Element Performance Inspection (EPI) Data Collection Tool
1.3.15 Reliability Program (AW)

ELEMENT SUMMARY INFORMATION

Purpose of this Element (certificate holder's responsibility):

- To provide a reliability program which improves aircraft, power plants, and/or systems reliability through data collection, analysis, corrective action, and follow-up.

Objective (FAA oversight):

- To determine the effectiveness of the certificate holder's procedures in meeting the desired output of the process.
- To determine if the certificate holder follows its procedures, controls, process measurements and interfaces for the Reliability Program.
- To determine if there were any changes in the personnel identified by the certificate holder as having responsibility and/or authority for the Reliability Program.

Specific Instructions:

- To accomplish this EPI, the Aviation Safety Inspector (ASI) should review the certificate holder's reliability program policies, procedures and reports. The ASI should attend the certificate holder's reliability program review meetings(s) and meet with certificate holder's reliability specialists. The ASI/PPM (Partial Program Manager) should discuss the reliability results, including corrective actions, with other ASIs/PPMs to identify related issues with the certificate holder's reliability program. The ASI should discuss the reliability program with the certificate holder's personnel having overall responsibility for the reliability program.
- The ASI should review logbook, pilot information reports, chronic reports, component tear down analysis reports, vendor reports, component failure rates, reliability program alerts, system adjustments, engine trend analysis data, and other statistical data required by the certificate holder's reliability program.
- This EPI will be accomplished at the main maintenance base and/or at the location where the reliability program is administered.
- There may be occasional circumstances when it is not possible to observe an event listed on this EPI. If during an inspection activity, the inspector does not observe the events listed in a question, leave the question unanswered until the last inspection activity. If the inspector does not observe the event during the last planned activity for the open EPI, then answer it yes and explain why it was not observed. He/She would select the "YES" button for the specific question, and enter an explanation in the Yes comment box, detailing why the event was not observed.

Related EPIs:

- 1.1.2 Appropriate Operational Equipment (AW)
- 1.2.1 Airworthiness Release / Logbook Entry (AW)
- 1.3.1 Maintenance Program (AW)
- 1.3.2 Inspection Program (AW)
- 1.3.4 Required Inspection Items (RII) (AW)
- 1.3.5 MEL / CDL / Deferred Maintenance (AW)
- 1.3.6 AD Management (AW)
- 1.3.9 Engineering / Major Repairs and Alterations (AW)

- 1.3.11 Continuous Analysis and Surveillance (CAS) (AW)
- 1.3.14 General Maintenance Manual / Equivalent (AW)
- 1.3.19 Lower Landing Minimums (LLM) (AW)
- 1.3.23 Short-Term Escalations (AW)
- 5.1.8 Extended Range Operations with Two-Engine Airplanes (ETOPS) (AW)

SUPPLEMENTAL INFORMATION

Specific Regulatory Requirements (SRRs):

- SRRs:

  119.43(b)
  119.43(b)(1)
  119.43(b)(2)
  119.43(c)
  119.5(g)
  121.135(a)(1)
  121.135(b)(1)
  121.135(b)(2)
  121.135(b)(3)
  D.074
  D.074(a)
  D.074(b)
  D.074(c)
  D.075
  D.075(a)
  D.075(b)
  D.075(c)
  D.077
  D.077a
  D.077f
  D.077h
  D.077i
  D.079
  D.079(b)
  D.079(c)(1)
  D.079(c)(2)
  D.079(c)(3)
  D.079(c)(4)
  D.079(c)(5)
  D.079(c)(6)
  D.079a
  D.079c
  D.088a
  D.088b

Related CFRs & FAA Policy/Guidance:

- Related CFRs:

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- FAA Policy/Guidance:

  FAA Order 8900.1,Vol 3, Ch 40
  FAA Order 8900.1,Vol 3, Ch 41
  FAA Order 8900.1,Vol 6, Ch 2, Sec 31
  AC 120-17A

