requirements of the regulations:

1) The total time in service record may consist of aircraft maintenance record pages, separate cards or pages, a computer list, or other methods as described in the operator's/applicant's manual (§ 91.1109 and 14 CFR parts 43 and 91 cover § 91.417(a)(2)(i) and part 125).

2) Life-limited parts (e.g., components of the airframe, engine, propellers, rotors, and appliances) are identified for removal from service when they have reached a specific time limit or number of cycles (refer to § 91.417(a)(2)(ii)).

a) The current status of the part is a record indicating the operating time limits, total number of hours or accumulated cycles, and the number of hours or cycles remaining before the component reaches its required retirement time. This record must also include any modification of the part in accordance with ADs, Service Bulletins (SB), or product improvements by the manufacturer or operator/applicant.

b) The FAA does not consider the following to be current status records:

- Work orders,
- Maintenance installation records,
- Purchase requests,
- Sales receipts,
- Manufacturers documentation of original certification, and
- Other historical data.

c) Whenever an operator cannot establish the current status of a life-limited part, that part should be considered un-airworthy and must be removed from service.

3) Either the operations specifications (OpSpecs)/management specifications (MSpecs), or a document referenced in the OpSpecs/MSpecs list items requiring overhaul.

a) The overhaul list includes the actual time or cycles in service since the last overhaul of all items installed on the aircraft.

b) The overhaul list refers to the time since the last overhaul of an item. Do not confuse the list with an overhaul record. An overhaul record requires a description of the work and identification of the person who performed and/or approved the work.

4) The person must make a record whenever he/she/they overhaul(s) an item of aircraft equipment (refer to subparagraph 3-3103E3). This overhaul record must describe the work performed. The program manager/operator/applicant must have this record or be able to make it available to the Administrator.

5) Section 91.417 requires the program manager/operator/applicant to retain a record identifying the current inspection status of each aircraft.

a) The record must show the time in service since the last inspection required by the inspection program, under which the person maintains the aircraft and its appliances (refer to subparagraph 3-3103E3)).

b) The program manager/operator/applicant must retain inspection work packages or routine and non-routine items generated while performing any part of the inspection program for 1 year after performing the work or until other work repeats or supersedes it.

6) The program manager/operator/applicant is required to follow § 91.417(a)(2)(v), and in doing so they must keep a record showing the current status of applicable ADs, including the method of compliance.

7) Section 91.417(a)(2)(v) requires the certificate holder to keep a record showing the current status of applicable ADs, including the method of compliance.

a) This record for 14 CFR parts 91, 125, and 135 must include the following:

- The AD number and revision date;
- List of ADs applicable to the aircraft;
- The date and time in service or cycles, as applicable;
- Method of compliance; and
- The time in service or cycles and/or date when the next action is required (if it is a recurring AD).

b) An acceptable method of compliance may be one of the following:

- Reference to a particular portion of the AD,
- Reference to a manufacturer's SB if the AD references the bulletin, or
- Reference to any other document generated by the operator/applicant that shows compliance with the AD.

c) A program manager/operator/applicant may apply for alternative methods of compliance (AMOC) for accomplishing ADs. The appropriate FAA Aircraft Certification Office (ACO) must approve AMOCs, which must apply only to the operator/applicant making the application. If a program manager/operator/applicant transfers an aircraft to another owner, the AMOC continues to apply to that aircraft.

d) The program manager's/operator's/applicant's manual must have procedures to comply with new and emergency ADs to ensure completion of the action within the given time limits. This must include procedures for notifying the responsible individuals to implement the required action during other than routine duty hours.

e) Serious problems have surfaced during national and routine inspections when the applicable AD current status and method of compliance was not complete. When the operator/applicant cannot determine current status and method of AD compliance from the document, they must verify this compliance through either visual inspection or detailed records review.

8) The operator must accomplish all major alterations by using FAA-approved data. Previous inspections have identified lack of approved data to support major alterations. Operators/applicants are required to retain records of each major alteration to the following:

- Airframe,
- Engine,
- Propeller,
- Rotor, and
- Appliance.

9) The program manager/operator/applicant must retain major repair records for 1 year after accomplishing the work or until the work is repeated or superseded by other work.

10) Major alteration records must be retained with the airplane indefinitely. If the person sells the airplane, he or she must transfer the records to the purchaser (see subparagraph 3-3103A3)).

3-3104 COORDINATION REQUIREMENTS. This task may require local, regional, and/or headquarters (HQ) coordination.

3-3105 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR Parts 43, 65, 91, 91K, 125, 135, and 145.
- Program Manager/Operator Maintenance Records.
- Applicant's Company Manual.

B. Forms. None.

C. Job Aids. None.

3-3106 PROCEDURES.

