

**Safety Attribute Inspection (SAI) 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 if the certificate holder's Aircraft Performance Operating Limitations process meets all applicable requirements of Title 14 of the Code of Federal Regulations (14 CFR) and FAA policies.
- To determine if the certificate holder's Aircraft Performance Operating Limitations process incorporates the safety attributes.
- To identify any shortfalls in the certificate holder's Aircraft Performance Operating Limitations process.

**Specific Instructions:**

- Intentionally Left Blank

**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)
  - 121.175(d)
  - 121.175(e)
  - 121.177(a)(1)
  - 121.177(a)(2)
  - 121.177(a)(3)
  - 121.177(b)
  - 121.179(a)

- SRRs:
  - 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

### SAI Section 1 - Procedures Attribute

**Objective:** Procedures, instructions, and information are documented methods for accomplishing a process. The certificate holder's policies should establish their compliance posture. Policies may be stand-alone statements, or they may be imbedded within procedures, instructions, or information regarding a particular regulatory requirement. The questions in this section of the data collection tool (DCT) are designed to assist the inspector in determining if the certificate holder has documented or prescribed methods of accomplishing the process requirements that provide answers to the associated questions regarding who, what, when, where, and how. This section contains policy questions, procedural questions, and instructional or informational questions pertaining to various types of certificate holder requirements such as actions, prohibitions, or resources (i.e., personnel, facilities, equipment, technical data, etc.).

#### 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 Aircraft Performance Operation Limitations process to ensure it contains the policies, procedures, instructions and information necessary for personnel to perform their duties and responsibilities with a high degree of safety.
3.	Review the certificate holder's Aircraft Performance Operating Limitations process to ensure it contains the policies, procedures, instructions and information necessary for personnel to perform their duties and responsibilities with a high degree of safety.

#### Questions

	To meet this objective, the inspector must answer the following questions:	
1.	Does the certificate holder's Aircraft Performance Operating Limitations process meet the specific regulatory and FAA policy requirements:	
1.1.	<p>Does the certificate holder comply with the applicable airplane certification standards?</p> <p>SRRs: 121.173(a); 121.173(b); 121.173(c); 121.173(e)</p> <p><i>Related Design JTIs:</i></p> <p>1. Check that the Certificate Holder's manual system contains instructions and information to its personnel specifying that if the Certificate Holder elects to carry the manual required by FAR 121.133, the Certificate Holder may revise the operating procedures sections and modify the presentation of performance data from the applicable flight manual if the revised operating procedures and modified performance data presentation are-- (1) Approved by the Administrator; and (2) Clearly identified as airplane flight manual requirements.</p> <p><i>Sources:</i> 121.135(b)(1); 121.173(a); 121.173(c)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP)</p> <p>2. Check that the Certificate Holder's manual contains instructions and information to its personnel that when operating a large nontransport category airplane certificated before January 1, 1965, it shall comply with FAR 121.199 through 121.205 and any determination of compliance will be based only on approved performance data.</p> <p><i>Sources:</i> 121.135(a)(1); 121.173(c)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP);</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

	2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP)	
1.2.	<p>Does the certificate holder have procedures for determining reciprocating engine-powered transport category aircraft performance limitations?</p> <p>SRRs: 121.175(a); 121.175(b); 121.175(c); 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); 121.187(a); 121.185(b)</p> <p><i>Related Design JTIs:</i></p> <ol style="list-style-type: none"> <li>1. Check that the Certificate Holder's manual system includes procedures to ensure that no person may take off a reciprocating engine powered airplane from an airport located at an elevation outside of the range for which maximum takeoff weights have been determined for that airplane. <i>Sources:</i> 121.135(b)(13); 121.175(a) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</li> <li>2. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person may take off a reciprocating engine powered transport category airplane from an airport located at an elevation outside of the range for which maximum takeoff weights have been determined for that airplane. <i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.175(a) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</li> <li>3. Check that the Certificate Holder's manual system includes procedures to ensure that no person may take off a reciprocating engine powered transport category airplane for an airport of intended destination that is located at an elevation outside of the range for which maximum landing weights have been determined for that airplane. <i>Sources:</i> 121.135(b)(13); 121.175(b) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</li> <li>4. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person may take off a reciprocating engine powered transport category airplane for an airport of intended destination that is located at an elevation outside of the range for which maximum landing weights have been determined for that airplane. <i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.175(b) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</li> <li>5. Check that the Certificate Holder's manual system includes procedures to ensure that no person may specify, or have specified, an alternate airport that is located at an elevation outside of the range for which maximum landing weights have been determined for the reciprocating engine powered transport category airplane concerned. <i>Sources:</i> 121.135(b)(13); 121.175(c) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</li> <li>6. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person may specify,</li> </ol>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable

