

Element Performance Inspection (EPI)

3.1.9 Aircraft Performance Operating Limitations (OP)

Purpose of this Element (Air Carrier’s responsibility):

To ensure aircraft are operated within the performance limitations of the Aircraft Flight Manual (AFM).

Objective (FAA responsibility):

To determine if the operator adheres to its procedures covering the operation of aircraft within the performance limitations of the AFM.

Specific Instructions for this EPI:

To accomplish this EPI, the inspector should be familiar with the aircraft flight manual performance and operating limitations.

Task 4. Appropriate flight documents are approved performance data, weight and balance, etc.

Question 1.2. In order to determine this performance measure, the inspector should go to dispatch, or the cockpit, and observe the Air Carrier’s procedures that avert an aircraft from taking-off due to climb restrictions.

Question 3. Examples of the Controls for the Aircraft Performance and Operating Limits process are:

- “Takeoff data considerations” (e.g. gross weight MEL / CDL limitations, runway clutter, second segment climb, runway data, environmental data);
- “Climb data considerations”(e.g. special procedures, climb performance);
- “En route data considerations” (e.g. drift down, terrain restrictions, airspace restrictions); or,
- “Destination/Alternate Airports” (e.g. landing/go-around data, environmental data, runway clutter).

Related EPIs:

- 3.2.1 Dispatch / Flight Release (OP)
- 3.2.2 Flight / Load Manifest / Weight and Balance Control (OP)
- 3.2.3 MEL / CDL Procedures (OP)

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To meet this objective, the inspector will accomplish the following tasks (at the inspection locations where applicable):

1. Review the FAA Guidance and Specific Regulatory Requirements (SRR) included in the supplemental information section of this EPI.
2. Review the associated SAI, with emphasis on the Controls Attribute section.
3. Review the Aircraft Flight Manual or its equivalent.
4. Review the appropriate flight documents.

To meet this objective, the inspector will answer the following questions:

1. Were the following performance measures met:

<i>1.1 The takeoff weight for the runway used was within the limits of the performance data.</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO	If no, explain:
<i>1.2 The climb performance calculations were within AFM limits.</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO	If no, explain:
<i>1.3 The Dispatch / Flight Release documents contained enroute considerations such as drift down, ETOPS, alternate airports, and altitude information in accordance with the Air Carrier's procedures.</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO	If no, explain:
<i>1.4 The landing weight for the runway used was within limits of the performance data.</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO	If no, explain:
<i>1.5 The flight crewmembers operated the aircraft in accordance with the approved Aircraft Performance Operating Limitations.</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO	If no, explain:
2. Were the procedures for the Aircraft Performance and Operating Limitations process followed?	<input type="checkbox"/> YES <input type="checkbox"/> NO	If no, explain:
3. Were the controls for the Aircraft Performance and Operating Limitations process followed?	<input type="checkbox"/> YES <input type="checkbox"/> NO	If no, explain:
4. Were the records for Aircraft Performance and Operating Limitations maintained in accordance with the Air Carrier's procedures?	<input type="checkbox"/> YES <input type="checkbox"/> NO	If no, explain:
5. <Deleted>		

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SUPPLEMENTAL INFORMATION

SRRs:

- 14 CFR 121.173 (a-c, e), “Airplane Performance Operating Limitations, General.”
- 14 CFR 121.175 (a-e), “Airplanes: reciprocating engine powered: Weight limitations.”
- 14 CFR 121.177 (a), “Airplanes: Reciprocating engine powered: Takeoff limitations.”
- 14 CFR 121.179 (a), “Airplanes: reciprocating engine powered: Enroute limitations: all engines operating.”
- 14 CFR 121.181 (a-c), “Airplanes: Reciprocating engine powered: Enroute limitations: One engine inoperative.”
- 14 CFR 121.183 (a), “Part 25 airplanes with four or more engines: Reciprocating engine powered: Enroute limitations: Two engines inoperative.”
- 14 CFR 121.185 (a, b), “Airplanes: Reciprocating engine powered: Landing limitations: Destination airport.”
- 14 CFR 121.187 (a), “Airplanes: Reciprocating engine powered: Landing limitations: Alternate airport.”
- 14 CFR 121.189 (a-e), “Airplanes: Turbine engine powered; takeoff limitations.”
- 14 CFR 121.191 (a), “Airplanes: Turbine engine powered: En route limitations: One engine inoperative.”
- 14 CFR 121.193 (a-c), “Airplanes: Turbine engine powered: En route limitations: Two engines inoperative.”
- 14 CFR 121.195 (a-e), “Airplanes: Turbine engine powered: Landing limitations: Destination airports.”
- 14 CFR 121.197, “Airplanes: Turbine engine powered: Landing limitations: Alternate airports.”
- 14 CFR 121.199 (a), “Nontransport category airplanes: Takeoff limitations.”
- 14 CFR 121.201 (a, b), “Nontransport category airplanes: Enroute limitations: One engine inoperative.”
- 14 CFR 121.203 (a), “Nontransport category airplanes: Landing limitations: Destination airport.”
- 14 CFR 121.205, “Nontransport category airplanes: Landing limitations: Alternate airport.”
- 14 CFR 121.207 (a, b), “Provisionally certificated airplanes: Operating limitations.”

Other CFRs and FAA Guidance:

- FAA Order 8400.10, Vol. 4, Chap. 3, “Airplane Performance and Airport Data.”
- Refer to Advisory Circulars using a search engine (such as ATP Navigator or Summit).