

CHAPTER 26 MONITOR FAR PART 91 OWNER'S INSPECTION PROGRAM

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance*: 3425 through 3429

B. *Avionics*: 5425 through 5429

3. OBJECTIVE. This chapter discusses the procedures to monitor aircraft and aircraft inspection programs under FAR Part 91.

5. INSPECTION PROGRAMS. Several types of inspection programs are available to the FAR Part 91 owner/operator.

A. *Annual and 100-Hour Inspections.* The annual and 100-hour inspections are identical in scope and detail. The only difference is in the performance and approval of the annual inspection, which must be accomplished by a person authorized under FAR §§ 43.3 and 43.7, as provided in FAR Part 65.

(1) FAR § 43.11 requires persons approving or disapproving equipment for return to service after any required inspection to make an entry in the record of that equipment. An approved repair station documenting compliance with an annual inspection in the aircraft maintenance records meets the requirements of FAR § 43.11.

NOTE: Due to the renumbering of FAR Part 91, this chapter contains the old FAR Part 91 section numbers in brackets {}, following the revised section numbers.

(a) An owner maintaining separate records for the airframe, powerplants, propellers, appliances, and components will make the entries for the 100-hour inspection in each record and make the entry for the annual inspection in the aircraft maintenance record (FAR §§ 91.417 {91.173} and 43.11).

(b) An owner/operator shall ensure that maintenance personnel make appropriate entries in the records for the airframe, powerplants, propellers, appliances, and components. Owner/operators keeping the required records together in a single record will make the entry of the annual inspection in that record. The entries for 100-hour inspections and other maintenance also will be made in this record, as required by FAR § 91.417 {91.173}.

(2) *Annual Inspections.* FAR § 91.409(a) {91.169(a)} requires that any person who operates aircraft must assure that the aircraft has been inspected according to the requirements of FAR Part 43.

(a) Annual inspections are designed to provide a complete and comprehensive inspection of an aircraft. They are performed at least each 12 calendar months by persons authorized under FAR §43.3. The inspection determines the condition of the aircraft and the maintenance required to return the aircraft to an airworthy condition. Appendix D of FAR Part 43 defines the scope and detail of an annual inspection.

(b) The owner/operator of an aircraft may have annual inspections at any interval that does not exceed the maximum of 12 calendar months between inspections, as specified by FAR § 91.409(a)(1) {91.409(a)(1)}. For example, an aircraft inspected and approved upon any day of a calendar month will become due for inspection upon the last day of the same month, 12 months later.

(c) FAR § 43.15 and Appendix D provide that all systems, components, and appliances shall be checked to assure proper installation and satisfactory operation.

- Before conducting surveillance of annual inspections performed by maintenance personnel, inspectors should become familiar with the manufacturer's recommended inspection procedures, special instructions, etc.

- Inspectors also should know the acceptable degree of deterioration or defect permitted by the manufacturer, as set forth in the manufacturer's manuals or other data

(d) In all cases, persons authorized to perform inspections under FAR §§ 43.3 and 43.7 must determine from records and physical inspection that the aircraft conforms to the contents of the following:

- Aircraft Specification or Type Certificate Data Sheets
- Supplemental Type Certificate, if applicable
- Airworthiness Directives

(e) The above documents must be available to the maintenance personnel conducting an inspection. Applicability of a Supplemental Type Certificate may be determined by reference to the aircraft maintenance records.

(f) The inspection is not considered complete until the required recording procedures of FAR §§ 43.11 and 91.417 {91.173} are met.

- Under the provisions of FAR § 43.11, the agency or person approving or disapproving for return to service is responsible for recording the inspection in the maintenance records
- If the person conducting the inspection finds the aircraft to be unairworthy, appropriate entries must be made in the aircraft maintenance records. The owner/operator must be furnished a list of discrepancies or unairworthy items.
- The owner/operator must ensure that the maintenance records contain proper entries according to FAR § 91.417 {91.173}. The owner/operator must have discrepancies found during the inspection repaired, as prescribed in FAR Part 43, before the aircraft is returned to service.

