



CHAPTER 50

APPROVED SMALL AIRCRAFT INSPECTION PROGRAMME.

0.0 LIST OF EFFECTIVE PAGES

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1.0 OBJECTIVE

This section describes how to evaluate and approve a (9 or less passenger seats) operator's Approved Aircraft Inspection Programme (AAIP). It ensures that programmes, systems, and intended methods of compliance are thoroughly reviewed, evaluated, and tested. Reference: ICAO, Annex 6, Part II, Chapter 8.

DEFINITION. Small aircraft means an aircraft of 5,700 kg (12,500 lbs.) or less. The words aeroplane and aircraft may be interchanged.

2.0 GENERAL.

- A. Inspectors should become thoroughly familiar with the operator/applicant's operation. Special attention should be given to :
- Areas of operation
 - Type of equipment
 - Operating history
 - Maintenance/inspection organization, as applicable
- B. An approved Aircraft Inspection Programme is authorized for use on operations specifications. Therefore, it cannot be transferred.
- C. Turbine-powered multiengine aircraft inspection programmes are more specific than the 50/100 hour/annual inspections but lack the ease and control provided by the approved aircraft inspection programme. The programmes for turbine-powered multiengine airplanes of 9-or-less passenger seats should be approved as AAIPs, because of the complexity of the aircraft. An AAIP is not considered better than a manufacturer's programme. However, an AAIP provides the NCAA Inspector with more control of the programme's content. It requires the operator to substantiate its programme and revisions to the approving inspector. Manufacturer's programmes do not require this approval. This is not so to say the manufacturer's programme cannot be used, but it must be identified as an AAIP approved for a particular operator as the operator's programme, not the manufacturer's.



1. CHANGES TO APPROVED TIME INTERVALS

A. Operator-Initiated Changes

- (1) The operator may request approval to amend inspection or overhaul intervals.
 - (a) The operator must justify the request using the following:
 - Past operating experience
 - Environmental conditions
 - Inspection programme provisions
 - At least one overhaul tear-down report
 - Any other data necessary to substantiate changes
 - (b) Operator-initiated time changes require revisions to both the Approved Aircraft Inspection Programme and operations specifications.
- (2) Amendments or extensions are not allowed for life-limited items and/or those designated by airworthiness directives unless authorized in NCAA approved revisions.

B. Manufacturer Escalations

- (1) If a manufacturer extends the recommended inspection or overhaul interval, the operator may request approval to use the extension by submitting a revision to the Approved Aircraft Inspection Programme. The request must be accompanied by the manufacturer's recommendation.
- (2) Inspectors should not automatically approve a time escalation recommended by the manufacturer. The individual operator's aircraft use and experience must be considered. The inspectors should ensure that the escalation will not compromise safety.



- 2. OPERATOR'S MAINTENANCE MANUAL/MAINTENANCE MANAGEMENT EXPOSITION:** The Approved Aircraft Inspection Programme must be included in the operator's maintenance manual. The operator should request a manual revision (in accordance with manual revision procedures) at the same time the Approved Aircraft Inspection Programme/revision is submitted for approval. This allows the NCAA to approve the Approved Aircraft Inspection Programme/revision and accept the manual concurrently, while advancing implementation of the programme.

PROCEDURES FOR APPROVAL OR REVISION OF OPERATIONS SPECIFICATION

- 1. COORDINATION.** This task is performed by a team of airworthiness inspectors. It may require coordination with operations inspectors.
- 2. PROCEDURES.** The airworthiness team:
 - A. Schedule and Conduct Preliminary Meeting, As Needed**
 - (1) Advise applicant of regulatory requirements and policies.
 - (2) Remind the operator that the Approved Aircraft Inspection Programme/revision must be included in the maintenance manual.
 - B. Plan and Coordinate Task**
 - (1) Determine whether the aircraft meets eligibility requirements.
 - (2) Review operator file to identify any information concerning the Approved Aircraft Inspection Programme/revision. Determine its effect on the operator's other programmes or procedures.
 - (3) If this task is performed as part of an original certification, review the Schedule of Events to ensure that the evaluation can be accomplished according to the schedule.
 - C. Evaluate the Proposed Programme/Revision**
 - (1) Evaluate instructions, procedures and standards for conducting inspections.
 - (a) The programme must include:
 - Airframe
 - Aircraft engines
 - Propellers



- Appliances
 - Survival and emergency equipment
 - Component parts for the above items
- (b) When establishing an inspection programme for an aircraft, the programme should include installed avionics and instrument systems (appliances). These systems are not always installed by the aircraft manufacturer and may not be included in their recommended inspection programme; instructions and procedures for all installed systems should be incorporated into the programme.
- (c) Inspection standards, procedures, methods, instructions or other technical data may be included in the programme by reference, eliminating the expense and trouble of reprinting them. Such references may be either the airframe manufacturer's or the appliance manufacturer's service data. However, when both airframe manufacturer and the appliance manufacturer provide inspection data, that of the airframe manufacturer should be used.
- (d) The avionics and instrument systems inspection should include a visual and functional check. Therefore, these definitions should be included in the programme:
- Visual Check - Utilizing acceptable methods, techniques, and practices to determine physical condition and safety of an item.
 - Operational Check - This is an operational test to determine whether a system or component is functioning properly in all aspects in conformance with minimum acceptable manufacturer design specifications.
 - Functional Check - This test may require the use of appropriate test equipment.
- (e) The avionics and instrument systems inspections should be incorporated into the basic airframe programme. The visual inspection of the avionics and instrument systems should be accomplished at intervals corresponding to the airframe inspection interval. Inspect avionics and instrument equipment, wiring, connectors, bonding straps, circuit breakers, switches, etc. forward of the instrument panel at the same interval with controls and structural inspections in that area.



