

Element Performance Inspection (EPI) Data Collection Tool

3.1.9 Aircraft Performance Operating Limitations (OP)

ELEMENT SUMMARY INFORMATION

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

- To ensure that the certificate holder's aircraft are operated within the performance limitations of the Aircraft Flight Manual and regulations.

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 Aircraft Flight Performance Operating Limitations process.
- To determine if there were any changes in the personnel identified by the certificate holder as having responsibility and/or authority for the Aircraft Performance Operating Limitations process.

Specific Instructions:

- To accomplish this EPI, the inspector should be familiar with the Aircraft Flight Manual performance and operating limitations.

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)

SUPPLEMENTAL INFORMATION

Specific Regulatory Requirements (SRRs):

- SRRs:
 - 119.43(b)
 - 119.43(b)(1)
 - 119.43(b)(2)
 - 119.43(c)
 - 121.135(a)(1)
 - 121.135(b)(1)
 - 121.135(b)(13)
 - 121.135(b)(2)
 - 121.135(b)(3)
 - 121.173(a)
 - 121.173(b)
 - 121.173(c)
 - 121.173(d)
 - 121.173(e)
 - 121.175(a)
 - 121.175(b)
 - 121.175(c)

- SRRs:
 - 121.175(d)
 - 121.175(e)
 - 121.177(a)(1)
 - 121.177(a)(2)
 - 121.177(a)(3)
 - 121.177(b)
 - 121.179(a)
 - 121.181(a)
 - 121.181(b)
 - 121.181(c)(1)
 - 121.181(c)(2)
 - 121.181(c)(3)
 - 121.181(c)(4)
 - 121.181(c)(5)
 - 121.181(c)(6)
 - 121.183(a)(1)
 - 121.183(a)(2)
 - 121.185(a)
 - 121.185(b)
 - 121.187(a)
 - 121.189(a)
 - 121.189(b)
 - 121.189(c)(1)
 - 121.189(c)(2)
 - 121.189(c)(3)
 - 121.189(d)(1)
 - 121.189(d)(2)
 - 121.189(e)
 - 121.189(g)
 - 121.191(a)(1)
 - 121.191(a)(2)
 - 121.193(a)(1)
 - 121.193(a)(2)
 - 121.193(b)(1)
 - 121.193(b)(2)
 - 121.193(c)(1)
 - 121.193(c)(2)
 - 121.195(a)
 - 121.195(b)
 - 121.195(c)
 - 121.195(d)
 - 121.195(e)
 - 121.197
 - 121.198(e)
 - 121.199(a)
 - 121.201(a)
 - 121.201(b)
 - 121.203(a)
 - 121.205
 - 91.323(a)(1)
 - 91.323(b)(4)
 - 91.605(a)
 - 91.605(b)
 - 91.9(b)(1)
 - 91.9(b)(2)
 - C.072b
 - C.354

Related CFRs & FAA Policy/Guidance:

- Related CFRs:
Intentionally left blank
- FAA Policy/Guidance:
FAA Order 8900.1
AC 91-6A

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 Aircraft Performance Operating Limitations process.
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 Aircraft Performance Operating Limitations process to gain an understanding of the procedures, instructions, and information.
5.	Discuss the Aircraft Performance Operating Limitations process with the personnel (other than management) who perform the duties and responsibilities required by the process.

Questions

	To meet this objective, the inspector must answer the following questions:	
1.	Determine whether the following performance measures were met:	
1.1.	<p>Did the certificate holder conduct takeoff operations within the performance limitations of the Aircraft Flight Manual and the regulations?</p> <p><i>Related Performance JTIs:</i></p> <ol style="list-style-type: none"> 1. Check at the Dispatch Center by observing the responsible personnel that when operating a turbine engine powered airplane, no airplane takes off at a weight greater than that listed in the Airplane Flight Manual for the elevation of the airport and for the ambient temperature existing at takeoff in accordance with the Certificate Holder's design. <i>Sources: 121.189(a)</i> 2. Check at the aircraft cockpit by observing the flight crew that when operating a turbine engine powered airplane, no airplane takes off at a weight greater than that listed in the Airplane Flight Manual for the elevation of the airport and for the ambient temperature existing at takeoff in accordance with the Certificate Holder's design. <i>Sources: 121.189(a)</i> 3. Check at the training center that the training includes, when operating a turbine engine powered airplane, no airplane may take off at a weight greater than that listed in the Airplane Flight Manual for the elevation of the airport and for the ambient temperature existing at takeoff in accordance with the Certificate Holder's design. <i>Sources: 121.189(a)</i> 4. Check at the dispatch center by observing the responsible personnel that when operating a turbine engine powered airplane certificated after August 26, 1957, but before August 30, 1959 (SR422, 422A), no person may take off that airplane at a weight greater than that listed in the 	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