(g) When conducting surveillance, airworthiness inspectors will review aircraft maintenance records to determine if the requirements of an annual inspection have been accomplished.

(3) *100-Hour Inspection.* Appendix D of FAR Part 43 defines the scope and detail of a 100-hour inspection. One-hundred-hour inspections are required in addition to annual inspections under the following situations:

- Aircraft are operated for carrying persons for compensation or hire
- Aircraft are used for flight instruction for hire, if furnished by the flight instructor

NOTE: When a flight instructor is not included in the rental agreement, a 100-hour inspection is not required on an aircraft when it is rented out.

B. *Progressive Inspections.* The progressive inspection must be a complete inspection of the aircraft, conducted in stages, with all stages to be completed in a period of 12 calendar months.

(1) An owner/operator desiring to use a progressive inspection program must submit a written request to the Flight Standards District Office (FSDO) with jurisdiction over the area in which the applicant is located.

(a) The owner/operator may develop a progressive inspection program tailored to fit the operation.

(b) Progressive inspection programs developed by the manufacturer do not automatically fit the needs of each individual operator; inspectors should review them on a case-by-case basis.

(c) The owner/operator's progressive inspection program may be more restrictive than the manufacturer's program, but it may not be less restrictive unless sufficient justification is presented to and accepted by the FAA.

(2) The inspector should not attempt to establish for the owner/operator arbitrary intervals for the inspection or overhaul of aircraft. Intervals should be based on the manufacturer's recommendations, field service experience, malfunction-

tion and defect history, and the type of operation in which the aircraft is engaged.

(3) If the progressive inspection is discontinued, the owner or operator shall notify the local FAA Flight Standards District Office in writing immediately. After the discontinuance, the first annual inspection is due within 12 calendar months after the complete inspection has been accomplished according to the progressive inspection program.

C. Large Airplane (Over 12,500 lbs.) and Turbine Powered (Turbojet and Turbopropeller) Multiengine Airplane Inspection Programs. These aircraft must be inspected according to the requirements of an inspection program selected by the owner/operator. FAR § 91.409(f) {91.169(f)} outlines various options available to the owner/operator.

(1) It may appear that some of the options specified in FAR § 91.409(f)(1) through (3) {91.169(f)(1) through (4)} do not involve the field inspector, as they refer to previously approved and manufacturer recommended programs. However, inspectors should recognize that these programs must be either currently recommended by the manufacturer or currently in use by the operators of FAR Parts 121, 127, or 135 who are supplying the program. The intent of this requirement is to prevent the use of obsolete programs.

(2) Reference to a manufacturer recommended program has led to several misconceptions about what precisely constitutes such a program.

(a) FAR § 91.409(f)(3) {91.169(f)(4)} refers to “A current inspection program recommended by the manufacturer.” No reference is made to the aircraft manufacturer specifically. FAR § 91.409(e) {91.169(e)} however, requires inspection of the airframe, engines, propellers, appliances, survival equipment, and emergency equipment.

(b) Therefore, a complete manufacturer’s recommended program consists of the program supplied by the airframe manufacturer and supplemented by the inspection programs provided by the manufacturers of the engines, propellers, appliances, survival equipment, and emergency equipment installed on the aircraft.

NOTE: Because this program addresses inspections only, it does not include service bulletins, service letters, service instructions, and other maintenance documents, unless they require an inspection to be performed.

D. Approved Aircraft Inspection Programs (FAR §§ 91.409 and 91.415) {91.169 and 91.170}. FAR Part 91 addresses the use of approved aircraft inspection programs in three sections. The following quotes from FAR Part 91 are cited because of frequent misinterpretation of the term “approved aircraft inspection program” by operators and FAA personnel alike.