	<p>or have specified, an alternate airport that is located at an elevation outside of the range for which maximum landing weights have been determined for the reciprocating engine powered transport category airplane concerned.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.175(c)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>7. Check that the Certificate Holder's manual system includes procedures to ensure that no person may take off a reciprocating engine powered transport category airplane at a weight more than the maximum authorized takeoff weight for the elevation of the airport.</p> <p><i>Sources:</i> 121.135(b)(13); 121.175(d)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>8. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person may take off a reciprocating engine powered transport category airplane at a weight more than the maximum authorized takeoff weight for the elevation of the airport.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.175(d)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>9. Check that the Certificate Holder's manual system includes procedures to ensure that no person may take off a reciprocating engine powered transport category airplane if its weight on arrival at the airport of destination will be more than the maximum authorized landing weight for the elevation of that airport.</p> <p><i>Sources:</i> 121.135(b)(13); 121.175(e)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>10. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person may take off a reciprocating engine powered transport category airplane if its weight on arrival at the airport of destination will be more than the maximum authorized landing weight for the elevation of that airport.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.175(e)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>11. Check that the Certificate Holder's manual system includes procedures to ensure that no person operating a reciprocating engine powered transport category airplane may takeoff that airplane unless it is possible to stop the airplane safely on the runway, as shown by the accelerate stop distance data, at any time during takeoff until reaching critical-engine failure speed.</p> <p><i>Sources:</i> 121.135(b)(13); 121.177(a)(1)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>12. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person operating a reciprocating engine powered transport category airplane may takeoff that airplane unless it is possible to stop the airplane safely on the runway, as shown by the accelerate stop distance data, at any time during takeoff until reaching critical-engine failure speed.</p>	
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	<p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>18. Check that the Certificate Holder's manual system includes instructions and information to ensure that corrections must be made for the effective runway gradient. To allow for wind effect, takeoff data based on still air may be corrected by taking into account not more than 50 percent of any reported headwind component and not less than 150 percent of any reported tailwind component.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.175(b)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>19. Check that the Certificate Holder's manual system includes procedures to ensure that no person operating a reciprocating engine powered transport category airplane may take off that airplane at a weight, allowing for normal consumption of fuel and oil, that does not allow a rate of climb (in feet per minute), with all engines operating, of at least 6.90 VSO (that is, the number of feet per minute is obtained by multiplying the number of knots by 6.90) at an altitude of at least 1,000 feet above the highest ground or obstruction within ten miles of each side of the intended track.</p> <p><i>Sources:</i> 121.135(b)(13); 121.179(a)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>20. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person operating a reciprocating engine powered transport category airplane may take off that airplane at a weight, allowing for normal consumption of fuel and oil, that does not allow a rate of climb (in feet per minute), with all engines operating, of at least 6.90 VSO (that is, the number of feet per minute is obtained by multiplying the number of knots by 6.90) at an altitude of at least 1,000 feet above the highest ground or obstruction within ten miles of each side of the intended track.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.179(a)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>21. Check that the Certificate Holder's manual system includes procedures to ensure that, except as provided FAR 121.181(b), no person operating a reciprocating engine powered transport category airplane may take off that airplane at a weight, allowing for normal consumption of fuel and oil, that does not allow a rate of climb (in feet per minute), with one engine inoperative, of at least <math>(0.079-0.106/N)</math> VSO<sub>2</sub> (where N is the number of engines installed and VSO is expressed in knots) at an altitude of at least 1,000 feet above the highest ground or obstruction within 10 miles of each side of the intended track. However, for the purposes of this paragraph the rate of climb for transport category airplanes certificated under Part 4a of the Civil Air Regulations is 0.026 VSO<sub>2</sub>.</p> <p><i>Sources:</i> 121.135(b)(13); 121.181(a)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>22. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that except as provided FAR 121.181(b), no person operating a reciprocating engine powered transport category airplane may take off that airplane at a weight, allowing for normal consumption of fuel and oil, that does not allow a</p>	
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	<p>rate of climb (in feet per minute), with one engine inoperative, of at least (0.079-0.106/N) VSO2 (where N is the number of engines installed and VSO is expressed in knots) at an altitude of at least 1,000 feet above the highest ground or obstruction within 10 miles of each side of the intended track. However, for the purposes of this paragraph the rate of climb for transport category airplanes certificated under Part 4a of the Civil Air Regulations is 0.026 VSO2.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.181(a)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>23. Check that the Certificate Holder's manual system includes procedures, that, if applicable, in place of the requirements of FAR 121.181(a), a person may, under an approved procedure, operate a reciprocating engine powered transport category airplane, at an all-engines-operating altitude that allows the airplane to continue, after an engine failure, to an alternate airport where a landing can be made in accordance with FAR 121.187, allowing for normal consumption of fuel and oil. after the assumed failure, the flight path must clear the ground and any obstruction within five miles on each side of the intended track by at least 2,000 feet.</p> <p><i>Sources:</i> 121.135(b)(13); 121.181(b)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>24. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that, if applicable, in place of the requirements of FAR 121.181(a), a person may, under an approved procedure, operate a reciprocating engine powered transport category airplane, at an all-engines-operating altitude that allows the airplane to continue, after an engine failure, to an alternate airport where a landing can be made in accordance with FAR 121.187, allowing for normal consumption of fuel and oil. After the assumed failure, the flight path must clear the ground and any obstruction within five miles on each side of the intended track by at least 2,000 feet.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.181(b)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>25. Check that the Certificate Holder's manual system includes procedures, that, if an approved procedure under FAR 121.181(b) is used, the rate of climb (as prescribed in the Airplane Flight Manual for the appropriate weight and altitude) used in calculating the airplane's flight path shall be diminished by an amount, in feet per minute, equal to (0.079-0.106/N) VSO2 (when N is the number of engines installed and VSO is expressed in knots) for airplanes certificated under Part 25 of this chapter and by 0.026 VSO2 for airplanes certificated under Part 4a of the Civil Air Regulations.</p> <p><i>Sources:</i> 121.135(b)(13); 121.181(c)(1)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>26. Check that the Certificate Holder's manual system includes instructions and information to its personnel that, if an approved procedure under FAR 121.181(b) is used, the rate of climb (as prescribed in the Airplane Flight Manual for the appropriate weight and altitude) used in calculating the airplane's flight path shall be diminished by an amount, in feet per minute, equal to (0.079-0.106/N) VSO2 (when N is the number of engines installed and VSO is expressed in knots) for</p>	
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	<p>airplanes certificated under Part 25 of this chapter and by 0.026 VSO2 for airplanes certificated under Part 4a of the Civil Air Regulations.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.181(c)(1)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>27. Check that the Certificate Holder's manual system includes procedures that, if an approved procedure under FAR 121.181(b) is used, the all-engines-operating altitude shall be sufficient so that in the event the critical engine becomes inoperative at any point along the route, the flight will be able to proceed to a predetermined alternate airport by use of this procedure. In determining the takeoff weight, the airplane is assumed to pass over the critical obstruction following engine failure at a point no closer to the critical obstruction than the nearest approved radio navigational fix, unless the Administrator approves a procedure established on a different basis upon finding that adequate operational safeguards exist.</p> <p><i>Sources:</i> 121.135(b)(13); 121.181(c)(2)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>28. Check that the Certificate Holder's manual system includes instructions and information to its personnel that, if an approved procedure under FAR 121.181(b) is used, the all-engines-operating altitude shall be sufficient so that in the event the critical engine becomes inoperative at any point along the route, the flight will be able to proceed to a predetermined alternate airport by use of this procedure. In determining the takeoff weight, the airplane is assumed to pass over the critical obstruction following engine failure at a point no closer to the critical obstruction than the nearest approved radio navigational fix, unless the Administrator approves a procedure established on a different basis upon finding that adequate operational safeguards exist.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.181(c)(2)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>29. Check that the Certificate Holder's manual system includes procedures to ensure that if an approved procedure under FAR 121.181(b) is used, the airplane must meet the provisions of FAR 121.181(a) at 1,000 feet above the airport used as an alternate in this procedure.</p> <p><i>Sources:</i> 121.135(b)(13); 121.181(c)(3)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>30. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that if an approved procedure under FAR 121.181(b) is used, the airplane must meet the provisions FAR 121.181(a) at 1,000 feet above the airport used as an alternate in this procedure.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.181(c)(3)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>31. Check that the Certificate Holder's manual system includes procedures to ensure that if an approved procedure under FAR 121.181(b) is used, the procedure must include an approved method of accounting for winds and temperatures that would otherwise adversely affect the flight path.</p> <p><i>Sources:</i> 121.135(b)(13); 121.181(c)(4)</p>	
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	<p>38. Check that the Certificate Holder's manual system includes procedures to ensure that no person may operate an airplane certificated under Part 25 and having four or more engines reciprocating engines and two inoperative unless it is operated at a weight allowing the airplane, with the two critical engines inoperative, to climb at 0.013 VSO2 feet per minute (that is, the number of feet per minute is obtained by multiplying the number of knots squared by 0.013) at an altitude of 1,000 feet above the highest ground or obstruction within 10 miles on each side of the intended track, or at an altitude of 5,000 feet, whichever is higher. <i>Sources:</i> 121.135(b)(13); 121.183(a)(2) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>39. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person may operate an airplane certificated under Part 25 and having four or more engines 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 FAR121.187. <i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.183(a)(1) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>40. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person may operate an airplane certificated under Part 25 and having four or more engines unless it is operated at a weight allowing the airplane, with the two critical engines inoperative, to climb at 0.013 VSO2 feet per minute (that is, the number of feet per minute is obtained by multiplying the number of knots squared by 0.013) at an altitude of 1,000 feet above the highest ground or obstruction within 10 miles on each side of the intended track, or at an altitude of 5,000 feet, whichever is higher. <i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.183(a)(2) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>41. Check that the Certificate Holder's manual system includes procedures to ensure that, except as provided in FAR 121.185(b), no person operating a reciprocating engine powered airplane may take off that airplane, unless its weight on arrival, allowing for normal consumption of fuel and oil in flight, would allow a full stop landing at the intended destination within 60 percent of the effective length of each runway described below from a point 50 feet directly above the intersection of the obstruction clearance plane and the runway. <i>Sources:</i> 121.135(b)(13); 121.185(a) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>42. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that, except as provided in FAR 121.185(b), no person operating a reciprocating engine powered airplane may take off that airplane, unless its weight on arrival, allowing for normal consumption of fuel and oil in flight, would allow a full stop landing at the intended destination within 60 percent of the effective length of each runway described below from a point 50 feet directly above the intersection of the obstruction clearance plane and the runway. <i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.185(a) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP);</p>	
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	<p>4.2.5(OP); 4.2.11(OP)</p> <p>43. Check that the Certificate Holder's manual system includes procedures to ensure that a reciprocating engine powered airplane that would be prohibited from being taken off because it could not meet the requirements of FAR 121.185(a)(2) may be taken off if an alternate airport is specified that meets all of the requirements of FAR 121.185 except that the airplane can accomplish a full stop landing within 70 percent of the effective length of the runway. <i>Sources:</i> 121.135(b)(13); 121.185(b) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>44. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that a reciprocating engine powered airplane that would be prohibited from being taken off because it could not meet the requirements of FAR 121.185(a)(2) may be taken off if an alternate airport is specified that meets all of the requirements of FAR 121.185 except that the airplane can accomplish a full stop landing within 70 percent of the effective length of the runway. <i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.185(b) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>45. Check that the Certificate Holder's manual system includes procedures to ensure that no person may list an airport as an alternate airport in a dispatch or flight release unless the airplane (at the weight anticipated at the time of arrival at the airport), based on the assumptions in FAR 121.185, can be brought to a full stop landing, within 70 percent of the effective length of the runway. <i>Sources:</i> 121.135(b)(13); 121.187(a) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>46. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person may list an airport as an alternate airport in a dispatch or flight release unless the airplane (at the weight anticipated at the time of arrival at the airport), based on the assumptions in FAR 121.185, can be brought to a full stop landing, within 70 percent of the effective length of the runway. <i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.187(a) <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p>	
<p>1.3.</p>	<p>Does the certificate holder have procedures for determining non transport category aircraft performance limitations? SRRs: 121.199(a); 121.201(a); 121.205; 121.201(b); 121.203(a) <i>Related Design JTIs:</i></p> <p>1. Check that the Certificate Holder's manual system includes procedures to ensure that no person operating a non transport category airplane may take off that airplane at a weight greater than the weight that would allow the airplane to be brought to a safe stop within the effective length of the runway, from any point during the takeoff before reaching 105 percent of minimum control speed (the minimum speed at which an airplane can be safely controlled in flight after an engine becomes inoperative) or 115 percent of the power off stalling speed in the takeoff configuration, whichever is greater.</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable</p>