EPI Section 1 - Performance Observables	
Objective: The tasks and questions in this section of the data collection tool (DCT) are designed to assist the inspector in determining if the certificate holder follows its written procedures and controls and meets the established performance measures of the process. To accomplish this, questions have been generated to test both the outputs of the process as well as the process itself. Question 1 and its following subquestions are directed at the output(s) of the process, whereas questions 2-6, when answered, should be directed at the process itself.	
Tasks	
	To meet this objective, the inspector must accomplish the following tasks:
1.	Review the information listed in the Supplemental Information section of this DCT.
2.	Review the certificate holder's policies, procedures, instructions, and information for the Reliability Program.
3.	Review the last accomplished associated safety attribute inspection (SAI) for this element with emphasis on the controls, process measurements and interface attribute section responses.
4.	Observe the certificate holder's Reliability Program to gain an understanding of the procedures, instructions, and information.
5.	Discuss the Reliability Program with the personnel (other than management) who perform the duties and responsibilities required by the Reliability Program.

Questions		
	To meet this objective, the inspector must answer the following questions:	
1.	Determine whether the following performance measures were met:	
1.1.	Did the certificate holder comply with the provisions of its operations specifications concerning the Reliability Program?	☐ Yes ☐ No, Explain
1.2.	Did the certificate holder collect the data required by its Reliability Program?	☐ Yes ☐ No, Explain
1.3.	Did the certificate holder submit the reports required by the Reliability Program?	☐ Yes ☐ No, Explain
1.4.	Did the certificate holder provide Reliability Program personnel with proper training?	☐ Yes ☐ No, Explain
1.5.	Did the certificate holder's reliability data reflect the actual operation?	☐ Yes ☐ No, Explain
1.6.	Did the certificate holder provide the data collected to the appropriate individual performing reliability analysis? *Related Performance JTIs:* 1. Check at the air carrier specified location by reviewing contracted Reliability Programs that the analyzed, consolidated, collected data is return it to the operator in a usable form in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 41, Para 3-3817 2. Check at the air carrier specified location by reviewing contracted Reliability Programs that the operator/applicant's is collecting the required data and sending it to the contractor in accordance with the contractual arrangement including corrective actions in accordance with the Certificate Holder's design.	☐ Yes ☐ No, Explain

	Sources: FAA Order 8900.1, Vol 3, Ch 41, Para 3-3823G3 3. Check at the air carrier specified location by reviewing contracted Reliability Programs that the operator/applicant's is collecting the required data and sending it to the contractor in accordance with the contractual arrangement including shop repair records for work performed away from the contractor's facility in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 41, Para 3-3823G3	
1.7.	Did the certificate holder obtain the required periodic feedback (follow-up) for the corrective action system? *Related Performance JTIs:* 1. Check at the air carrier specified location, by reviewing the Reliability Programs performance standards corrective action system, is obtaining periodic feedback (follow-up) until the performance reaches an acceptable level to ensure the corrective action taken was effective in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 40, Para 3-3789A2	☐ Yes ☐ No, Explain
1.8.	Did the certificate holder initiate and document corrective actions? *Related Performance JTIs:* 1. Check at the records repository by reviewing aircraft logbook records; identify any critical failures, check that they were recognized and a corrective action taken in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 40, Para 3-3793L6 FAA Order 8900.1, Vol 3, Ch 41, Para 3-3823N6 2. Check at the air carrier specified location, by reviewing any appropriate documents or reports, to identify any critical failures, check that they were recognized and a corrective action taken in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 40, Para 3-3793L6 FAA Order 8900.1, Vol 3, Ch 41, Para 3-3823N6 3. Check at the air carrier specified location, by reviewing the Reliability Programs data analysis system, that any further analysis for corrective action is being conducted by who is identified in the analysis system (i.e., quality control or engineering) in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 6, Ch 2, Sec 31, Para 6-854B5b FAA Order 8900.1, Vol 6, Ch 2, Sec 31, Para 6-854B5c 4. Check at the air carrier specified location, by reviewing the Reliability Programs corrective action system, that when the definitive conditions listed, have occurred, was corrective action taken implemented in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 6, Ch 2, Sec 31, Para 6-854B6c FAA Order 8900.1, Vol 6, Ch 2, Sec 31, Para 6-854B6b 5. Check at the air carrier specified location by reviewing a contracted Reliability Program that corrective actions were performed through the person responsible in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 41, Para 3-3823I1 6. Check at the air carrier specified location by reviewing a contracted Reliability Program that the person responsible for taking corrective	☐ Yes ☐ No, Explain