(1) FAR § 91.409(f) {91.169(f)} states that the owner/operator must select, identify, and use one of the inspection programs. FAR § 91.409(f)(2) {91.409(f)(2)} presents as one of the options “an approved aircraft inspection program (AAIP) approved under FAR § 135.419 . . . and currently in use by a person holding an operating certificate issued under FAR Part 135.”

(2) FAR § 91.409(g) {91.169(g)} states “Each operator of an airplane desiring to establish or change an approved inspection program under paragraph (f)(4) of this section must submit the program for approval to the local FAA Flight Standards District Office having jurisdiction over the area in which the airplane is based.” The approved inspection program spoken to in this section is not to be confused with an *Approved Aircraft Inspection Program* (AAIP) as allowed in FAR § 91.409(f)(2) {91.409(f)(2)}.

(3) FAR § 91.415(a) {91.170(a)} states “Whenever the Administrator finds that revisions to an approved aircraft inspection program under FAR § 91.409(f)(4) {91.169(f)(5)} are necessary for the continued adequacy of the program, the owner or operator shall, after notification by the Administrator, make any changes in the program found necessary by the Administrator.” The inspection program referenced in this section is not to be confused with an approved aircraft inspection program (AAIP) approved under the requirements of FAR § 135.419.

NOTE: The inspector should ensure that the program includes inspection of all systems, including avionics and emergency equipment.

7. COMPUTERIZED RECORD KEEPING AND ALERTING PROGRAMS. Computer companies have made available computer programs designed to function as maintenance tracking programs. These programs do not have the prior approval of the FAA.

A. To use one of these programs, the aircraft owner/operator must present the program to the FAA for approval. FAA approval of one of these computerized programs for one owner/operator does not constitute approval for use of the same program by all operators.

B. FAA approval of a particular computerized program for an individual operator does not grant approval of the program for the computer company.

(1) Each computerized program must be approved for the individual owner/operator. No other form of approval is acceptable.

(2) Use of the computerized companies' services is for data collection and distribution only.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION

A. *Prerequisites.* This task requires knowledge of FAR Parts 43, 65, and 91, and FAR § 135.419.

B. *Coordination.* This task requires coordination between maintenance and avionics inspectors.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR Part 39
- Advisory Circular 39-7, Airworthiness Directives, as amended
- Advisory Circular 43-9, Maintenance Records, as amended
- Advisory Circular 43.9-1, Instructions for Completion of FAA Form 337, Major Repair and Alteration, as amended
- Advisory Circular 43-16, General Aviation Airworthiness Alerts, as amended
- Advisory Circular 91-38, Large and Turbine Powered Multiengine Airplanes, Part 91, Subpart D, as amended

B. *Forms.* None

C. *Job Aids.* None.

5. PROCEDURES

A. *Review and Accept a Progressive Inspection Program*

(1) Advise the owner/operator desiring a progressive inspection program to submit a letter of intent and a copy of the program, as required by FAR § 91.409 {91.169}.

NOTE: The inspector should carefully review FAR § 91.409(d) {91.169(d)} prior to analysis of the program.

(2) Upon receipt of the letter of intent and the program, ensure the following:

- The program includes the entire aircraft and its components
- The program will provide a complete inspection of the aircraft within 12 calendar months. Inspection intervals should be based on the manufacturer's recommendations, field service experience, malfunction or defect history, and the type of operation in which the aircraft is engaged.
- The scope of the inspection equals that of an annual-type inspection
- The progressive inspection schedule ensures that the aircraft at all times will be airworthy

and will conform to all applicable FAA aircraft specifications, type certificate data sheets, airworthiness directives, and other approved data

- The program includes procedures for the immediate, written notification of the local FAA Flight Standards District Office upon the discontinuance of the progressive program and the assumption of an annual inspection program

(3) Analyze results of the review.

(4) Notify the operator in writing of any deficiencies found in the program.

(a) Request that the operator inform the FAA of plans for resolving deficient items.

(b) Once deficiencies have been corrected to meet the requirements of FAR § 91.409 {91.169}, notify the operator in writing that the program has been accepted.