	<p><i>Sources:</i> 121.135(b)(13); 121.199(a)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>2. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person operating a non transport category airplane may take off that airplane at a weight greater than the weight that would allow the airplane to be brought to a safe stop within the effective length of the runway, from any point during the takeoff before reaching 105 percent of minimum control speed (the minimum speed at which an airplane can be safely controlled in flight after an engine becomes inoperative) or 115 percent of the power off stalling speed in the takeoff configuration, whichever is greater.  <i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.199(a)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>3. Check that the Certificate Holder's manual system includes procedures to ensure that, except as provided in FAR 121.201(b), no person operating a non transport category airplane may take off that airplane at a weight that does not allow a rate of climb of at least 50 feet a minute, with the critical engine inoperative, at an altitude of at least 1,000 feet above the highest obstruction within five miles on each side of the intended track, or 5,000 feet, whichever is higher.  <i>Sources:</i> 121.135(b)(13); 121.201(a)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>4. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that, except as provided in FAR 121.201(b), no person operating a non transport category airplane may take off that airplane at a weight that does not allow a rate of climb of at least 50 feet a minute, with the critical engine inoperative, at an altitude of at least 1,000 feet above the highest obstruction within five miles on each side of the intended track, or 5,000 feet, whichever is higher.  <i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.201(a)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>5. Check that the Certificate Holder's manual contains procedures that not withstanding paragraph (a) of this section, if the Administrator finds that safe operations are not impaired, a person may operate the airplane at an altitude that allows the airplane, in case of engine failure, to clear all obstructions within 5 miles on each side of the intended track by 1,000 feet. If this procedure is used, the rate of descent for the appropriate weight and altitude is assumed to be 50 feet a minute greater than the rate in the approved performance data. Before approving such a procedure, the Administrator considers the following for the route, route segment, or area concerned: (1) The reliability of wind and weather forecasting. (2) The location and kinds of navigation aids. (3) The prevailing weather conditions, particularly the frequency and amount of turbulence normally encountered. (4) Terrain features. (5) Air traffic control problems. (6) Any other operational factors that affect the operation.  <i>Sources:</i> 121.135(b)(13); 121.201(b)(1); 121.201(b)(2); 121.201(b)(3); 121.201(b)(4); 121.201(b)(5); 121.201(b)(6)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p>	
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	<p>6. Check that the Certificate Holder's manual contains instructions and information to its personnel that notwithstanding paragraph (a) of this section, if the Administrator finds that safe operations are not impaired, a person may operate the airplane at an altitude that allows the airplane, in case of engine failure, to clear all obstructions within 5 miles on each side of the intended track by 1,000 feet. If this procedure is used, the rate of descent for the appropriate weight and altitude is assumed to be 50 feet a minute greater than the rate in the approved performance data. Before approving such a procedure, the Administrator considers the following for the route, route segment, or area concerned: (1) The reliability of wind and weather forecasting. (2) The location and kinds of navigation aids. (3) The prevailing weather conditions, particularly the frequency and amount of turbulence normally encountered. (4) Terrain features. (5) Air traffic control problems. (6) Any other operational factors that affect the operation.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.201(b)(1); 121.201(b)(2); 121.201(b)(3); 121.201(b)(4); 121.201(b)(5); 121.201(b)(6)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>7. Check that the Certificate Holder's manual system includes procedures to ensure that no person operating a non transport category airplane may take off that airplane at a weight that, allowing for anticipated consumption of fuel and oil, is greater than the weight that would allow a full stop landing within 60 percent of the effective length of the most suitable runway at the destination airport.</p> <p><i>Sources:</i> 121.135(b)(13); 121.203(a)(1)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>8. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person operating a non transport category airplane may take off that airplane at a weight that, allowing for anticipated consumption of fuel and oil, is greater than the weight that would allow a full stop landing within 60 percent of the effective length of the most suitable runway at the destination airport.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.203(a)(1)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>9. Check that the Certificate Holder's manual system includes procedures to ensure that no person operating a non transport category airplane may take off that airplane at a weight that is greater than the weight allowable if the landing is to be made on the runway-- (i) With the greatest effective length in still air; and (ii) Required by the probable wind, taking into account not more than 50 percent of the headwind component or not less than 150 percent of the tailwind component.</p> <p><i>Sources:</i> 121.135(b)(13); 121.203(a)(2)(i); 121.203(a)(2)(ii)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>10. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person operating a non transport category airplane may take off that airplane at a weight that is greater than the weight allowable if the landing is to be made on the runway-- (i) With the greatest effective length in still air; and (ii) Required by the probable wind, taking into account not more than 50 percent of the headwind component or not less than 150 percent of the tailwind component.</p>	
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	<p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.203(a)(2)(i); 121.203(a)(2)(ii)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>11. Check that the Certificate Holder's manual system includes procedures to ensure that no person may list an airport as an alternate airport in a dispatch or flight release for a non transport category airplane unless that airplane (at the weight anticipated at the time of arrival) based on the assumptions contained in FAR 121.203, can be brought to a full stop landing within 70 percent of the effective length of the runway.</p> <p><i>Sources:</i> 121.135(b)(13); 121.205</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>12. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person may list an airport as an alternate airport in a dispatch or flight release for a non transport category airplane unless that airplane (at the weight anticipated at the time of arrival) based on the assumptions contained in FAR 121.203, can be brought to a full stop landing within 70 percent of the effective length of the runway.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.205</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p>	
1.4.	<p>Does the certificate holder have procedures for determining turbine engine-powered transport category aircraft takeoff performance limitations?</p> <p><i>SRRs:</i> 121.135(b)(13); 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); 91.605(b); 121.189(g)</p> <p><i>Related Design JTIs:</i></p> <p>1. Check that the Certificate Holder's manual system includes procedures to ensure 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 for the elevation of the airport and for the ambient temperature existing at takeoff.</p> <p><i>Sources:</i> 121.135(b)(13); 121.189(a)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>2. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure 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 for the elevation of the airport and for the ambient temperature existing at takeoff.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.189(a)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>3. Check that the Certificate Holder's manual system includes procedures to ensure that no person operating a turbine engine powered airplane certificated after August 26, 1957, but before August 30, 1959 (SR422, 422A), 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</p>	<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No, Explain</p> <p><input type="checkbox"/> Not Applicable</p>



