



U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: Approved Aircraft Inspection
Program

Date: 6/8/16

AC No: 135-10B

Initiated by: AFS-300

Change:

- 1 **PURPOSE.** This advisory circular (AC) provides information and guidance that can be used to develop and obtain approval of an Approved Aircraft Inspection Program (AAIP).
 - 2 **CANCELLATION.** AC 135-10A, Approved Aircraft Inspection Program, dated December 22, 1993, is cancelled.
 - 3 **DISCUSSION.**
 - 3.1 Title 14 of the Code of Federal Regulations (14 CFR) part 135, § 135.419 provides for an AAIP, when formally approved by the Federal Aviation Administration (FAA). The AAIP applies to aircraft type certificated (TC) for nine or less passenger seats that are authorized for operations under part 135. An AAIP benefits air carriers by allowing them to develop and utilize inspection programs more suitable to aircraft in the air carrier's operating environment than the conventional 100-hour/annual inspections that 14 CFR part 91 requires. An AAIP does not need to be complex, but it must be comprehensive enough to cover the entire aircraft, as configured.
 - 3.2 The AAIP allows certificated air carriers operating under part 135 to develop a program tailored to its particular needs to satisfy aircraft inspection requirements. In developing the program, a certificate holder who has aircraft subject to the 100-hour/annual inspection requirements of part 91, § 91.409(a) and (b) is able to develop a program that is comprised of phases or segments which have intervals that can be established to align with the utilization and availability of the aircraft between scheduled flight operations, rather than repeating all tasks at each 100-hour increment.
 - 3.3 Whenever the FAA finds that the aircraft inspections required or allowed under part 91 are not adequate to meet part 135 requirements, or upon application by a certificate holder, the FAA may amend the certificate holder's operations specifications (OpSpecs) to require or allow an AAIP. While the manufacturer's recommended inspection program requirements of § 91.409(f) can be used to meet the regulatory requirements, the configuration of the aircraft and any additional equipment, modifications, or repairs to the aircraft after manufacture may nullify the adequacy of that manufacturer's recommended program. An AAIP provides the means whereby operators can develop inspection procedures to include specific tasks necessary to mitigate risk, and the associated time intervals for the accomplishment of those tasks.
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- 3.4** Prior to approving the program, the FAA will verify that the AAIP incorporates all of the instructions and procedures necessary to implement and administer the program, as well as confirming the inclusion of all of the inspection tasks necessary to ensure the entire aircraft and its associated components, accessories, and installed equipment are covered by the program.
- 3.5** The AAIP serves as the operator's specification for each segment of the inspection program. This is in contrast to the 100-hour/annual inspection wherein the performing mechanic or maintenance organization performs a comprehensive inspection that must meet the inspection scope and detail from 14 CFR part 43 appendix D. The program designates worksheets and other criteria that specifies the inspection work for each inspection segment, and certified mechanics or a certificated repair station (CRS) must perform the inspection.
- 3.6** The operator is responsible for the AAIP content and intervals, and has the added responsibility of ensuring the program is followed in its entirety. This is in alignment with the responsibility § 135.413 assigns for airworthiness. A well-defined and monitored AAIP should result in a more efficient inspection program, reduce downtime, and be more cost effective when compared to the cost of a 100-hour/annual inspection system.

4 REGULATORY REQUIREMENTS.

- 4.1** The AAIP, as described in the context of this AC, is an inspection program developed by an air carrier certificated under part 135. After developing the program, the air carrier submits it to the FAA for approval and once approved, is authorized to use that program by issuance of OpSpec D073, Approved Inspection Program.

Note: Part 135 provides a higher level of safety than part 91 or 91 subpart K (part 91K). An Aircraft Inspection Program (AIP) that may have been approved for aircraft being strictly operated under part 91 or 91K may not be synonymous with a part 135 AAIP.

- 4.2** The AAIP is approved for a specific aircraft make, model, and series (M/M/S). Section 135.419(a) denotes a determining factor that establishes the basis for eligibility to use an AAIP. The AAIP is allowed for at least one of any make and model aircraft of which the certificate holder has exclusive use. This exclusive use requirement is defined in § 135.25(b).

