

CHAPTER 65. EVALUATE CONTINUING ANALYSIS AND SURVEILLANCE PROGRAM/REVISION

SECTION 1. BACKGROUND

1. PTRS ACTIVITY CODES

A. *Maintenance*: 3333 (New)/3334 (Revision)

B. *Avionics*: 5333 (New)/5334 (Revision)

3. OBJECTIVE. This chapter provides guidance for ensuring that an operator/applicant's Continuous Analysis and Surveillance Program (CASP) meets the necessary requirements for certification or revision.

5. GENERAL

A. The continuing analysis and surveillance system is usually included in the operator's maintenance manual. The system ensures the adequacy of an operator's maintenance program and confirms that the program is properly followed and controlled. FAR §§ 121.373 and 135.431 allow the FAA to require revisions to an operator's maintenance program based on deficiencies or irregularities revealed by the continuing analysis and surveillance system.

B. Continuing Analysis and Surveillance Program Functions

(1) A continuing analysis and surveillance system has two functions:

(a) The "audit function" which includes a follow-up for those components removed, and the teardown report must be a part of the Continuing Analysis and Surveillance Program. It must also include examining the administrative and supervisory aspects of the operator's program (including work done outside of the operator's basic organization). The audit must ensure that the Main Base, Sub Base, Line Station, and shops operate in accordance with company procedure. The audit function includes such things as:

- Ensuring that all publications and work forms are current and readily available to the user
- Ensuring that major repairs/alterations are classified properly and accomplished with approved data

- Ensuring that carryover items and deferred maintenance are properly handled
- Ensuring that vendors are properly authorized, qualified, staffed, and equipped to do the contractor function according to the operator's manual

(b) The "performance analysis function" includes daily and long-term monitoring and emergency response related to the performance of affected aircraft systems, including aircraft engines and components. This function includes monitoring such things as:

- Daily mechanical problems for affected aircraft (daily monitoring)
- Deferred maintenance items including excessive number and times (daily monitoring)
- Pilot reports compiled by Air Transport Association (ATA) code (long-term monitoring)
- Mechanical Interruption Summary Reports (MIS) (long-term monitoring)
- Contained engine failures (emergency response)
- High number of unscheduled component removals (long-term monitoring)

(2) The continuing analysis and surveillance program should include a system of data collection and analysis which may or may not be part of a reliability program.

C. The continuing analysis and surveillance system also addresses operational matters, such as maintenance scheduling, control and accountability of work forms, conformity to technical instruction, and compliance with procedural requirements. Additionally, it examines the adequacy of equipment

and facilities, parts protection and inventory, mechanic competency, and shop orderliness.

7. REVIEWING THE OPERATOR'S PROGRAM

A. For maximum effectiveness, the continuing analysis and surveillance program should be separated from other maintenance functions. Some operators establish a separate quality assurance organization for this purpose. Others assign this function to their inspection/quality control organization. When the analysis and surveillance responsibility is assigned to an organizational unit that has other duties, these functions should be performed independently of the other duties.

B. Mechanical performance analysis may be performed as part of a reliability program or as an independent data collection and analysis system (See Advisory Circular 120-17, Maintenance Control by Reliability Methods, as amended). The system should include charting or other appropriate methods for recording and accounting of pertinent data at specified intervals. This will ensure continuous program operation. Data collection and analysis are essential elements for supporting the condition-monitoring process.

C. The use of contract agencies tends to complicate an operator's continuous analysis and surveillance system. When a contractor fails to provide the operator with essential information (such as failure characteristics, service times, etc.), gaps are created in the operator's data collection. This obstructs the continuous analysis and surveillance system. Therefore, the continuing analysis and surveillance

program must include procedures for transmitting essential information back to the operator.

D. When aircraft fleets are grouped for purposes involving data collection, the data from the total of the fleets may provide a valid comparison for behavior of one of the fleets. However, data generated by a single airplane or a small fleet can be obscured by a larger fleet of the group.

NOTE: Unacceptable performance of a small fleet may not contribute a significant statistical impact unless the data from the smaller fleet is reviewed individually.

E. When an operator uses a contractor for total maintenance support, the operator is responsible for the continuing analysis and surveillance requirement. The operator must have enough personnel and resources to accomplish both the audit and performance analysis functions.

F. The complexity and sophistication of the continuous analysis and surveillance system should relate to the certificate holder's operation. A small operator should not be expected to have a complex system similar to a large airline. However, small operators must have a system with continuous data collection which includes specified analysis points and repetitive examinations.

G. A data collection and analysis program can use a manufacturer as a collection and analysis center if the Administrator agrees. The operator is still responsible for the development and implementation of corrective actions and the overall effectiveness of the program.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. Prerequisites:

- Knowledge of the regulatory requirements of FAR Parts 121 and/or 135
- Successful completion of either the General Aviation or Airworthiness Inspectors Indoctrination Course or equivalent
- Suggested completion of the FAA Reliability Training Course

B. Coordination. This task requires coordination between the Principal Maintenance Inspector (PMI) and the Principal Avionics Inspector (PAI).

3. REFERENCES, FORMS, AND JOB AIDS

A. References

- FAR Part 43
- Advisory Circular 120-16, Continuous Airworthiness Maintenance Program, as amended
- Advisory Circular 120-17, Maintenance Control by Reliability Methods, as amended

B. Forms. None.

C. Job Aids. None.

5. PROCEDURES

A. Brief Operator/Applicant On Program Requirements and Procedures. When an operator/applicant inquires about a continuing analysis and surveillance program, brief the operator/applicant about program requirements. Inform the operator/applicant that an acceptable program must have a continuous internal audit and analysis system that accomplishes the following:

- Evaluates the organization's performance
- Identifies the performance deficiencies
- Determines and implements corrective actions
- Determines the effectiveness of corrective actions

B. Review the Operator/Applicant's Program. When the operator/applicant presents the complete continuing analysis and surveillance program, ensure that the program audits and analyzes the following:

- Aircraft inspections
- Scheduled maintenance
- Unscheduled maintenance
- Aircraft, engine, prop and appliance repair and overhaul
- Maintenance manuals
- Mechanical Reliability Reports (MRRs)
- Mechanical Interruption Summary Reports (MISRs)
- Vendor facilities and capabilities
- Maintenance organization staffing
- Required Inspection Item Program (RIIs)

C. Review Operator's Manual. Ensure that the manual contains the following:

- (1) An organizational chart that defines the lines of authority
- (2) Definitions of responsibilities and duties
- (3) The means by which the information will flow within the operator/applicant's organization and between any contractor/vendors and the operator/applicant
- (4) Examples of forms or reports that are used
- (5) Procedures that include a record review covering the following items:

- Accountability for all inspection requirements
- Routine and non-routine maintenance records
- Overhaul records
- Methods of Airworthiness Directives (ADs) compliance
- Service bulletin compliance
- Major repairs and alterations approval data

D. Evaluate Available Staffing. Ensure that the staffing described in the manual is available and

appropriate for the complexity of the operator/applicant's operation.

E. Analyze Results. Upon completion of the review, analyze the results and determine whether the operator/applicant's program meets all requirements. If problems exist, discuss the discrepancies with the operator/applicant and advise them as to what areas need corrective action.

7. TASK OUTCOMES

A. File PTRS Transmittal Form.

B. Successful completion of this task will result in the acceptance of the continuous analysis and surveillance program or revision.

C. Document Task. File all supporting paperwork in the operator/applicant's office file.

9. FUTURE ACTIVITIES. Normal surveillance.