A. Review Office Files. Review the historical data of the program manager/operator's recordkeeping system. This includes the PTRS history of past inspections, surveillance data, Enforcement Information System (EIS), and other office files.

B. Review the Operator's Maintenance Records. Analyze the program manager/operator/applicant's recordkeeping system. Determine if the regulations' recordkeeping requirements are met. The recordkeeping should provide an acceptable method for creating, preserving, and retrieving required records. All records must contain the following:

- Description of the work performed (or reference to data acceptable to the Administrator);
- The date of completion of the work performed; and
- The signature and certificate number of the person approving the aircraft for return to service.

1) Airworthiness Records. Ensure that the records as described in § 91.417(a)(1) are retained for 1 year after the work is performed or until repeated or superseded by other work.

2) Total Time in Service.

a) Determine the method of recording total time in service of the airframe, engine, propeller, and rotor. This record must show the current time in service appropriate parameter.

b) Determine if this record is retained until the aircraft is sold and is transferred with the aircraft upon sale.

3) Status of Life-Limited Parts.

a) Ensure that the operator is tracking the current status of life-limited parts for each airframe, engine, propeller, rotor, and appliance.

b) Determine if this record is retained until the aircraft is sold and is transferred with the aircraft upon sale.

4) Time Since Last Overhaul of All Items Required to be Overhauled. This document must accompany the aircraft when transferred.

5) Overhaul Records. Ensure that the manual describes how the program manager/operator documents the last complete overhaul of each engine, propeller, and rotor. The overhaul records should be retained until the work is superseded by work of equivalent scope and detail. The overhaul record may include:

- Disassembly data,
- Dimensional check data,
- Replacement parts list,
- Repair data,
- Reassembly/test data, and
- Reference to data including overhaul specifications.

6) Current Aircraft Inspection Status.

a) Determine how the program manager/operator records the time in service since the last inspection.

b) Determine if procedures ensure that this record is retained until the aircraft is sold and is transferred with the aircraft upon sale.

7) AD Compliance. Determine how the program manager/operator complies with recordkeeping requirements of the ADs, including emergency ADs. Ensure that there is a record containing the following items:

a) Current Status.

- The AD number and revision date,
- A list of all ADs applicable to the aircraft,
- Date and time of compliance, and
- Time and/or date of next required action (if it is a recurring AD).

b) Method of Compliance. This includes either a record of the work performed or reference to the applicable section of the AD.

c) Determine if this record is retained until the aircraft is sold and is transferred with the aircraft upon sale.

8) Major Alteration Records. Determine how the program manager/operator maintains the records of major alterations to each airframe, engine, propeller, rotor, and appliance.

C. Inspect the Program Manager/Operator Record System.

1) Identify the documents/forms that are used for ensuring that the following are accomplished:

- Total time in service,
- Status of life-limited parts,
- Time since last overhaul document,
- Overhaul records,
- Current aircraft inspection status,
- Current status of applicable ADs, and
- Major alteration records.

2) Inspect the records and, during the inspection, document and photocopy any confusing areas, obvious omissions, or apparent discrepancies.

- a) Compare the records with the actual accomplishment of the maintenance.
 - b) Obtain and review the maintenance logs to determine the scheduled inspections and nonroutine maintenance.
 - c) Review maintenance records to ensure that:
 - Flight discrepancies were entered at the end of each flight,
 - Corrective action was related to the discrepancy,
 - Corrective action and sign off are entered into the maintenance record,
 - Repetitive discrepancies are handled properly, and
 - Deferred maintenance as authorized by the minimum equipment list (MEL) is deferred according to the operator's MEL and instructions.
- 3) Select or obtain work packages for scheduled inspections and ensure that scheduled inspections are properly signed off.
- a) Ensure that nonroutine items generated were properly signed off.
 - b) Determine if repairs were categorized correctly (major or minor) and if approved data was used for major repairs.
- 4) Compare the actual record of accomplishment with the total time/cycles in service record for the airframe, engine, propeller, and rotor.
- 5) Select and obtain total time/cycles in service record for a sample number of aircraft to ensure that cumulative flight times/cycles are added to the record.
- 6) 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.
- 7) If the program manager/operator maintains a hand-written maintenance record for engines, compare the record entries to the aircraft flight log entries for accuracy and to detect transposition of flight time/cycles in service, numbers, etc.
- 8) Compare the manual procedures for life-limited parts with the actual recording of the current status of life-limited parts.
- 9) Select a random sample of records and ensure that:
- a) All life-limited parts described in the aircraft approved limitations are noted.
 - b) Current status of each part is provided to include:
 - Total operating hours (including calendar time)/cycles accumulated,
 - Life limit (total service life),
 - Remaining time/cycles, and
 - Modifications.