	<p>Airplane Flight Manual for the minimum distances required for takeoff. In the case of an airplane certificated after September 30, 1958 (SR422A, 422B), the takeoff distance may include a clearway distance but the clearway distance included may not be greater than 1/2 of the takeoff run in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.189(b)</p> <p>5. Check at the aircraft cockpit by observing the flight crew that when operating a turbine engine powered airplane, certificated after August 26, 1957, but before August 30, 1959 (SR422, 422A), no person may take off that airplane at a weight greater than that listed in the Airplane Flight Manual for the minimum distances required for takeoff. In the case of an airplane certificated after September 30, 1958 (SR422A, 422B), the takeoff distance may include a clearway distance but the clearway distance included may not be greater than 1/2 of the takeoff run in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.189(b)</p> <p>6. Check at the training center that the training includes that when operating a turbine engine powered airplane, certificated after August 26, 1957, but before August 30, 1959 (SR422, 422A), no person may take off that airplane at a weight greater than that listed in the Airplane Flight Manual for the minimum distances required for takeoff. In the case of an airplane certificated after September 30, 1958 (SR422A, 422B), the takeoff distance may include a clearway distance but the clearway distance included may not be greater than 1/2 of the takeoff run in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.189(b)</p> <p>7. Check at the dispatch center by observing the responsible personnel that when operating a turbine engine powered airplane certificated after August 29, 1959 (SR422B), no person may take off that airplane at a weight greater than that listed in the Airplane Flight Manual at which compliance with the following may be shown: ,h The accelerate-stop distance must not exceed the length of the runway plus the length of any stopway. ,h The takeoff distance must not exceed the length of the runway plus the length of any clearway except that the length of any clearway included must not be greater than one-half the length of the runway. ,h The takeoff run must not be greater than the length of the runway.</p> <p><i>Sources:</i> 121.189(c)(1); 121.189(c)(2); 121.189(c)(3)</p> <p>8. Check at the aircraft cockpit by interviewing the flightcrew that they are aware that when operating a turbine engine powered airplane certificated after August 29, 1959 (SR422B), no person may take off that airplane at a weight greater than that listed in the Airplane Flight Manual at which compliance with the following may be shown: ,h The accelerate-stop distance must not exceed the length of the runway plus the length of any stopway. ,h The takeoff distance must not exceed the length of the runway plus the length of any clearway except that the length of any clearway included must not be greater than one-half the length of the runway. ,h The takeoff run must not be greater than the length of the runway.</p> <p><i>Sources:</i> 121.189(c)(1); 121.189(c)(2); 121.189(c)(3)</p> <p>9. Check at the training center that training includes that when operating a turbine engine powered airplane certificated after August 29, 1959 (SR422B), the training includes that no person may take off at a weight greater than that listed in the Airplane Flight Manual at which compliance with the following may be shown: ,h The accelerate-stop distance must not exceed the length of the runway plus the length of any stopway. ,h</p>	
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	<p>The takeoff distance must not exceed the length of the runway plus the length of any clearway except that the length of any clearway included must not be greater than one-half the length of the runway. The takeoff run must not be greater than the length of the runway.</p> <p><i>Sources:</i> 121.189(c)(1); 121.189(c)(2); 121.189(c)(3)</p> <p>10. Check at the dispatch center that when operating a turbine engine powered airplane no person may take off that airplane at a weight greater than that listed in the Airplane Flight Manual. In the case of an airplane certificated after August 26, 1957, but before October 1, 1958 (SR422), that allows a takeoff path that clears all obstacles either by at least $(35+0.01D)$ feet vertically (D is the distance along the intended flight path from the end of the runway in feet), or by at least 200 feet horizontally within the airport boundaries and by at least 300 feet horizontally after passing the boundaries in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.189(d)(1)</p> <p>11. Check at the aircraft cockpit by interviewing the flight crew that when operating a turbine