- (f) Functional checks of the avionics and instrument systems, using appropriate ramp test equipment should be performed at intervals which would be a function of the aircraft operating environment. Example: One (1) year of manufacture design specification. The term “avionics” means aviation electronics and includes the following systems:
- Communications
 - Navigation
 - Electrical
 - Instrument
 - Lights
 - Auto-Pilot/Flight Director System
- (g) All required tests and checks recommended by the aircraft or equipment manufacturer must be addressed.
- (h) Persons responsible for performing the work must be identified.
- (i) The instructions, procedures, and standards must be clear and easily understood. They must identify the scope of each task and provide a detailed outline of each step that must be accomplished to perform the inspection and ensure that established standards are met.
- (2) Evaluate the procedures for life-limited parts. The programme must contain provisions to ensure that records are current. Life-limits must be expressed in one of the following measures:
- Length of time in service
 - Number of cycles
 - Number of landings
 - Calendar time
 - A combination of the above measures
- (3) Evaluate procedures for scheduling inspections.
- (a) The programme must list inspection intervals and describe personnel responsibilities for scheduling and performing inspections.
- (b) Procedures must ensure that inspections are performed by properly certificated, qualified, trained, current, and authorized personnel. The programme must identify, by title, the person responsible for ensuring inspection personnel meet NCAA requirements.



- (4) Ensure that engine overhaul periods correspond to the recommended overhaul intervals in the engine manufacturer's manuals and/or service bulletins.
 - (5) Evaluate procedures for reporting and correcting mechanical irregularities. The programme must include detailed instructions, procedures, and the necessary forms and documents for the recording and repair of mechanical irregularities. These instructions, procedures, and forms may appear elsewhere in the company manual, but their location must be referenced in the Approved Aircraft Inspection Programme.
 - (6) Ensure that the Approved Aircraft Inspection Programme includes instructions on its use.
- D. Analyze Findings. Determine if programme changes are required. Before meeting with the operator/applicant, discuss initial findings with appropriate CAA personnel to determine the content of the briefing. Depending on the findings, it may be necessary to coordinate with other inspectors or the Director, Airworthiness Standards.
- E. Debrief Operator/Applicant. Discuss results of the evaluation including any deficiencies noted during inspection.

3.0 TASK OUTCOMES

- A. Completion of this task will result in one of the following:
- (1) If the Approved Aircraft Inspection Programme/revision is not acceptable, advise the operator/applicant by letter that the program/revision is rejected. Give the reasons for the rejection. Return the programme proposal and documentation to the operator/applicant.
 - (a) If this review is performed as a part of a certification, inform the applicant in the letter that the certificate will not be issued until the deficiencies are corrected. If necessary, advise the applicant to revise the Schedule of Events.
 - (b) The letter must also accomplish the following:
 - Confirm all agreements made during the debriefing
 - Identify the date the Approved Aircraft Inspection Programme/revision was submitted



- Show the revision number and date, as applicable
 - Identify and describe all deficiencies by chapter, section, page, etc.
 - Reference each deficiency to the appropriate regulation
 - Request a revised schedule of events, if necessary
 - If a revision, remind operator not to implement the revision.
- (2) If the programme or revision meets all regulatory requirements, accomplish the following:
- (a) Ensure that the approved Aircraft Inspection Programme or revision has been fully coordinated between airframe/engines and avionics.
 - (b) For a new or totally revised programme, indicate “Approved and authorized for use on Operations Specifications dated_____”. The approving Maintenance Avionics Inspector shall sign and date the document. The date of the document approval must be the same date approved by the Aircraft Inspection programme.
 - (c) Initial and date each page of the Approved Aircraft Inspection Programme or revision unless a control page is used.
 - (d) In the case of a revision to an approved programme, issued amended operations specifications. The back page of the amendment must identify and justify the changes to the programme.
 - (e) Send the operator a letter accepting the approved Aircraft Inspection Programme. The letter must accomplish the following:
 - Request that the operator acknowledge receipt of the operations specifications by signing and dating the original and copy, and forward the copy to the NCAA.
 - Confirm all information given during the debriefing
 - Indicate the date the Approved Aircraft Inspection Programme/revision was submitted
 - Show the revision number and date, if applicable
 - If revision, indicate the number of approved pages



- Advise the operator that the revision may be implemented
- If a manual revision was submitted and is acceptable, advise the operator of the acceptance
- If a manual revision was not submitted, remind the operator to revise the manual to incorporate the programme/revision. Advise the operator to submit the manual change for acceptance.
- Enclose the stamped, dated, and initialed original Approved Aircraft Inspection Programme.
- Enclose the original and one copy of the approved operations specifications
- Enclose the accepted manual revision, if appropriate.

4.0 FUTURE ACTIVITIES

- A. Schedule of Events. In case of original certification, review of the Schedule of Events to determine if a revised Schedule of Events is necessary.
- B. Operator's Maintenance Manual. Ensure that the Manual includes the Approved Aircraft Inspection Programme/revision.