	action is being notified of the need for a corrective action in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 41, Para 3-3823I2 7. Check at the air carrier specified location, by reviewing the Reliability Programs corrective actions, that a time limit (completion date) is being set to complete the corrective action in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 6, Ch 2, Sec 31, Para 6-854B6d 8. Check at the air carrier specified location, by reviewing the Reliability Programs performance standards corrective action system, that when a corrective action is initiated that the organization responsible for taking the action is notified in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 4, Para 3-3789A1 FAA Order 8900.1, Vol 6, Ch 2, Sec 31, Para 6-854B6d	
1.9.	Did the certificate holder properly interpret critical failures? *Related Performance JTIs:* 1. Check at the air carrier specified location by reviewing any appropriate documents or reports to identify any critical failures and review the data analysis system to see if those critical failures were analyzed as they occurred in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 40, Para 3-3793F3 FAA Order 8900.1, Vol 3, Ch 41, Para 3-3823H3 2. Check at the records repository by reviewing aircraft logbook records; identify any critical failures, check that they were recognized and a corrective action taken in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 40, Para 3-3793L6 FAA Order 8900.1, Vol 3, Ch 41, Para 3-3823N6 3. Check at the air carrier specified location, by reviewing the Reliability Programs corrective action system, is identifying critical failures in which loss of function or secondary effects of failure could affect the airworthiness of the aircraft in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 40, Para 3-3789A4 FAA Order 8900.1, Vol 3, Ch 40, Para 3-3793F3	☐ Yes ☐ No, Explain
1.10.	Did the certificate holder properly adjust maintenance intervals? *Related Performance JTIs:* 1. Check at the FAA Location that the CHDO is being notified when increased time limit adjustment or other program adjustments are being addressed in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 40, Para 3-3793L5 FAA Order 8900.1, Vol 3, Ch 41, Para 3-3823N5 2. Check at the air carrier specified location, by reviewing the reliability programs Interval Adjustment/Change System, that systems or components are being escalated when current performance exceeds control limits in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 40, Para 3-3793J1	☐ Yes ☐ No, Explain
1.11.	Did the certificate holder properly adjust inspection intervals?	☐ Yes

	Related Performance JTIs: 1. Check at the air carrier specified location, by reviewing the Reliability Programs data analysis system, that it includes the effects on the maintenance controls such as inspection periods in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 40, Para 3-3793F2 FAA Order 8900.1, Vol 3, Ch 41, Para 3-3823H2 2. Check at the air carrier specified location, by reviewing the Reliability Programs data analysis system, that it includes the effects on maintenance controls such as inspection procedures in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 40, Para 3-3793F2 FAA Order 8900.1, Vol 3, Ch 41, Para 3-3823H2	☐ No, Explain
1.12.	Did the certificate holder properly interpret the reports and Reliability Program data collected?	☐ Yes ☐ No, Explain
2.	Were the certificate holder's policies, procedures, instructions and information for the Reliability Program followed? *Related Performance JTIs:* 1. Check at the air carrier specified location by reviewing contracted Reliability Programs that the contractor's reliability program is evaluating the conditions and trends found during the inspection of the aircraft that resulted in corrective action in accordance with the Certificate Holder's design. *Sources:* FAA Order 8900.1, Vol 3, Ch 41, Para 3-3823D3	☐ Yes ☐ No, Explain
3.	Were the Reliability Program controls followed?	☐ Yes ☐ No, Explain
4.	Did the records for the Reliability Program comply with the instructions provided by the certificate holder.	☐ Yes ☐ No, Explain
5.	Were the process measurements for the Reliability Program effective in identifying problems or potential problems and providing corrective action for them?	☐ Yes ☐ No, Explain
6.	Did personnel properly handle the associated interfaces by complying with other written policies, procedures, instructions and information that are related to this element?	☐ Yes ☐ No, Explain