engine powered airplane they are aware that no person may take off that airplane at a weight greater than that listed in the Airplane Flight Manual. In the case of an airplane certificated after August 26, 1957, but before October 1, 1958 (SR422), that allows a takeoff path that clears all obstacles either by at least $(35+0.01D)$ feet vertically (D is the distance along the intended flight path from the end of the runway in feet), or by at least 200 feet horizontally within the airport boundaries and by at least 300 feet horizontally after passing the boundaries in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.189(d)(1)</p> <p>12. Check at the training center that when operating a turbine engine powered airplane the training includes that they may take off an airplane at a weight greater than that listed in the Airplane Flight Manual. In the case of an airplane certificated after August 26, 1957, but before October 1, 1958 (SR422), that allows a takeoff path that clears all obstacles either by at least $(35+0.01D)$ feet vertically (D is the distance along the intended flight path from the end of the runway in feet), or by at least 200 feet horizontally within the airport boundaries and by at least 300 feet horizontally after passing the boundaries in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.189(d)(1)</p> <p>13. Check at the dispatch center by interviewing the responsible personnel that they are aware that no person operating a turbine engine powered airplane may take off that airplane at a weight greater than that listed in the Airplane Flight Manual. In the case of an airplane certificated after September 30, 1958 (SR 422A, 422B), that allows a net takeoff flight path that clears all obstacles either by a height of at least 35 feet vertically, or by at least 200 feet horizontally within the airport boundaries and by at least 300 feet horizontally after passing the boundaries in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.189(d)(2)</p> <p>14. Check at the aircraft cockpit by interviewing the flight crew that they are aware that no person operating a turbine engine powered airplane may take off that airplane at a weight greater than that listed in the Airplane Flight Manual. In the case of an airplane certificated after September 30, 1958 (SR 422A, 422B), that allows a net takeoff flight path that clears all obstacles either by a height of at least 35 feet vertically, or by at least 200 feet horizontally within the airport boundaries and by at least 300 feet horizontally after passing the boundaries in accordance with the</p>	
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	<p>Certificate Holder's design. Sources: 121.189(d)(2)</p> <p>15. Check at the training center that when operating a turbine engine powered airplane the training includes that no person may take off that airplane at a weight greater than that listed in the Airplane Flight Manual. In the case of an airplane certificated after September 30, 1958 (SR 422A, 422B), that allows a net takeoff flight path that clears all obstacles either by a height of at least 35 feet vertically, or by at least 200 feet horizontally within the airport boundaries and by at least 300 feet horizontally after passing the boundaries in accordance with the Certificate Holder's design. Sources: 121.189(d)(2)</p> <p>16. Check at the dispatch center by observing the responsible personnel that when determining maximum weights, minimum distances, and flight paths under FAR 121.189(a) through (d), corrections are made for the runway to be used, the elevation of the airport, the effective runway gradient, the ambient temperature and wind component at the time of takeoff, and, if operating limitations exist for the minimum distances required for takeoff from wet runways, the runway surface condition (dry or wet) in accordance with the Certificate Holder's design. Sources: 121.189(e)</p> <p>17. Check at the aircraft cockpit by observing the flight crew that when determining maximum weights, minimum distances, and flight paths under FAR 121.189(a) through (d), corrections are made for the runway to be used, the elevation of the airport, the effective runway gradient, the ambient temperature and wind component at the time of takeoff, and, if operating limitations exist for the minimum distances required for takeoff from wet runways, the runway surface condition (dry or wet) in accordance with the Certificate Holder's design. Sources: 121.189(e)</p> <p>18. Check at the training center by that training includes that when determining maximum weights, minimum distances, and flight paths under FAR 121.189(a) through (d), corrections are made for the runway to be used, the elevation of the airport, the effective runway gradient, the ambient temperature and wind