	<p>takeoff run.  <i>Sources:</i> 121.135(b)(13); 121.189(b)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>4. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person operating a turbine engine powered airplane certificated after August 26, 1957, but before August 30, 1959 (SR422, 422A), 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.  <i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.189(b)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>5. Check that the Certificate Holder's manual system includes procedures to ensure that no person operating a turbine engine powered airplane certificated after August 29, 1959 (SR422B), 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: The accelerate-stop distance must not exceed the length of the runway plus the length of any stopway.  <i>Sources:</i> 121.135(b)(13); 121.189(c)(1)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>6. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person operating a turbine engine powered airplane certificated after August 29, 1959 (SR422B), 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: The accelerate-stop distance must not exceed the length of the runway plus the length of any stopway.  <i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.189(c)(1)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>7. Check that the Certificate Holder's manual system includes procedures to ensure that no person operating a turbine engine powered airplane certificated after August 29, 1959 (SR422B), 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: 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.  <i>Sources:</i> 121.135(b)(13); 121.189(c)(2)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>8. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person operating a turbine engine powered airplane certificated after August 29, 1959 (SR422B), 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: The takeoff distance must not exceed the length of the runway plus the length of any clearway except that the length of any</p>	
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	<p>clearway included must not be greater than one-half the length of the runway.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.189(c)(2)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>9. Check that the Certificate Holder's manual system includes procedures to ensure that no person operating a turbine engine powered airplane certificated after August 29, 1959 (SR422B), 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: The takeoff run must not be greater than the length of the runway.</p> <p><i>Sources:</i> 121.135(b)(13); 121.189(c)(3)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>10. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person operating a turbine engine powered airplane certificated after August 29, 1959 (SR422B), 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: The takeoff run must not be greater than the length of the runway.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.189(c)(3)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>11. Check that the Certificate Holder's manual system includes procedures to ensure 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 August 26, 1957, but before October 1, 1958 (SR422), that allows a takeoff path that clears all obstacles either by at least <math>(35+0.01D)</math> 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.</p> <p><i>Sources:</i> 121.135(b)(13); 121.189(d)(1)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>12. Check that the Certificate Holder's manual system includes procedures to ensure 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.</p> <p><i>Sources:</i> 121.135(b)(13); 121.189(d)(2)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>13. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure 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 August 26, 1957, but before October 1, 1958</p>	
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	<p>(SR422), that allows a takeoff path that clears all obstacles either by at least <math>(35+0.01D)</math> feet vertically (<math>D</math> 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.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.189(d)(1)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>14. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure 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.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.189(d)(2)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>15. Check that the Certificate Holder's manual system includes procedures to ensure that in determining maximum weights, minimum distances, and flight paths under FAR 121.189(a) through (d), correction must be 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).</p> <p><i>Sources:</i> 121.135(b)(13); 121.189(e)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>16. Check that the Certificate Holder's manual system includes procedures to ensure that in 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, may be 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.</p> <p><i>Sources:</i> 121.135(b)(13); 121.189(e)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>17. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that in determining maximum weights, minimum distances, and flight paths under FAR 121.189(a) through (d), correction must be 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).</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.189(e)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>18. Check that the Certificate Holder's manual system includes instructions</p>	
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	<p>and information to its personnel to ensure that in 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, may be 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.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.189(e)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>19. Check that the Certificate Holder's manual system has instructions and information to its personnel that for the purposes of FAR 121.189, the terms, "takeoff distance," "takeoff run," "net takeoff flight path" and "takeoff path" have the same meanings as set forth in the rules under which the airplane was certificated.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.189(g)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p>	
<p>1.5.</p>	<p>Does the certificate holder have procedures for determining turbine engine-powered transport category aircraft en route performance limitations?</p> <p>SRRs: 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)</p> <p><i>Related Design JTIs:</i></p> <p>1. Check that the Certificate Holder's manual system includes procedures to ensure that no person operating a turbine engine powered airplane may take 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) will allow compliance with paragraph FAR 121.191(a) (1) or (2), 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.</p> <p><i>Sources:</i> 121.135(b)(13); 121.191(a)(1)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>2. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person operating a turbine engine powered airplane may take 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) will allow compliance with paragraph FAR 121.191(a) (1) or (2), 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.</p>	<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No, Explain</p> <p><input type="checkbox"/> Not Applicable</p>