5 PROGRAM REQUIREMENTS.

- 5.1** The AAIP must encompass the total aircraft, including all avionics equipment, emergency equipment, cargo provisions, aftermarket modifications and alterations, etc. An air carrier authorized to utilize a variety of aircraft types would require a different AAIP for each aircraft make and model. Essential elements of the AAIP include:

1. Administrative/implementation procedures and instructions,
2. Schedule of inspections,

3. Inspection worksheets/checklists, and
 4. Discrepancy recording procedures and forms.
- 5.2** The administrative procedures should provide well-defined instructions that describe:
1. How the program is to be administered, and the duties and responsibilities of personnel involved in administering the program.
 2. How the program is to be controlled, how revisions to the program are made, and how FAA approval of any revisions are obtained and reflected in the program.
 3. How aircraft are to be placed into, or taken out of, the inspection program.
 4. How to make accommodations for variations in equipment and configurations between aircraft in the operator's fleet.
 5. How to make arrangements with contract agencies for performing inspections.
 6. How the aircraft is approved for return to service following the inspection.
 7. How each inspection is to be scheduled, performed, and documented.
 8. How to report errors and other problems found within the AAIP.
- 5.3** Instructions for accomplishing each task must satisfy part 43, § 43.13(a) regarding methods, techniques, practices, tools, and equipment. The instructions should also provide standards regarding dimensions and tolerances and should include adequate information in a form suitable for use by the person performing the work. The instructions may be incorporated into the program by a number of methods, such as:
1. The instructions may be printed directly on the work forms.
 2. The instructions may be included in a section of the AAIP document/manual in a format that can be cross-referenced to items on the inspection checklist/form.
 3. The references from specific chapters, sections, or paragraphs of a manufacturer's manual or other pertinent instructions can be incorporated on the form or in the section of the operator's manual containing the AAIP.
- 5.4** The schedule of inspections provides the time interval in terms of hours/cycles or calendar-days for the performance of each inspection task. Inspection tasks may be grouped together based on a specific zonal area or system of the aircraft (wings, fuselage, engines, empennage, landing gear, etc.). Other inspection programs utilize sequential, alpha-numeric nomenclature, which progressively indicates a greater scope and detail of the inspections (A-Check, B-Check, C-Check, or No. 1 Inspection, No. 2 Inspection, etc.). These groups or checks may also be comprised of segments that are divided into smaller groupings of tasks and identified as an inspection segment or phase. In addition to depicting the inspection task intervals, the schedule of inspections describes the scope of each group within the program, as well as depicts the number of segments or phases that comprise an entire group. The schedule of inspections establishes the frequency for

sequentially performing individual tasks or groups of tasks that results in the completion of an entire inspection program cycle, upon which after completing, the cycle begins again. When performing the inspections, individual tasks and frequency of performance can be outlined on work forms or checklists. The work forms can also identify the appropriate report form(s), which may need to be completed for each task(s) performed.

- 5.5** The schedule of inspections must also address unscheduled events that require specialized structural inspections. These include events such as hard landings, overweight landings, lightning strikes, aerodynamic upsets, engine overspeed/overtorque, bird strikes, and ground/prop strikes. Additionally, the schedule of inspections should include an aircraft low-utilization inspection schedule.
- 5.6** The inspection worksheets and checklists provide a means of controlling and managing the performance and documentation of each task within the inspection segment. Work forms designate these tasks or groups of tasks with a signoff provision for each. The tasks can be arranged or consolidated according to the complexity of the program, the type of aircraft involved, and the character of the maintenance entity performing the work (e.g., the work forms for an inspection of a complex aircraft by a large departmentalized maintenance facility should be subdivided to accommodate that situation). The forms also serve to coordinate and control work in progress. They may be developed by the operator or adopted from another source.
- 5.7** The discrepancy recording procedures and forms provide instructions and procedures for all recordkeeping requirements associated with the AAIP. The procedures establish a system for recording discrepancies and their correction. If the program authorizes a deferral of discrepancies through an approved minimum equipment list (MEL), a process to maintain control and ensure follow-up action takes place is required.
- 5.8** The instructions related to recordkeeping must provide a means of accounting for all work forms upon completion of the inspection. These forms are used to satisfy § 91.417, so they must be complete, legible, and identifiable as to the aircraft and specific inspection to which they relate. In some cases, the forms may also serve to satisfy the regulatory requirements of § 43.11.
- 5.9** The program should include procedures for ensuring compliance with applicable Airworthiness Directives (AD) and safety directives that provide for the recordation of the method of compliance, the AD, or safety directive number and revision date.