component at the time of takeoff, and, if operating limitations exist for the minimum distances required for takeoff from wet runways, the runway surface condition (dry or wet) in accordance with the Certificate Holder's design. Sources: 121.189(e)</p> <p>19. Check at the dispatch center by observing the responsible personnel that when determining maximum weights, minimum distances, and flight paths under FAR 121.189(a) through (d), wet runway distances associated with grooved or porous friction course runways, if provided in the Airplane Flight Manual, are used only for runways that are grooved or treated with a porous friction course (PFC) overlay, and that the operator determines are designed, constructed, and maintained in a manner acceptable to the Administrator in accordance with the Certificate Holder's design. Sources: 121.189(e)</p> <p>20. Check at the aircraft cockpit by observing the flight crew that when determining maximum weights, minimum distances, and flight paths under FAR 121.189(a) through (d), wet runway distances associated with grooved or porous friction course runways, if provided in the Airplane Flight Manual, are used only for runways that are grooved or treated with a porous friction course (PFC) overlay, and that the operator determines</p>	
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	<p>are designed, constructed, and maintained in a manner acceptable to the Administrator in accordance with the Certificate Holder's design. <i>Sources:</i> 121.189(e)</p> <p>21. Check at the training center by that training includes that when determining maximum weights, minimum distances, and flight paths under FAR 121.189(a) through (d), wet runway distances associated with grooved or porous friction course runways, if provided in the Airplane Flight Manual, are used only for runways that are grooved or treated with a porous friction course (PFC) overlay, and that the operator determines are designed, constructed, and maintained in a manner acceptable to the Administrator in accordance with the Certificate Holder's design. <i>Sources:</i> 121.189(e)</p> <p>22. Check at the aircraft cockpit that the flight crew cross-checks engine parameters with provided data during takeoff in accordance with the Certificate Holder's design. <i>Sources:</i> HBAT 98-31 4A</p> <p>23. Check at the Training Center that the responsible company personnel provides training to ensure that flight crews cross-check engine parameters with provided data during takeoff in accordance with the Certificate Holder's design. <i>Sources:</i> HBAT 98-31 4A</p>	
<p>1.2.</p>	<p>Did the certificate holder conduct en route operations within the performance limitations of the Aircraft Flight Manual and the regulations? <i>Related Performance JTIs:</i></p> <p>1. Check at the dispatch center by observing the responsible personnel that no person operating a turbine engine powered airplane takes off that airplane at a weight, allowing for normal consumption of fuel and oil, that is greater than that which (under the approved, one engine inoperative, en route net flight path data in the Airplane Flight Manual for that airplane) based on the ambient temperatures expected en route, there is a positive slope at an altitude of at least 1,000 feet above all terrain and obstructions within five statute miles on each side of the intended track, and, in addition, if that airplane was certificated after August 29, 1959 (SR 422B) there is a positive slope at 1,500 feet above the airport where the airplane is assumed to land after an engine fails in accordance with the Certificate Holder's design. <i>Sources:</i> 121.191(a)(1)</p> <p>2. Check at the aircraft cockpit by observing the flight crew that no person operating a turbine engine powered airplane takes off that airplane at a weight, allowing for normal consumption of fuel and oil, that is greater than that which (under the approved, one engine inoperative, en route net flight path data in the Airplane Flight Manual for that airplane) based on the ambient temperatures expected en route, there is a positive slope at an altitude of at least 1,000 feet above all terrain and obstructions within five statute miles on each side of the intended track, and, in addition, if that airplane was certificated after August 29, 1959 (SR 422B) there is a positive slope at 1,500 feet above the airport where the airplane is assumed to land after an engine fails in accordance with the Certificate Holder's design. <i>Sources:</i> 121.191(a)(1)</p> <p>3. Check at the training center that when operating a turbine engine powered airplane the training includes that no takeoffs in that airplane are at a weight, allowing for normal consumption of fuel and oil, that is</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No, Explain</p>