	<p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.191(a)(1)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>3. Check that the Certificate Holder's manual system includes procedures to ensure that no person operating a turbine engine powered airplane may take 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.</p> <p><i>Sources:</i> 121.135(b)(13); 121.191(a)(2)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>4. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person operating a turbine engine powered airplane may take 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.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.191(a)(2)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>5. Check that the Certificate Holder's manual system includes procedures to ensure that, for airplanes certificated after August 26, 1957, but before October 1, 1958 (SR 422), no person may operate a turbine engine powered airplane along an intended route unless he complies with either of the following: 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.</p> <p><i>Sources:</i> 121.135(b)(13); 121.193(a)(1)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>6. Check that the Certificate Holder's manual system includes procedures to ensure that, for airplanes certificated after August 26, 1957, but before October 1, 1958 (SR 422), no person may operate a turbine engine powered transport category airplane along an intended route unless he complies with either of the following: 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</p>	
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	<p>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.</p> <p><i>Sources:</i> 121.135(b)(13); 121.193(a)(2)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>7. Check that the Certificate Holder's manual system includes instructions and information to ensure that, for airplanes certificated after August 26, 1957, but before October 1, 1958 (SR 422, no person may operate a turbine engine powered transport category airplane along an intended route unless he complies with either of the following: 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.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.193(a)(1)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>8. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that, for airplanes certificated after August 26, 1957, but before October 1, 1958 (SR 422, no person may operate a turbine engine powered airplane along an intended route unless he complies with either of the following: 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.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.193(a)(2)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>9. Check that the Certificate Holder's manual system includes procedures to ensure that, for aircraft certificated after September 30, 1958, but before August 30, 1959 (SR422A), no person may operate a turbine engine powered airplane along an intended route unless he complies with either of the following: (1) 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.</p> <p><i>Sources:</i> 121.135(b)(13); 121.193(b)(1)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>10. Check that the Certificate Holder's manual system includes procedures to ensure that, for aircraft certificated after September 30, 1958, but before August 30, 1959 (SR422A), no person may operate a turbine engine powered airplane along an intended route unless he complies with either of the following: (2) 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</p>	
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	<p>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.</p> <p><i>Sources:</i> 121.135(b)(13); 121.193(b)(2)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>11. Check that the Certificate Holder's manual system includes instructions and information to ensure that, for aircraft certificated after September 30, 1958, but before August 30, 1959 (SR422A), no person may operate a turbine engine powered airplane along an intended route unless he complies with either of the following: (1) 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.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.193(b)(1)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>12. Check that the Certificate Holder's manual system includes instructions and information to ensure that, for aircraft certificated after September 30, 1958, but before August 30, 1959 (SR422A), no person may operate a turbine engine powered airplane along an intended route unless he complies with either of the following: (2) 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.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.193(b)(2)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>13. Check that the Certificate Holder's manual system includes procedures to ensure that, for aircraft certificated after August 29, 1959 (SR 422B), no person may operate a turbine engine powered airplane along an intended route unless he complies with either of the following: (1) 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.</p> <p><i>Sources:</i> 121.135(b)(13); 121.193(c)(1)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>14. Check that the Certificate Holder's manual system includes procedures to ensure that, for aircraft certificated after August 29, 1959 (SR 422B), no person may operate a turbine engine powered airplane along an intended route unless he complies with either of the following: (2) 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</p>	
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	<p>intended track.  <i>Sources:</i> 121.135(b)(13); 121.193(c)(2)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>15. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that, for aircraft certificated after August 29, 1959 (SR 422B), no person may operate a turbine engine powered airplane along an intended route unless he complies with either of the following: (1) 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.  <i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.193(c)(1)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>16. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that, for aircraft certificated after August 29, 1959 (SR 422B), no person may operate a turbine engine powered airplane along an intended route unless he complies with either of the following: (2) 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.  <i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.193(c)(2)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p>	
<p>1.6.</p>	<p>Does the certificate holder have procedures for determining turbine engine-powered transport category aircraft landing performance limitations?  <i>SRRs:</i> 121.195(a); 121.195(b); 121.195(c); 121.195(d); 121.195(e); 121.197  <i>Related Design JTIs:</i></p> <p>1. Check that the Certificate Holder's manual system includes procedures to ensure that, no person operating a turbine engine powered airplane may take off that airplane 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.  <i>Sources:</i> 121.135(b)(13); 121.195(a)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>2. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that, no person operating a turbine engine powered airplane may take off that airplane 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.</p>	<p><input type="checkbox"/> Yes  <input type="checkbox"/> No, Explain  <input type="checkbox"/> Not Applicable</p>