(5) Establish and maintain an operator file according to agency orders. The file should include a copy of the program and all related correspondence.

B. Approve an Inspection Program Under FAR § 91.409(f)(4) {91.169(f)(5)}

(1) Advise the operator of a large airplane, multi-engine turbojet or turbopropeller powered airplane desiring an approved inspection program to submit the program for approval to the appropriate Flight Standards District Office.

(2) Ensure the program is in writing and details the following:

- Instructions and procedures for conducting inspections, including necessary tests and checks
- Inspection intervals, expressed in terms of time in service, calendar time, number of system operations, or any combination of these

- The parts and areas that must be inspected

(3) Compare the submitted program with the manufacturer's recommended program. Ensure the applicant completely justifies all deletions of items and inspection period escalations. Where there is no manufacturer's recommended program, use a time-tested program for comparison purposes.

(4) Ensure that the program developed by the applicant provides a level of safety equivalent to or greater than that provided by the inspection options of FAR §§ 91.409(f)(1) through (3) {91.169(f)(1) through (4)}.

(5) Indicate approval on the cover page of the inspection program. Include the date of approval, the inspector's signature, and the office name, number, and location. Stamp each succeeding page with the district office stamp, date, and the initials of the inspector.

C. Review Maintenance Records. Ensure that persons approving and disapproving equipment for return to service after any required inspection have entered the inspection in the record of that equipment. Verify that when an owner maintains a single record, the entry for required inspections is made in that record. Ensure that if the owner maintains separate records for the airframe, engines, powerplants, propellers, appliances, and components, the entry for required inspections is made in each.

(1) *Annual/100 Hour Inspection.* Review records to ensure compliance with the requirements of FAR §§ 43.11 and 91.417 {91.173}. Determine that appropriate entries have been made to meet the regulatory requirements.

NOTE: The annual and 100-hour inspections are identical in scope and detail. The only difference is in the performance and approval of the annual inspection, which must be accomplished by a person authorized under FAR §§ 43.3 and 43.7.

(2) *Progressive Inspection.* Ensure records indicate the following:

- Completion of an annual inspection within the past 30 days prior to the commencement of inspections under a progressive inspection program

- Compliance with inspection intervals prescribed in the progressive program
- Completion of the inspection cycle within 12 calendar months

(3) *Large Airplane (Over 12,500 lbs.) and Turbine-Powered (Turbojet and Turbopropeller) Multiengine Airplane Inspection Programs.* Ensure the maintenance records indicate that the owner/operator has identified and is using a selected program according to FAR § 91.409(f) {91.169(f)}. Ensure that any inspection program with a computerized record keeping and alerting system has prior approval by the FAA. Verify that this system reflects the current airworthiness requirements for the individual airplane.

D. *Conduct Surveillance of the Aircraft.* Examine the aircraft to determine, to the extent possible, that it is in condition for safe operation. Ensure the inspection is accomplished either in the presence of or with specific approval from the owner/operator. The following are examples of items to be checked:

- Proper internal and external placarding
- Obvious signs of excessive wear and deterioration, including corrosion, worn places

on tires, nicks in the leading edge of the propeller blades, broken windshields, etc.

- Condition of fabric on fabric-covered control surfaces, wings, or fuselages
- The interior of the aircraft for obvious deterioration
- Evidence of any other condition that would render the aircraft unsafe for flight

7. TASK OUTCOMES

A. *File a Completed PTRS Transmittal Form.*

B. Successful completion of the task will result in acceptance and/or approval of the inspection programs.

9. FUTURE ACTIVITIES. Carefully monitor inspection systems for compliance with appropriate Federal Aviation Regulations and for continued airworthiness of subject aircraft. Determine that maintenance practices are performed at an adequate level of safety. Direct particular attention to any areas where trends indicate a faulty inspection system or inadequate maintenance. Take immediate action to correct any deficiencies.