	<p>greater than that which (under the approved, one engine inoperative, en route net flight path data in the Airplane Flight Manual for that airplane) based on the ambient temperatures expected en route, there is a positive slope at an altitude of at least 1,000 feet above all terrain and obstructions within five statute miles on each side of the intended track, and, in addition, if that airplane was certificated after August 29, 1959 (SR 422B) there is a positive slope at 1,500 feet above the airport where the airplane is assumed to land after an engine fails in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.191(a)(1)</p> <p>4. Check at the dispatch center by observing the responsible personnel that no person operating a turbine engine powered airplane takes off that airplane at a weight, allowing for normal consumption of fuel and oil, that is greater than that which (under the approved, one engine inoperative, en route net flight path data in the Airplane Flight Manual for that airplane) based on the ambient temperatures expected en route, the net flight path allows the airplane to continue flight from the cruising altitude to an airport where a landing can be made under FAR 121.197, clearing all terrain and obstructions within five statute miles of the intended track by at least 2,000 feet vertically and with a positive slope at 1,000 feet above the airport where the airplane lands after an engine fails, or, if that airplane was certificated after September 30, 1958 (SR 422A, 422B), with a positive slope at 1,500 feet above the airport where the airplane lands after an engine fails in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.191(a)(2)</p> <p>5. Check at the aircraft cockpit by observing the flight crew that that no person operating a turbine engine powered airplane takes off that airplane at a weight, allowing for normal consumption of fuel and oil, that is greater than that which (under the approved, one engine inoperative, en route net flight path data in the Airplane Flight Manual for that airplane) based on the ambient temperatures expected en route, the net flight path allows the airplane to continue flight from the cruising altitude to an airport where a landing can be made under FAR 121.197, clearing all terrain and obstructions within five statute miles of the intended track by at least 2,000 feet vertically and with a positive slope at 1,000 feet above the airport where the airplane lands after an engine fails, or, if that airplane was certificated after September 30, 1958 (SR 422A, 422B), with a positive slope at 1,500 feet above the airport where the airplane lands after an engine fails in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.191(a)(2)</p> <p>6. Check at the training center that when operating a turbine engine powered airplane the training includes that no takeoffs in that airplane are at a weight, allowing for normal consumption of fuel and oil, that is greater than that which (under the approved, one engine inoperative, en route net flight path data in the Airplane Flight Manual for that airplane) based on the ambient temperatures expected en route, the net flight path allows the airplane to continue flight from the cruising altitude to an airport where a landing can be made under FAR 121.197, clearing all terrain and obstructions within five statute miles of the intended track by at least 2,000 feet vertically and with a positive slope at 1,000 feet above the airport where the airplane lands after an engine fails, or, if that airplane was certificated after September 30, 1958 (SR 422A, 422B), with a positive slope at 1,500 feet above the airport where the airplane lands after an engine fails in accordance with the Certificate Holder's</p>	
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	<p>design. Sources: 121.191(a)(2)</p> <p>7. Check at the dispatch center by observing the responsible personnel that no person operating a turbine engine powered airplane certificated after August 26, 1957, but before October 1, 1958 (SR 422), operates along an intended route unless there is no place along the intended track that is more than 90 minutes (with all engines operating at cruising power) from an airport that meets the requirements of FAR121.197 in accordance with the Certificate Holder's design. Sources: 121.193(a)(1)</p> <p>8. Check at the aircraft cockpit by observing the flight crew that that no person operating a turbine engine powered airplane certificated after August 26, 1957, but before October 1, 1958 (SR 422), operates along an intended route unless there is no place along the intended track that is more than 90 minutes (with all engines operating at cruising power) from an airport that meets the requirements of FAR121.197 in accordance with the Certificate Holder's design. Sources: 121.193(a)(1)</p> <p>9. Check at the training center that when operating a turbine engine powered airplane certificated after August 26, 1957, but before October 1, 1958 (SR 422), that training includes that no person may operate along an intended route unless there is no place along the intended track that is more than 90 minutes (with all engines operating at cruising power) from an airport that meets the requirements of FAR121.197 in accordance with the Certificate Holder's design. Sources: 121.193(a)(1)</p> <p>10. Check at the dispatch center by observing the responsible personnel that no person operating a turbine engine powered airplane certificated after August 26, 1957, but before October 1, 1958 (SR 422), operates a turbine engine powered airplane along an intended route unless its weight, according to the two-engine-inoperative, en route, net flight path data in the Airplane Flight Manual, allows the airplane to fly from the point where the two engines are assumed to fail simultaneously to an airport that meets the requirements of FAR 121.197, with a net flight path (considering the ambient temperature anticipated along the track) having a positive slope at an altitude of at least 1,000 