U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject: APPROVED AIRCRAFT INSPECTION PROGRAM
Date: 12/22/93
Initiated by: AFS-340
AC No: 135-10A
Change:

1. PURPOSE. This advisory circular (AC) provides information and guidance that can be used to develop an approved aircraft inspection program (AAIP).

2. CANCELLATION. AC 135-10, Approved Aircraft Inspection Program, dated 9-17-81.

3. DISCUSSION. Federal Aviation Regulations (FAR) Section 135.419 provides for AAIP's, when formally approved by the Federal Aviation Administration (FAA), for aircraft of nine or less passenger seats operated under FAR Part 135. The AAIP concept was first developed for the benefit of air taxi operators who requested regulatory authority to develop and utilize inspection programs more suitable to aircraft in their operating environments than the conventional 100-hour/annual inspections required by FAR Part 91. An AAIP does not need to be complex.

a. The AAIP allows each operator to develop a program tailored to its particular needs to satisfy aircraft inspection requirements. It allows each operator to adjust the intervals between individual inspection tasks in accordance with the needs of the aircraft rather than repeat all tasks at each 100-hour increment. It also allows operators to develop procedures and time intervals for the accomplishment of those tasks. The viability of an AAIP depends upon the ability and willingness of the operator to substantiate to the FAA that the program, and revisions thereto, complies with the FAR Part 91 inspection requirements.

b. 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 repair station determines, in accordance with Appendix D of FAR Part 43, what work is required. Under the AAIP, the operator is responsible for the program content and intervals, and has responsibility of the entire program. The mechanic or repair station is responsible for the accomplishment of the inspection, as specified by worksheets and other criteria designated by the program.

c. The operator is responsible for the AAIP. This is in keeping with the responsibility for airworthiness assigned by FAR Section 135.413. A well-developed and monitored AAIP should result in a more efficient inspection program. This, in turn, should reduce downtime and be more cost effective when compared to the cost of a 100-hour/annual inspection system.

4. PROGRAM REQUIREMENTS. An AAIP must encompass the total aircraft, including all avionics equipment, emergency equipment, cargo provisions, etc. The program should include the following elements:

a. The program comprises a schedule of the individual tasks or groups of tasks, as well as the frequency of task(s) performance. These time intervals should also address a low aircraft utilization schedule. A group may include all of the tasks making up an identifiable segment of the program such as a "No. 1 Inspection." In a No. 1 Inspection, the individual tasks, as well as frequency of performance, can be outlined on work forms. The work forms can also identify the appropriate report form(s), which may need to be completed for each task(s) performed.

b. 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 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.

c. Instructions for accomplishing each task. These instructions must satisfy FAR Section 43.13(a) regarding methods, techniques, practices, tools, and equipment. The instructions should also provide standards regarding dimensions and tolerances. The instructions should include adequate information in a form suitable for use by the person performing the work. Following are several means of rendering these guidelines:

(1) The instructions may be printed directly on the work forms.

(2) They may be published in a manual section in a format that can be cross-referenced to items on the form.

(3) References to specific chapters, sections, or paragraphs of a manufacturer's manual or other pertinent instructions can be incorporated on the form or in the operator's manual.

d. Provisions for operator-developed revisions to referenced instructions should be incorporated in the operator's manual. Whenever the FAA determines that revisions to the AAIP are appropriate, the certificate holder shall make the appropriate changes (reference FAR Section 135.419(f)).

e. A system for recording discrepancies and their correction. If deferral of discrepancies is authorized by the program, a system for control and followup action is required.

f. A means of accounting for work forms upon completion of the inspection. These forms are used to satisfy FAR Section 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 FAR Section 43.11 should the aircraft revert to FAR Part 91 inspection requirements.

g. Accommodation for variations in equipment and configurations between aircraft in the fleet. This includes installation and alterations that deviate from the original aircraft configuration.

h. Procedures for transferring an aircraft from another program to the AAIP. Although not essential to the AAIP, procedures for transferring an aircraft to FAR Part 91 inspection requirements would be helpful should the aircraft ever be transferred back to FAR Part 91 operation.

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

a. 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. 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.

(1) Revisions to the manufacturer's inspection program should be analyzed immediately for inclusion in the AAIP.

(2) Many aircraft manufacturers' programs do not encompass avionics, emergency equipment, appliances, and related installations that must be incorporated into the AAIP.

(3) For equipment and systems not covered under the aircraft manufacturer's inspection program, the AAIP should provide for a detailed visual inspection of the installed components, wiring, placards, and related hardware to ensure integrity of the equipment and/or systems.

(4) A thorough, indepth 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.

(5) Items of emergency equipment may require inspections in accordance with the air carrier's operation specifications and/or by the manufacturer and as applicable in the Code of Federal Regulations. These standards may require the equipment to be inspected by the equipment manufacturer or by a person authorized under FAR Parts 43 and 145.

b. Modified manufacturers' programs. The operator may modify manufacturers' inspection programs to suit its needs. The modifications can be done to work forms, published methods, techniques, practices, standards, or to maintenance/inspection intervals. Modifications to manufacturers' instructions should be clearly identified and provide an equivalent level of safety to those in manufacturers' approved programs.

c. Operator-developed program. This type program is developed and published in its entirety by the operator. It should include methods, techniques, practices, and standards necessary for proper accomplishment of the program.

d. An existing progressive inspection program (FAR Section 91.409(d)) may be converted to an AAIP.

6. CORROSION CONTROL. 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 make periodic inspection to ensure that the protective finishes remain intact and that all drain holes and pathways remain open. The FAA strongly recommends that a Corrosion Protection Control Program, 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 its own program.

7. PROGRAM EVALUATION AND REVISION. An inspection program or revision should be evaluated by the operator prior to submitting it to the FAA for approval.

a. 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.

b. 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.

c. 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.

(1) Revisions predicated on tests, inspections, and disassembly analysis should be coordinated with the FAA to accommodate its observation of the conditions under analysis.

(2) Historical data for revisions based on service experience should be provided by the operator.

(3) Manufacturers' recommendations or manufacturers' inspection program revisions do not, by themselves, justify revision to an AAIP.

8. PROGRAM ADMINISTRATION. Procedures for administering the program should be established. These should include all facets of the program, such as:

a. Duties and responsibilities for all personnel involved in administering the program.

b. Scheduling inspections and instituting methods to record their accomplishment.

c. Editing the program and/or related manual pages, work forms, etc., and revisions thereto.

d. FAA approval of revisions.

e. Accounting for and maintaining a file of completed work forms.

f. Arrangements with contract agencies for performing inspections.

g. For computerized maintenance/inspection programs, procedures unique to these programs such as security to prevent unauthorized modifications of records, protection of data, etc.

9. OPERATOR'S MANUAL. The operator's manual should include a section that clearly describes the program, including procedures for program scheduling, recording, accountability for continuing accomplishment, and for program revision. This section serves 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.

10. PROGRAM APPROVAL. The FAA Flight Standards District Office will provide each operator with computer-generated Operations Specifications (FAA Form 8400-8). 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.

a. The administrative provisions of an AAIP are a significant part of the program and will be reviewed for approval when operator requests a change.

b. Manufacturers' recommendations or manufacturers' inspection program revisions do not, in themselves, justify revision to an AAIP.

c. If the additional maintenance requirements are incorporated in the AAIP, the operations specifications and program description should state this.

d. An amendment or change to an AAIP may be accomplished by incorporation into the approved program.

e. Maintenance manual pages or other instructions pertaining to administration of the program are considered in program approval.

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