- c) Ensure that:
 - Time/cycles limits on the program manager/operator list are the same as those in the approved aircraft limitations; and
 - Life limits have not been exceeded.
 - d) 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, ensure that the time since overhaul (TSO) record is available.
 - f) Ensure that the life limit of an item has not been changed as a result of the overhaul.
- 10)** Compare the overhaul list with the actual record.
- 11)** Identify items in the operator maintenance program that have overhaul requirements, if applicable.
- 12)** Ensure that all items identified are on the current list.
- 13)** Ensure that the overhaul list contains the time/cycles since last overhaul.
- 14)** Ensure that the items on the list have not exceeded their specified overhaul time/cycle limits.
- 15)** Select a random sample of items from the overhaul list to:
- a) Ensure that the records contain a description of the overhaul, and that the item was overhauled according to the overhaul specifications by a qualified and authorized person.
 - b) Ensure the component was approved for return to service by an authorized person.
- 16)** Review the removal/installation records of overhauled components to determine if the overhaul was accomplished within the authorized time limits.
- a) Compare the current aircraft inspection status with the record available.
 - b) Determine whether daily flight hours/cycles are recorded to obtain the current inspection status.
 - c) Take a random sample of aircraft inspection records and review the last two “C” checks (or equivalent) to ensure that scheduled inspections times/cycles were not exceeded (overflowed).

- 17)** Compare the compliance with ADs with the current status of the AD document.
- a) Contact the program manager/operator responsible for AD records and request a random sample of aircraft AD compliance record.
 - b) Ensure that the document contains all applicable ADs for the sampled aircraft.
 - c) Ensure that the AD requirements were accomplished within the effective times of the AD, with special emphasis on recurring ADs.
 - d) Ensure that the AD document contains current status and method of compliance. The current status must include these three items:
 - A list of all ADs applicable to the aircraft,
 - Date and time of compliance, and
 - Time and/or date of next required action (if it is a recurring AD).
 - e) Ensure that the list is being retained indefinitely.
 - f) Identify those ADs with AMOCs, and ensure that the operator has obtained prior approval for that alternate method.
 - g) Select from the current AD compliance document a number of ADs accomplished within the last 12 months and ensure that the appropriate accomplishment records are available. Review the accomplishment record to ensure the following:
 - The method of compliance is as specified in the AD,
 - The date of compliance is identical to the date on the current status list,
 - The mechanic is certificated to accomplish the work, and
 - The accomplishment was properly signed off.
- 18)** Compare the major alteration and repair records with the actual records.
- a) Major Alterations:
 - Request a list of all major alterations for a random sample of aircraft;
 - Ensure that the list contains the date of accomplishment and a brief description of the alteration; and
 - Select a random sample of major alterations accomplished within the last 12 months and ensure that the respective maintenance records show that alterations were accomplished according to approved data.
 - b) Major Repairs:
 - Request several records of major repairs, if available;
 - Ensure that the records contain the date of accomplishment and a brief description of the repair. The respective maintenance records must also show that repairs were accomplished according to approved data; and

- When major repairs or alterations are identified and are not recorded, request the actual maintenance accomplishment record from the operator/applicant.

D. Analyze the Inspection Results.

1) Determine the effectiveness of the maintenance recordkeeping system. Ineffective recordkeeping systems may be the result of:

- Inadequate/nonexistent procedures;
- Not following manual procedures;
- Ineffective organization;
- Lack of qualified personnel;
- Poor scheduling of AD compliance, overhaul requirements, inspections, etc.; and
- Improper training.

2) Compile deficiencies.

a) Compile all findings that are contrary to the regulations.

b) Compile all findings that are in noncompliance, but are producing satisfactory results.

3) After compiling all findings and before the program manager/operator debriefing, consult with the appropriate FAA supervisory personnel to determine which (if any) findings require enforcement actions.

4) If no findings are made, no further action is required.

E. For Parts 91K and 125, Meet With the Program Manager/Operator.

1) Discuss the following items:

- All discrepancies discovered during the inspection,
- Possible corrective action, and
- Possible enforcement actions.

2) Inform the operator that official written notification of findings may follow.

F. For Part 135, Follow SAS Guidance for Module 5.

3-3107 TASK OUTCOMES.

A. Complete the PTRS Record. For parts 91K and 125.

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

- Formal letter to program manager/operator confirming results of the review or inspection,
- Continuation of the certification process, and
- Enforcement action according to the current edition of FAA Order 2150.3, FAA Compliance and Enforcement Program.

C. Document the Task. File record of inspection in program manager/operator's file in district office according to office procedures.

D. Follow SAS Guidance for Modules 4 and 5. For part 135.

3-3108 FUTURE ACTIVITIES. For parts 91K and 125 schedule followup inspections, as required, and conduct normal surveillance. For part 135, follow SAS guidance.

RESERVED. Paragraphs 3-3109 through 3-3125.