	<p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.195(a)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>3. Check that the Certificate Holder's manual system includes procedures to ensure that, except as provided in FAR 121.195 (c),(d), or (e), no person operating a turbine engine powered airplane may take 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.</p> <p><i>Sources:</i> 121.135(b)(13); 121.195(b)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>4. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that, except as provided in FAR 121.195 (c),(d), or (e), no person operating a turbine engine powered airplane may take 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.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.195(b)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>5. Check that the Certificate Holder's manual system includes procedures to ensure 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.</p> <p><i>Sources:</i> 121.135(b)(13); 121.195(c)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>6. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure 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.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.195(c)  <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>7. Check that the Certificate Holder's manual system includes procedures to ensure that unless, based on a showing of actual operating landing techniques on wet runways, a shorter landing distance (but never less than that required by FAR 121.195(b) has been approved for a specific</p>	
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	<p>type and model airplane and included in the Airplane Flight Manual, 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).</p> <p><i>Sources:</i> 121.135(b)(13); 121.195(d)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>8. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that unless, based on a showing of actual operating landing techniques on wet runways, a shorter landing distance (but never less than that required by FAR 121.195(b) has been approved for a specific type and model airplane and included in the Airplane Flight Manual, 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).</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.195(d)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>9. Check that the Certificate Holder's manual system includes procedures to ensure that, a turbojet 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 FAR 121.195(b).</p> <p><i>Sources:</i> 121.135(b)(13); 121.195(e)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>10. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that, a turbojet 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 FAR 121.195(b).</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.195(e)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>11. Check that the Certificate Holder's manual system includes procedures to ensure that no person may list an airport as an alternate airport 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.</p> <p><i>Sources:</i> 121.135(b)(13); 121.197</p>	
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	<p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p> <p>12. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure that no person may list an airport as an alternate airport 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.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.197</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p>	
1.7.	<p>Where conditions are different from those in the Airplane Flight Manual, does the certificater holder's system specify that results be substantially as accurate as direct tests?</p> <p>SRRs: 121.173(d)</p> <p><i>Related Design JTIs:</i></p> <p>1. Check that the Certificate Holder's manual system includes instructions and information to its personnel to ensure the performance data in the Airplane Flight Manual applies in determining compliance with FAR 121.175 through 121.197. Where conditions are different from those on which the performance data is based, compliance is determined by interpolation or by computing the effects of changes in the specific variables if the results of the interpolation or computations are substantially as accurate as the results of direct tests.</p> <p><i>Sources:</i> 121.135(a)(1); 121.135(b)(9); 121.173(d)</p> <p><i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.8.	<p>Does the certificate holder conducting operations in Alaska comply with restrictions contained in 14 CFR part 91, section 91.323?</p> <p>SRRs: 91.323(a)(1); 91.323(b)(4)</p> <p><i>Related Design JTIs:</i></p> <p>1. Check that the Certificate Holder's manual system contains a policy specifying that no person may operate a U.S.-registered civil aircraft for which an Airplane Flight Manual is not required by 21.5 of this chapter, unless there is available in the aircraft a current approved Airplane Flight Manual, approved manual material, markings, and placards, or any combination thereof.</p> <p><i>Sources:</i> 121.135(a)(1); 91.323(a)(1); 91.323(b)(4)</p> <p><i>Interfaces:</i> 1.1.1(AW); 1.2.2(AW); 1.2.3(AW); 1.3.1(AW); 1.3.2(AW); 1.3.9(AW); 3.2.2(OP); 4.2.3(OP); 4.2.5(OP)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable
1.9.	<p>Does the certificate holder s approved operations manual include the engine-out departure procedures specifically designed to use the 10-minute takeoff</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

	thrust time? SRRs: C.072b	<input type="checkbox"/> Not Applicable
1.10.	<p>Does the certificate holder's Aircraft Performance Operating Limitations process comply with the guidance contained in Order 8900.1?</p> <p><i>Related Design JTIs:</i></p> <ol style="list-style-type: none"> <li>1. Check that the Certificate Holder's manual contains a policy to include limitations in their AFM or RFM that are published advisory information. <i>Sources:</i> FAA Order 8900.1, Vol 4, Ch 3, Sec 1, Para 4-487 <i>Interfaces:</i> 1.1.1(AW); 2.1.2(AW); 2.1.2(OP); 3.2.1(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP)</li> <li>2. Check that the Certificate Holder's manual system includes procedures to provide direction and guidance to be used by flightcrews and dispatchers when operating en route with the landing gear extended, whether planned or unplanned. The procedures must include speed limitations and fuel consumption data sufficient to show compliance with regulatory requirements. <i>Sources:</i> FAA Order 8900.1, Vol 4, Ch 3, Sec 5, Para 4-594 <i>Interfaces:</i> 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.1.3(AW); 1.2.1(AW); 1.2.4(AW); 1.2.5(AW); 1.3.1(AW); 1.3.2(AW); 1.3.5(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 3.2.3(OP); 4.2.1(AW); 4.2.3(OP); 4.2.5(OP); 4.2.8(OP); 4.2.11(OP)</li> <li>3. Check that the Certificate Holder's manual contains specific instructions and information to flightcrews for operating each type of aircraft in adverse weather conditions or prohibit such operations. <i>Sources:</i> FAA Order 8900.1, Vol 4, Ch 3, Sec 5, Para 4-597 <i>Interfaces:</i> 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.1.3(AW); 1.2.1(AW); 1.2.4(AW); 1.2.5(AW); 1.3.1(AW); 1.3.2(AW); 1.3.5(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 3.2.3(OP); 4.2.1(AW); 4.2.3(OP); 4.2.5(OP); 4.2.8(OP); 4.2.11(OP)</li> </ol>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.11.	<p>Does the certificate holder's Aircraft Performance Operating Limitations process comply with the guidance contained in AC 91-6A?</p> <p><i>Related Design JTIs:</i></p> <ol style="list-style-type: none"> <li>1. Check that the Certificate Holder's manual system includes instructions to ensure that flightcrews on each type of turbo jet aircraft are applying a gross weight reduction, V1 speed adjustments, and/or additional runway length required when operating on wet, slush, or snow covered runways. <i>Sources:</i> AC-91-6A <i>Interfaces:</i> 1.3.17(AW); 3.2.1(OP); 3.2.2(OP); 4.2.3(OP); 4.2.5(OP); 4.2.11(OP); 5.1.1(AW)</li> </ol>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.12.	<p>Does the certificate holder s manual contain the required references to, or excerpts from, the operations specifications listed in the Supplemental Information section of this safety attribute inspection (SAI)?</p> <p>SRRs: 119.43(b)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.13.	<p>If the certificate holder's manual includes excerpts from its operations specifications, are the excerpts clearly identified as part of the operations specifications?</p> <p>SRRs: 119.43(b)(1)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable

1.14.	Does the certificate holder s manual require compliance with operations specifications listed in the Supplemental Information section of this safety attribute inspection (SAI)? SRRs: 119.43(b)(2)	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.15.	Does the certificate holder s Aircraft Performance Operating Limitations process contain a method for keeping all persons engaged in its operations informed of the provisions of the operations specifications listed in the Supplemental Information section of this safety attribute inspection (SAI)? SRRs: 119.43(c)	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
2.	Does the certificate holder's manual contain general policies for the Aircraft Performance Operating Limitations process that comply with the SRRs? SRRs: 121.135(b)(1); 121.173(e); 121.198(e); 91.605(a); 91.605(b); 91.9(b)(1); 91.9(b)(2); 91.323(a)(1); 91.323(b)(4); C.354 <i>Related Design JTIs:</i>  1. Check that the Certificate Holder's manual system contains a policy that no person will operate a U.S.-registered civil aircraft for which an Airplane Flight Manual is required by 21.5 of this chapter unless there is available in the aircraft a current, approved Airplane Flight Manual or the manual provided for in 121.141(b) and, when a Flight Manual is not required by 21.5 of this chapter, a current approved Airplane Flight Manual, approved manual material, markings, and placards, or any combination thereof. <i>Sources:</i> 121.135(b)(1); 91.9(b)(1); 91.9(b)(2) <i>Interfaces:</i> 1.1.1(AW); 2.1.1(AW); 2.1.1(OP); 3.1.3(OP); 3.2.1(OP); 3.2.2(OP); 3.2.3(OP); 4.2.3(OP); 4.2.5(OP); 7.1.3(AW); 7.1.3(OP)  2. Check that the Certificate Holder's manual system contains a policy specifying that no person may operate a U.S.-registered civil aircraft for which an Airplane Flight Manual is not required by 21.5 of this chapter, unless there is available in the aircraft a current approved Airplane Flight Manual, approved manual material, markings, and placards, or any combination thereof. <i>Sources:</i> 121.135(a)(1); 91.323(a)(1); 91.323(b)(4) <i>Interfaces:</i> 1.1.1(AW); 1.2.2(AW); 1.2.3(AW); 1.3.1(AW); 1.3.2(AW); 1.3.9(AW); 3.2.2(OP); 4.2.3(OP); 4.2.5(OP)  3. Check that the Certificate Holder's manual contains a policy that except for large nontransport category airplane certificated before January 1, 1965, when operating a turbine-engine-powered airplane it shall comply with applicable provisions of FAR 121.189 through 121.197. Except, when operating a turbo-propeller-powered airplane certificated after August 29, 1959, but previously type certificated with the same number of reciprocating engines, the Certificate Holder may comply with 121.175 through 121.187; or until December 20, 2010, a turbo-propeller-powered airplane described in 121.157(f), the Certificate Holder may comply with the applicable performance requirements of appendix K of this part. <i>Sources:</i> 121.135(b)(1); 121.173(b); 121.173(b)(1); 121.173(b)(2); 121.173(c) <i>Interfaces:</i> 1.1.1(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP)  4. Check that the Certificate Holder's manual contains a policy that when operating a large nontransport category airplane certificated before January 1, 1965, it shall comply with FAR 121.199 through 121.205 and any determination of compliance will be based only on approved	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

	<p>performance data.  <i>Sources:</i> 121.135(b)(1); 121.173(c)  <i>Interfaces:</i> 1.1.1(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP);  2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP)</p>	
3.	<p>Does the certificate holder's manual reference the appropriate Federal Aviation Regulations listed in the Supplemental Information section of this safety attribute inspection (SAI)?  SRRs: 121.135(b)(3)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
4.	<p>Does the certificate holder's manual contain the duties and responsibilities for personnel who will accomplish the Aircraft Performance Operating Limitations process?  SRRs: 121.135(b)(2)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
5.	<p>Does the certificate holder's manual include instructions and information for personnel to meet the requirements of the Aircraft Performance Operating Limitations process?  SRRs: 121.135(a)(1)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

<b>SAI Section 1 - Procedures Attribute Drop-Down Menu</b>	
1.	No procedures, policy, instructions or information specified.
2.	Procedures or instructions and information do not identify (who, what, when, where, how).
3.	Procedures, policy or instructions and information do not comply with CFR.
4.	Procedures, policy or instructions and information do not comply with FAA policy and guidance.
5.	Procedures, policy or instructions and information do not comply with other documentation (e.g., manufacturer's data, Jeppesen's Charts, etc.).
6.	Procedures, policy or instructions and information unclear or incomplete.
7.	Documentation quality (e.g., unreadable or illegible).
8.	Procedures, policy or instructions and information inconsistent across Certificate Holder manuals (FOM - Flight Operations Manual to GMM - General Maintenance Manual, etc.).
9.	Procedures, policy or instructions and information inconsistent across media (e.g., paper, microfiche, electronic).
10.	Resource requirements incomplete (personnel, facilities, equipment, technical data).
11.	Other.

### SAI Section 2 - Controls Attribute

**Objective:** Controls are checks and restraints designed into a process to ensure a desired result. The questions in this section of the DCT are designed to assist the inspector in determining if checks and restraints are designed into the process to ensure the desired result is achieved. Controls should be written into the system to ensure that the most important policies, procedures, or instructions and information will be followed.

Controls may be in the form of administrative controls, which are secondary or supplemental written procedures. Like written procedures, administrative controls also need to provide answers to questions regarding who, what, when, where, and how. Controls may also be in the form of engineered controls, such as automated features or mechanical actions or devices (i.e., safety devices, warning devices, etc.).

#### Tasks

To meet this objective, the inspector must accomplish the following tasks:

1. Review the control questions below.
2. Review the certificate holder's policies, procedures, instructions, and information to gain an understanding of the controls that it has documented.