EPI Section 1 - Performance Observables Drop-Down Menu
1. Personnel.
2. Tools and Equipment.
3. Technical Data.
4. Procedures, policies or instructions or information.
5. Materials.
6. Facilities.
7. Controls.
8. Process Measures.
9. Interfaces.
10. Desired Outcome.
11. Other.

EPI Section 2 - Management Responsibility & Authority Observables	
Objective: The questions in this section address the responsibility and authority of the process. They are designed to assist the inspector in determining if there is a clearly identifiable, qualified, and knowledgeable person who is responsible for the process, is answerable for the quality of the process, and has the authority to establish and modify the process.(The person with the authority may or may not be the person with the responsibility.)	
Tasks	
	To meet this objective, the inspector must accomplish the following tasks:
	NOTE: If no personnel or major program changes (as defined by the principal inspector (PI)) affecting the responsibility or authority attributes for this element have occurred since the last SAI and/or EPI was accomplished, then do not perform tasks 3 - 6, below. Answer questions 1 and 2 below, and provide the name/title.
1.	Identify the person who has overall responsibility for the Reliability Program.
2.	Identify the person who has overall authority for the Reliability Program.
3.	Review the duties and responsibilities for the person(s) who manage the Reliability Program.
4.	Review the appropriate organizational chart.
5.	Discuss the Reliability Program with the management personnel identified in tasks 1 and 2.
6.	Evaluate the qualifications and work experience of the management personnel identified in tasks 1 and 2.

Questions		
	To meet this objective, the inspector must answer the following questions:	
1.	Is there a clearly identified person who is responsible for the quality of the Reliability Program?	☐ Yes ☐ No, Explain Name/Title:
2.	Is there a clearly identified person who has authority to establish and modify the certificate holder's policies, procedures, instructions and information for the Reliability Program?	☐ Yes ☐ No, Explain Name/Title:
3.	Does the responsible person know that he/she has responsibility for the Reliability Program?	☐ Yes ☐ No, Explain ☐ No Change
4.	Does the person with authority know that he/she has authority for the Reliability Program?	☐ Yes ☐ No, Explain ☐ No Change
5.	Does the person with responsibility for the Reliability Program meet the qualification standards?	☐ Yes ☐ No, Explain ☐ No Change
6.	Does the person with authority to establish and modify the Reliability Program meet the qualification standards?	☐ Yes ☐ No, Explain ☐ No Change
7.	Does the person with responsibility understand the controls, process measurements, and interfaces associated with the Reliability Program?	☐ Yes ☐ No, Explain

		☐ No Change
8.	Does the person with authority understand the controls, process measurements, and interfaces associated with the Reliability Program?	☐ Yes ☐ No, Explain ☐ No Change
9.	Does the responsible person know who has authority to establish and modify the Reliability Program?	☐ Yes ☐ No, Explain ☐ No Change
10.	Does the individual with authority know who has the responsibility for the Reliability Program?	☐ Yes ☐ No, Explain ☐ No Change

EPI Section 2 - Management Responsibility & Authority Observables Drop-Down Menu
1. Assignment of responsibility.
2. Assignment of authority.
3. Does not understand procedures, policies or instructions and information.
4. Does not understand controls.
5. Does not understand process measurements.
6. Does not understand interfaces.
7. Span of control.
8. Position vacant.
9. Other.