feet above all terrain and obstructions within five miles on each side of the intended track, or at an altitude of 5,000 feet, whichever is higher in accordance with the Certificate Holder's design. Sources: 121.193(a)(2)</p> <p>11. Check at the aircraft cockpit by observing the flight crew that no person operating a turbine engine powered airplane certificated after August 26, 1957, but before October 1, 1958 (SR 422), operates a turbine engine powered airplane along an intended route unless its weight, according to the two-engine-inoperative, en route, net flight path data in the Airplane Flight Manual, allows the airplane to fly from the point where the two engines are assumed to fail simultaneously to an airport that meets the requirements of FAR 121.197, with a net flight path (considering the ambient temperature anticipated along the track) having a positive slope at an altitude of at least 1,000 feet above all terrain and obstructions within five miles on each side of the intended track, or at an altitude of 5,000 feet, whichever is higher in accordance with the Certificate Holder's design. Sources: 121.193(a)(2)</p> <p>12. Check at the training center that when operating a turbine engine</p>	
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	<p>powered airplane certificated after August 26, 1957, but before October 1, 1958 (SR 422), that training includes that no person may along an intended route unless its weight, according to the two-engine-inoperative, en route, net flight path data in the Airplane Flight Manual, allows the airplane to fly from the point where the two engines are assumed to fail simultaneously to an airport that meets the requirements of FAR 121.197, with a net flight path (considering the ambient temperature anticipated along the track) having a positive slope at an altitude of at least 1,000 feet above all terrain and obstructions within five miles on each side of the intended track, or at an altitude of 5,000 feet, whichever is higher in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.193(a)(2)</p> <p>13. Check at the dispatch center by observing the responsible personnel that, for aircraft certificated after September 30, 1958, but before August 30, 1959 (SR422A), no person may operates a turbine engine powered airplane along an intended route unless there is no place along the intended track that is more than 90 minutes (with all engines operating at cruising power) from an airport that meets the requirements of FAR121.197 in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.193(b)(1)</p> <p>14. Check at the aircraft cockpit by observing the flight crew that, for aircraft certificated after September 30, 1958, but before August 30, 1959 (SR422A), no person may operates a turbine engine powered airplane along an intended route unless there is no place along the intended track that is more than 90 minutes (with all engines operating at cruising power) from an airport that meets the requirements of FAR121.197 in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.193(b)(1)</p> <p>15. Check at the training center that, for aircraft certificated after September 30, 1958, but before August 30, 1959 (SR422A), training includes that no person may operate a turbine engine powered airplane along an intended route unless there is no place along the intended track that is more than 90 minutes (with all engines operating at cruising power) from an airport that meets the requirements of FAR121.197 in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.193(b)(1)</p> <p>16. Check at the dispatch center by observing the responsible personnel that, for aircraft certificated after September 30, 1958, but before August 30, 1959 (SR422A), no person operates a turbine engine powered airplane along an intended route unless its weight, according to the two-engine-inoperative, en route, net flight path data in the Airplane Flight Manual, allows the airplane to fly from the point where the two engines are assumed to fail simultaneously to an airport that meets the requirements of FAR 121.197, with a net flight path (considering the ambient temperatures anticipated along the track) having a positive slope at an altitude of at least 1,000 feet above all terrain and obstructions within 5 miles on each side of the intended track, or at an altitude of 2,000 feet, whichever is higher in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.193(b)(2)</p> <p>17. Check at the aircraft cockpit by observing the flight crew that, for aircraft certificated after September 30, 1958, but before August 30, 1959 (SR422A), no person operates a turbine engine powered airplane along an intended route unless its weight, according to the two-engine-inoperative, en route, net flight path data in the Airplane Flight Manual, allows the airplane to fly from the point where the two engines are</p>	
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	<p>assumed to fail simultaneously to an airport that meets the requirements of FAR 121.197, with a net flight path (considering the ambient temperatures anticipated along the track) having a positive slope at an altitude of at least 1,000 feet above all terrain and obstructions within 5 miles on each side of the intended track, or at an altitude of 2,000 feet, whichever is higher in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.193(b)(2)</p> <p>18. Check at the training center that, for aircraft certificated after September 30, 1958, but before August 30, 1959 (SR422A), training includes that no person may operate a turbine engine powered airplane along an intended route unless its weight, according to the two-engine-inoperative, en route, net flight path data in the Airplane Flight Manual, allows the airplane to fly from the point where the two engines are assumed to fail simultaneously to an airport that meets the requirements of FAR 121.197, with a net flight path (considering the ambient temperatures anticipated along the track) having a positive slope at an altitude of at least 1,000 