6 **INSPECTION PROGRAM DEVELOPMENT.** An AAIP may be developed from one of the following:

- 6.1** **Adoption of an Aircraft Manufacturer's Inspection Program.** Under this arrangement, the aircraft manufacturer's program (including methods, techniques, practices, standards for its accomplishment, and inspection intervals) is adopted in its entirety. It should be noted, however, that the manufacturer's program alone will not be approved as an AAIP. Similarly, a document that only references the manufacturer's inspection program as the AAIP will not be considered for approval. Typically, the

purpose for which the AAIP was deemed necessary was because the aircraft manufacturer's program does not encompass avionics, emergency equipment, appliances, and related installations. In addition, it may not fit the carrier's operations and aircraft configuration. Therefore, the air carrier will usually need to add to, or modify, the manufacturer's program to incorporate these additional inspection requirements into the AAIP to create a unique and individualized inspection program. If the manufacturer's program affords options such as particular inspections that need to be done during the winter in cold climates, the operator's AAIP should designate when those items need to be accomplished. Likewise, if the manufacturer's program provides for the use of "windows" to avail the operator with greater flexibility in scheduling the inspections, these options may also be used by the air carrier.

- 6.1.1** The program submitted to the FAA for approval should be re-identified as the carrier's program because it no longer reflects the manufacturer's current program. Once approved, the program is essentially "locked" and subsequent revisions published by the manufacturer for its inspection program would not automatically be incorporated into the carrier's program. Each revision must be analyzed by the carrier for inclusion in the AAIP, which would then be revised as necessary, and then submitted for approval per the program revision procedures.
- 6.1.2** For equipment and systems not covered under the aircraft manufacturer's inspection program, the AAIP must provide for a detailed visual inspection of the installed components, wiring, placards, and related hardware to ensure integrity of the equipment and/or systems.
- 6.1.3** A thorough, in-depth inspection may require an operational check. These checks are appropriate for systems where failures are not normally detectable without the use of test equipment or where accuracy or quality of operation is not normally evident to a flightcrew.
- 6.1.4** Items of emergency equipment may require inspections in accordance with the air carrier's OpSpecs and/or by the manufacturer, and as applicable in 14 CFR. These standards may require the equipment to be inspected by the equipment manufacturer or by a person authorized under 14 CFR parts 43 and 145.
- 6.1.5** Unlike a Continuous Airworthiness Maintenance Program (CAMP), the AAIP is not a program that covers inspection and maintenance. As such, maintenance tasks that fall outside the scope of inspection would not be included in the AAIP. The AAIP would not require the use of manufacturer's recommended inspection programs that include recommended maintenance tasks, such as overhaul or replacement requirements. However, should the operator elect to incorporate these maintenance tasks, as well as those required by regulation (refer to § 135.421) and any applicable airworthiness limitations (AL), they would not be prohibited from including these tasks.

6.1.6 The program must include the inspection criteria as provided in any applicable instructions for continued airworthiness (ICA), including those that pertain to any repairs or alterations previously accomplished. The current editions of the following documents contain information about ICAs:

- AC 43-210, Standardized Procedures for Requesting Field Approval of Data, Major Alterations, and Repairs.
- FAA Order 8100.17, Field Approval Delegation Handbook.

6.2 Modified Manufacturer's Programs. The operator may modify manufacturer's inspection programs to suit his or her needs. The modifications can be done to work forms, published methods, techniques, practices, standards, or to maintenance/inspection intervals. Modifications to manufacturer's instructions should be clearly identified and provide an equivalent level of safety to those in manufacturer's recommended programs.

6.3 Operator-Developed Program. This type program is developed and published in its entirety by the operator. It must include methods, techniques, practices, and standards necessary for proper accomplishment of the program. An existing progressive inspection program (§ 91.409(d)) may be converted to an AAIP. If electing to use "windows" in its program, the air carrier may adapt scheduling procedures to allow for windows for no more than (plus or minus) 20 flight-hours, 20 flight-(or component) cycles, or 1 calendar-month, as appropriate.

7 CORROSION CONTROL.

7.1 All aircraft are prone to some degree of corrosion. Corrosion-prone areas are susceptible to finish damage, moisture entrapment, or both. The basic corrosion prevention philosophy is to conduct periodic inspections to ensure that the protective finishes remain intact and that all drain holes and pathways remain open. The FAA strongly recommends that Corrosion Prevention and Control Programs (CPCP), structural modification programs, and supplemental structural inspection type programs be included in the inspection program. If a manufacturer's program does not exist for corrosion control, the operator may elect to develop his or her own program.

8 MANUFACTURER'S SERVICE PUBLICATIONS. Refer to the current edition of AC 20-77, Use of Manufacturers' Maintenance Manuals, and FAA Order 8620.2, Applicability and Enforcement of Manufacturer's Data. These documents list situations when Service Bulletins (SB) would be regulatory.