#### Questions

	To meet this objective, the inspector must answer the following questions:	
1.	Are the following controls built into the Aircraft Performance Operating Limitations process:	
1.1.	Is there a control or controls in place to ensure that the certificate holder conducts takeoff operations within the performance limitations of the Aircraft Flight Manual and the regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.2.	Is there a control or controls in place to ensure that the certificate holder conducts en route operations within the performance limitations of the Aircraft Flight Manual and the regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.3.	Is there a control or controls in place to ensure that the certificate holder conducts landing operations within the performance limitations of the Aircraft Flight Manual and the regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
2.	Does the certificate holder have a documented method for assessing the impact of any changes made to the controls in the Aircraft Performance Operating Limitations process?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain



<b>SAI Section 2 - Controls Attribute Drop-Down Menu</b>	
1.	No controls specified.
2.	Documentation for the controls do not identify (who, what, when, where, how).
3.	Controls incomplete.
4.	Controls could be circumvented.
5.	Controls could be unenforceable.
6.	Resource requirements incomplete (personnel, facilities, equipment, technical data).
7.	Other.

### SAI Section 3 - Process Measurement Attribute

**Objective:** Process measurements are used by the certificate holder to measure and assess its processes, to identify and correct problems or potential problems, and to make improvements to the processes. The questions in this section of the DCT are designed to assist the inspector in determining if the certificate holder measures or assesses information to identify, analyze, and document potential problems with the process. Process measurements are a certificate holder's internal evaluation or auditing of the most important policies, procedures, or instructions and information associated with an element.

To prevent the duplication of work, process measurements are most commonly addressed through a combination of auditing features contained in both the certificate holder's safety program/internal evaluation program (for operations and cabin safety related issues) and the auditing function of the Continuous Analysis and Surveillance System (for airworthiness or maintenance/inspection related issues). The director of safety and the quality assurance department often work together to accomplish this function for the certificate holder. This approach requires amendment of the safety program/internal evaluation program audit forms or checklists and the Continuous Analysis and Surveillance System audit forms or checklists to include the specific process measurements for each element.

#### Tasks

	To meet this objective, the inspector must accomplish the following tasks:
1.	Review the process measurement questions below.
2.	Review the certificate holder's policies, procedures, instructions, and information to gain an understanding of the process measurements that it has documented.

#### Questions

	To meet this objective, the inspector must answer the following questions:	
1.	Does the certificate holder's Aircraft Performance Operating Limitations process include the following process measurements:	
1.1.	Is there a process measurement or process measurements that would identify if the certificate holder failed to conduct takeoff operations within the performance limitations of the Aircraft Flight Manual and the regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.2.	Is there a process measurement or process measurements that would identify if the certificate holder failed to conduct en route operations within the performance limitations of the Aircraft Flight Manual and the regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.3.	Is there a process measurement or process measurements that would identify if the certificate holder failed to conduct landing operations within the performance limitations of the Aircraft Flight Manual and the regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
2.	Is there a process measurement or process measurements that would reveal if the certificate holder's policy, procedures, instructions, and information were not followed?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
3.	Does the certificate holder document its process measurement results?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
4.	Does the certificate holder use its process measurements results to improve its	<input type="checkbox"/> Yes

	program?	<input type="checkbox"/> No, Explain
5.	Does the organization that conducts the process measurements have direct access to the person with responsibility for the Aircraft Performance Operating Limitations process?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

<b>SAI Section 3 - Process Measurement Attribute Drop-Down Menu</b>
1. No process measurements specified.
2. Documentation for the process measurements does not identify (who, what, when, where, how).
3. Inability to identify negative findings.
4. No provisions for implementing corrective actions.
5. Ineffective follow-up to determine effectiveness of corrective actions.
6. Resources requirements (personnel, facilities, equipment, technical data).
7. Other.

### SAI Section 4 - Interfaces Attribute

**Objective:** Interfaces are used by the certificate holder to identify and manage the interactions between processes. The questions in this section of the DCT are designed to assist the inspector in determining whether or not interactions between the policies, procedures, or instructions and information associated with other independent processes within the certificate holder's organization are documented. Written policies, procedures, or instructions and information that are interrelated and located in different areas within the certificate holder's system must be consistent and complement each other. For the interfaces to be effectively managed, the certificate holder's system should identify and document the interfaces.

#### Tasks

	To meet this objective, the inspector must accomplish the following tasks:	
1.	Review the interfaces associated with the Aircraft Performance Operating Limitations process that have been identified along with the individual questions in section 1, Procedures, of this DCT.	
2.	Review the certificate holder's policies, procedures, instructions, and information to gain an understanding of the interfaces that it has documented.	

#### Questions

	To meet this objective, the inspector must answer the following questions:	
	Note: The design job task items (JTIs) displayed with the questions in section 1, Procedures, of this DCT identify potential interfaces (by element number) for this element.	
1.	Does the certificate holder's system properly address the interfaces that are identified along with the questions in section 1, Procedures, of this DCT?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
2.	Does the certificate holder document a method for assessing the impact of any changes to the associated interfaces within the Aircraft Performance Operating Limitations process?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

<b>SAI Section 4 - Interfaces Attribute Drop-Down Menu</b>	
1.	No interfaces specified.
2.	The following interfaces not identified within the Certificate Holder's manual system:
3.	Interfaces listed are inaccurate.
4.	Specific location of interfaces not identified within the manual system.
5.	Other

### SAI Section 5 - Management Responsibility & Authority Attributes

**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:
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 of the person(s) documented in the certificate holder's manual.
4.	Review the appropriate organizational chart.

#### Questions

	To meet this objective, the inspector must answer the following questions:	
1.	Does the certificate holder clearly identify 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.	Does the certificate holder clearly identify who has authority to establish and modify the 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 certificate holder's manual include the duties and responsibilities of those who manage the work required by the Aircraft Performance Operating Limitations process? SRRs: 121.135(b)(2)	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
4.	Does the certificate holder's manual include instructions and information for those who manage the work required by the Aircraft Performance Operating Limitations process? SRRs: 121.135(a)(1)	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
5.	Does the certificate holder clearly and completely document the responsibility for this position?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
6.	Does the certificate holder clearly and completely document the authority for this position?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
7.	Does the certificate holder clearly and completely document its qualification standards for the person having responsibility for the Aircraft Performance Operating Limitations process?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
8.	Does the certificate holder clearly and completely document its qualification standards for the person having 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

9.	Does the certificate holder clearly and completely document the procedures for delegation of authority for the Aircraft Performance Operating Limitations process?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
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<b>SAI Section 5 - Management Responsibility &amp; Authority Attributes Drop-Down Menu</b>	
1.	Not documented.
2.	Documentation unclear.
3.	Documentation incomplete.
4.	Other.