feet above all terrain and obstructions within 5 miles on each side of the intended track, or at an altitude of 2,000 feet, whichever is higher in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.193(b)(2)</p> <p>19. Check at the dispatch center by observing the responsible personnel that, for aircraft certificated after August 29, 1959 (SR 422B), no person operates a turbine engine powered airplane along an intended route unless there is no place along the intended track that is more than 90 minutes (with all engines operating at cruising power) from an airport that meets the requirements of FAR121.197 in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.193(c)(1)</p> <p>20. Check at the aircraft cockpit by observing the flight crew that, for aircraft certificated after August 29, 1959 (SR 422B), no person operates a turbine engine powered airplane along an intended route unless there is no place along the intended track that is more than 90 minutes (with all engines operating at cruising power) from an airport that meets the requirements of FAR121.197 in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.193(c)(1)</p> <p>21. Check at the training center that, for aircraft certificated after August 29, 1959 (SR 422B), training includes that no person operates a turbine engine powered airplane along an intended route unless there is no place along the intended track that is more than 90 minutes (with all engines operating at cruising power) from an airport that meets the requirements of FAR121.197 in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.193(c)(1)</p> <p>22. Check at the dispatch center by observing the responsible personnel that, for aircraft certificated after August 29, 1959 (SR 422B), no person operates a turbine engine powered airplane along an intended route unless its weight, according to the two-engine inoperative, en route, net flight path data in the Airplane Flight Manual, allows the airplane to fly from the point where the two engines are assumed to fail simultaneously to an airport that meets the requirements of FAR 121.197, with the net flight path (considering the ambient temperatures anticipated along the track) clearing vertically by at least 2,000 feet all terrain and obstructions within five statute miles (4.34 nautical miles) on each side of the intended track in accordance with the Certificate Holder's design.</p>	
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	<p><i>Sources:</i> 121.193(c)(2)</p> <p>23. Check at the aircraft cockpit by observing the flight crew that, for aircraft certificated after August 29, 1959 (SR 422B), no person operates a turbine engine powered airplane along an intended route unless its weight, according to the two-engine inoperative, en route, net flight path data in the Airplane Flight Manual, allows the airplane to fly from the point where the two engines are assumed to fail simultaneously to an airport that meets the requirements of FAR 121.197, with the net flight path (considering the ambient temperatures anticipated along the track) clearing vertically by at least 2,000 feet all terrain and obstructions within five statute miles (4.34 nautical miles) on each side of the intended track in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.193(c)(2)</p> <p>24. Check at the training center that, for aircraft certificated after August 29, 1959 (SR 422B), training includes no person operates a turbine engine powered airplane along an intended route unless its weight, according to the two-engine inoperative, en route, net flight path data in the Airplane Flight Manual, allows the airplane to fly from the point where the two engines are assumed to fail simultaneously to an airport that meets the requirements of FAR 121.197, with the net flight path (considering the ambient temperatures anticipated along the track) clearing vertically by at least 2,000 feet all terrain and obstructions within five statute miles (4.34 nautical miles) on each side of the intended track in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.193(c)(2)</p>	
<p>1.3.</p>	<p>Did the certificate holder conduct landing operations within the performance limitations of the Aircraft Flight Manual and the regulations?</p> <p><i>Related Performance JTIs:</i></p> <p>1. Check at the aircraft cockpit by observing the flight crew that, no person takes off a turbine engine powered airplane unless it is at such a weight that (allowing for normal consumption of fuel and oil in flight to the destination or alternate airport) the weight of the airplane on arrival would exceed the landing weight set forth in the Airplane Flight Manual for the elevation of the destination or alternate airport and the ambient temperature anticipated at the time of landing in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.195(a)</p> <p>2. Check at the training center that, training includes that no person takes off a turbine engine powered airplane unless it is at such a weight that (allowing for normal consumption of fuel and oil in flight to the destination or alternate airport) the weight of the airplane on arrival would exceed the landing weight set forth in the Airplane Flight Manual for the elevation of the destination or alternate airport and the ambient temperature anticipated at the time of landing in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.195(a)</p> <p>3. Check that the dispatch center by observing the responsible personnel that, except as provided in FAR 121.195 (c),(d), or (e), no person operating a turbine engine powered airplane takes off that airplane unless its weight on arrival, allowing for normal consumption of fuel and oil in flight (in accordance with the landing distance set forth in the Airplane Flight Manual for the elevation of the destination airport and the wind conditions anticipated there at the time of landing), would allow a full stop landing at the intended destination airport within 60 percent of</p>	<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No, Explain</p>