9 PROGRAM EVALUATION AND REVISION.

9.1 Procedures and instructions for making any revisions to the AAIP must be present in the program. These procedures would be utilized whenever the carrier, or the FAA, determines that revisions to the AAIP are necessary and requires that the certificate holder make the appropriate changes (refer to § 135.419(f)). An inspection program or revision should be evaluated by the operator prior to submitting it to the FAA for review and approval.

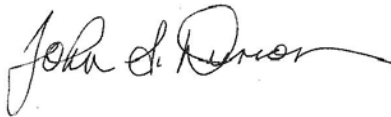
- 9.1.1** This evaluation should establish, at a minimum, that the program applies to the aircraft make, model, configuration, and modification status, and that it encompasses the avionics installation and all aircraft equipment.
- 9.1.2** The program should also be evaluated for its suitability with regard to the geographic location of the operator. Evaluation should include climate, stage length (flight time between landings), and the provisional inspections for special purpose operations.
- 9.1.3** The basis for revision to a program, in preparation for initial FAA approval or for an ongoing AAIP, may be service experience, tests or inspections to determine serviceability or condition, disassembly analysis, modifications, and changes in environment.
- 9.1.4** Revisions predicated on tests, inspections, and disassembly analysis should be coordinated with the FAA to accommodate its observation of the conditions under analysis. The operator should provide historical data for revisions based on service experience.
- 9.1.5** The program should have procedures to ensure that the inspection is not broken up or “segmented” once an inspection phase or check has been started. The inspection must be completed and the aircraft approved for return to service prior to resuming flight operations.
- 9.2** Operators that chose to utilize Web-based contracted computerized maintenance/inspection programs may do so, but recognize that the FAA does not approve the contract vendor’s program. The computerized database is used to support the documentation and recordation of inspections that are accomplished in accordance with the carrier’s approved program. The procedures unique to these computerized programs, such as security to prevent unauthorized modifications of records, protection of data, etc., must be integrated into the procedures and instructions for administration of the program.

10 OPERATOR’S MANUAL.

- 10.1** The regulations require that the air carrier include the AAIP into its manual. The operator’s manual should include a section or appendix that is clearly identified as the approved program. The air carrier’s manual procedures for discrepancy recordation, correction, and document retention should coincide with the procedures for recordkeeping contained in the AAIP. The carrier’s manual should provide instructions that serve to facilitate administration of the program by the certificate holder and to direct its accomplishment by mechanics or repair stations. It should include copies of the work forms and schedule of maintenance/inspection intervals, or it should identify and reference the forms and schedule if they are located elsewhere in the operator’s manual system. The operator’s manual should also include or reference instructions for methods, techniques, and practices to accomplish the maintenance/inspection tasks. The manual should also contain the task standards as well as a list of the necessary tools and equipment needed to perform maintenance/inspection.

11 PROGRAM APPROVAL.

- 11.1** The FAA Flight Standards District Office (FSDO) will identify the program as FAA approved through use of an approval stamp and signature on the control pages of the program. Typically, the control pages, referred to as the List of Effective Pages (LEP), will identify each page and the revision number and date of that page. The stamping of approval and the signature of the reviewing FAA inspector provides a positive means of revision control and FAA approval.
- 11.2** Individual approval is required for each operator and for each model of aircraft (e.g., there is no provision for an individual approval for all model aircraft used by one operator or for approval of a specific program for use by several operators). Therefore, the AAIP cannot be transferred from one entity to another.
- 11.3** Following the approval of the program, the FAA and the operator will sign the electronic OpSpecs, which authorize the use of the AAIP. These OpSpecs are required documents that authorize the operator to use aircraft that are inspected under an AAIP.
- 11.4** If the additional maintenance requirements are incorporated into the AAIP, the OpSpecs and program description should state this.



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Advisory Circular Feedback Form

If you find an error in this AC, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by contacting the Aircraft Maintenance Division (AFS-300) at 9-AWA-AFS-300-Correspondence@faa.gov or the Flight Standards Directives Management Officer.

Subject: AC 135-10B, Approved Aircraft Inspection Program.

Date: _____

Please check all appropriate line items:

An error (procedural or typographical) has been noted in paragraph _____ on page _____.

Recommend paragraph _____ on page _____ be changed as follows:

In a future change to this AC, please cover the following subject:
(Briefly describe what you want added.)

Other comments:

I would like to discuss the above. Please contact me.

Submitted by: _____

Date: _____