	<p>the effective length of each runway described below from a point 50 feet above the intersection of the obstruction clearance plane and the runway in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.195(b)</p> <p>4. Check that the aircraft cockpit by observing the flight crew that, except as provided in FAR 121.195 (c),(d), or (e), no person operating a turbine engine powered airplane takes off that airplane unless its weight on arrival, allowing for normal consumption of fuel and oil in flight (in accordance with the landing distance set forth in the Airplane Flight Manual for the elevation of the destination airport and the wind conditions anticipated there at the time of landing), would allow a full stop landing at the intended destination airport within 60 percent of the effective length of each runway described below from a point 50 feet above the intersection of the obstruction clearance plane and the runway in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.195(b)</p> <p>5. Check that the training center that, training includes that except as provided in FAR 121.195 (c),(d), or (e), no person operating a turbine engine powered airplane takes off that airplane unless its weight on arrival, allowing for normal consumption of fuel and oil in flight (in accordance with the landing distance set forth in the Airplane Flight Manual for the elevation of the destination airport and the wind conditions anticipated there at the time of landing), would allow a full stop landing at the intended destination airport within 60 percent of the effective length of each runway described below from a point 50 feet above the intersection of the obstruction clearance plane and the runway in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.195(b)</p> <p>6. Check at the dispatch center by observing the responsible personnel that a turbopropeller powered airplane that would be prohibited from being taken off because it could not meet the requirements of FAR 121.195(b)(2), may be taken off if an alternate airport is specified that meets all the requirements of this section except that the airplane can accomplish a full stop landing within 70 percent of the effective length of the runway in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.195(c)</p> <p>7. Check at the aircraft cockpit by observing the flight crew that a turbopropeller powered airplane that would be prohibited from being taken off because it could not meet the requirements of FAR 121.195(b)(2), may be taken off if an alternate airport is specified that meets all the requirements of this section except that the airplane can accomplish a full stop landing within 70 percent of the effective length of the runway in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.195(c)</p> <p>8. Check at the training center that, training includes that a turbopropeller powered airplane that would be prohibited from being taken off because it could not meet the requirements of FAR 121.195(b)(2), may be taken off if an alternate airport is specified that meets all the requirements of this section except that the airplane can accomplish a full stop landing within 70 percent of the effective length of the runway in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.195(c)</p> <p>9. Check at the dispatch center by observing the responsible personnel that no person takeoffs a turbojet powered airplane when the appropriate weather reports and forecasts, or a combination thereof, indicate that the</p>	
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	<p>runways at the destination airport may be wet or slippery at the estimated time of arrival unless the effective runway length at the destination airport is at least 115 percent of the runway length required under FAR 121.195(b) in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.195(d)</p> <p>10. Check at the aircraft cockpit by observing the flight crew that no person takeoffs a turbojet powered airplane when the appropriate weather reports and forecasts, or a combination thereof, indicate that the runways at the destination airport may be wet or slippery at the estimated time of arrival unless the effective runway length at the destination airport is at least 115 percent of the runway length required under FAR 121.195(b) in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.195(d)</p> <p>11. Check at the training center that, training includes no person may takeoff a turbojet powered airplane when the appropriate weather reports and forecasts, or a combination thereof, indicate that the runways at the destination airport may be wet or slippery at the estimated time of arrival unless the effective runway length at the destination airport is at least 115 percent of the runway length required under FAR 121.195(b) in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.195(d)</p> <p>12. Check at the dispatch center that no alternate airports are listed in a dispatch or flight release for a turbine engine powered airplane unless (based on then assumptions in FAR 121.195 (b)) that airplane at the weight anticipated at the time of arrival can be brought to a full stop landing within 70 percent of the effective length of the runway for turbopropeller powered airplanes and 60 percent of the effective length of the runway for turbojet powered airplanes, from a point 50 feet above the intersection of the obstruction clearance plane and the runway. In the case of an alternate airport for departure, as provided in FAR 121.617, allowance may be made for fuel jettisoning in addition to normal consumption of fuel and oil when determining the weight anticipated at the time of arrival in accordance with the Certificate Holder's design.</p> <p><i>Sources:</i> 121.197</p>	
2.	Were the certificate holder's policies, procedures, instructions, and information, for the Aircraft Performance Operating Limitations process followed?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
3.	Were the Aircraft Performance Operating Limitations process controls followed?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
4.	Did the records for the Aircraft Performance Operating Limitations process comply with the instructions provided in the certificate holder?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
5.	Were the process measurements for the Aircraft Performance Operating Limitations process effective in identifying problems or potential problems and providing corrective action for them?	<input type="checkbox"/> Yes <input type="checkbox"/> 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?	<input type="checkbox"/> Yes <input type="checkbox"/> 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 Aircraft Performance Operating Limitations process.
2.	Identify the person who has overall authority for the Aircraft Performance Operating Limitations process.
3.	Review the duties and responsibilities for those who manage the Aircraft Performance Operating Limitations process.
4.	Review the appropriate organizational chart.
5.	Discuss the Aircraft Performance Operating Limitations process 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 Aircraft Performance Operating Limitations process?	<input type="checkbox"/> Yes <input type="checkbox"/> 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 Aircraft Performance Operating Limitations process?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain Name/Title:
3.	Does the responsible person know that he/she has responsibility for the Aircraft Performance Operating Limitations process?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> No Change
4.	Does the person with authority know that he/she has authority for the Aircraft Performance Operating Limitations process?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> No Change
5.	Does the person with responsibility for the Aircraft Performance Operating Limitations process meet the qualification standards?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> No Change
6.	Does the person with authority to establish and modify the Aircraft Performance	<input type="checkbox"/> Yes

	Operating Limitations process meet the qualification standards?	<input type="checkbox"/> No, Explain <input type="checkbox"/> No Change
7.	Does the person with responsibility understand the controls, process measurements, and interfaces associated with the Aircraft Performance Operating Limitations process?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> No Change
8.	Does the person with authority understand the controls, process measurements, and interfaces associated with the Aircraft Performance Operating Limitations process?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> No Change
9.	Does the responsible person know who has authority to establish and modify the Aircraft Performance Operating Limitations process?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> No Change
10.	Does the individual with authority know who has the responsibility for the Aircraft Performance Operating Limitations process?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> 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.