

nontransport category C-46 type airplane in cargo operations unless—

(1) It is certificated at a maximum gross weight that is not greater than 48,000 pounds;

(2) It meets the requirements of §§ 121.199 through 121.205 using the performance data in appendix C to this part;

(3) Before each flight, each engine contains at least 25 gallons of oil; and

(4) After December 31, 1964—

(i) It is powered by a type and model engine as set forth in appendix C of this part, when certificated at a maximum gross takeoff weight greater than 45,000 pounds; and

(ii) It complies with the special airworthiness requirement set forth in §§ 121.213 through 121.287 of this part or in appendix C of this part.

(e) *Commuter category airplanes.* Except as provided in paragraph (f) of this section, no certificate holder may operate under this part a nontransport category airplane type certificated after December 31, 1964, and before March 30, 1995, unless it meets the applicable requirements of § 121.173 (a), (b), (d), and (e), and was type certificated in the commuter category.

(f) *Other nontransport category airplanes.* No certificate holder may operate under this part a nontransport category airplane type certificated after December 31, 1964, unless it meets the applicable requirements of § 121.173 (a), (b), (d), and (e), was manufactured before March 20, 1997, and meets one of the following:

(1) Until December 20, 2010:

(i) The airplane was type certificated in the normal category before July 1, 1970, and meets special conditions issued by the Administrator for airplanes intended for use in operations under part 135 of this chapter.

(ii) The airplane was type certificated in the normal category before July 19, 1970, and meets the additional airworthiness standards in SFAR No. 23, 14 CFR part 23.

(iii) The airplane was type certificated in the normal category and meets the additional airworthiness standards in appendix A of part 135 of this chapter.

(iv) The airplane was type certificated in the normal category and com-

plies with either section 1.(a) or 1.(b) of SFAR No. 41 of 14 CFR part 21.

(2) The airplane was type certificated in the normal category, meets the additional requirements described in paragraphs (f)(1)(i) through (f)(1)(iv) of this section, and meets the performance requirements in appendix K of this part.

(g) *Certain newly manufactured airplanes.* No certificate holder may operate an airplane under this part that was type certificated as described in paragraphs (f)(1)(i) through (f)(1)(iv) of this section and that was manufactured after March 20, 1997, unless it meets the performance requirements in appendix K of this part.

(h) *Newly type certificated airplanes.* No person may operate under this part an airplane for which the application for a type certificate is submitted after March 29, 1995, unless the airplane is type certificated under part 25 of this chapter.

[Doc. No. 6258, 29 FR 19197, Dec. 31, 1964, as amended by Amdt. 121-251, 60 FR 65927, Dec. 20, 1995; Amdt. 121-256, 61 FR 30434, June 14, 1996]

#### **§ 121.159 Single-engine airplanes prohibited.**

No certificate holder may operate a single-engine airplane under this part.

[Doc. No. 28154, 60 FR 65927, Dec. 20, 1995]

#### **§ 121.161 Airplane limitations: Type of route.**

(a) Unless authorized by the Administrator, based on the character of the terrain, the kind of operation, or the performance of the airplane to be used, no certificate holder may operate two-engine or three-engine airplanes (except a three-engine turbine powered airplane) over a route that contains a point farther than 1 hour flying time (in still air at normal cruising speed with one engine inoperative) from an adequate airport.

(b) Except as provided in paragraph (c) of this section, no certificate holder may operate a land airplane (other than a DC-3, C-46, CV-240, CV-340, CV-440, CV-580, CV-600, CV-640, or Martin 404) in an extended overwater operation unless it is certificated or approved as

adequate for ditching under the ditching provisions of part 25 of this chapter.

(c) Until December 20, 2010, a certificate holder may operate, in an extended overwater operation, a non-transport category land airplane type certificated after December 31, 1964, that was not certificated or approved as adequate for ditching under the ditching provisions of part 25 of this chapter.

[Doc. No. 7329, 31 FR 13078, Oct. 8, 1966 as amended by Amdt. 121–162, 45 FR 46739, July 10, 1980; Amdt. 121–251, 60 FR 65927, Dec. 20, 1995]

#### § 121.163 Aircraft proving tests.

(a) *Initial airplane proving tests.* No person may operate an airplane not before proven for use in a kind of operation under this part or part 135 of this chapter unless an airplane of that type has had, in addition to the airplane certification tests, at least 100 hours of proving tests acceptable to the Administrator, including a representative number of flights into en route airports. The requirement for at least 100 hours of proving tests may be reduced by the Administrator if the Administrator determines that a satisfactory level of proficiency has been demonstrated to justify the reduction. At least 10 hours of proving flights must be flown at night; these tests are irrefutable.

(b) *Proving tests for kinds of operations.* Unless otherwise authorized by the Administrator, for each type of airplane, a certificate holder must conduct at least 50 hours of proving tests acceptable to the Administrator for each kind of operation it intends to conduct, including a representative number of flights into en route airports.

(c) *Proving tests for materially altered airplanes.* Unless otherwise authorized by the Administrator, for each type of airplane that is materially altered in design, a certificate holder must conduct at least 50 hours of proving tests acceptable to the Administrator for each kind of operation it intends to conduct with that airplane, including a representative number of flights into en route airports.

(d) *Definition of materially altered.* For the purposes of paragraph (c) of this

section, a type of airplane is considered to be materially altered in design if the alteration includes—

(1) The installation of powerplants other than those of a type similar to those with which it is certificated; or

(2) Alterations to the aircraft or its components that materially affect flight characteristics.

(e) No certificate holder may carry passengers in an aircraft during proving tests, except for those needed to make the test and those designated by the Administrator. However, it may carry mail, express, or other cargo, when approved.

[Doc. No. 6258, 29 FR 19197, Dec. 31, 1964, as amended by Amdt. 121–42, 33 FR 10330, July 19, 1968; 34 FR 13468, Aug. 21, 1969; Amdt. 121–162, 45 FR 46739, July 10, 1980; Amdt. 121–251, 60 FR 65927, Dec. 20, 1995]

### Subpart I—Airplane Performance Operating Limitations

SOURCE: Docket No. 6258, 29 FR 19198, Dec. 31, 1964; 30 FR 130, Jan. 7, 1965, unless otherwise noted.

EDITORIAL NOTE: Nomenclature changes to subpart I appear at 60 FR 65928, Dec. 20, 1995.

#### § 121.171 Applicability.

(a) This subpart prescribes airplane performance operating limitations for all certificate holders.

(b) For purposes of this part, *effective length of the runway* for landing means the distance from the point at which the obstruction clearance plane associated with the approach end of the runway intersects the centerline of the runway to the far end thereof.

(c) For the purposes of this subpart, *obstruction clearance plane* means a plane sloping upward from the runway at a slope of 1:20 to the horizontal, and tangent to or clearing all obstructions within a specified area surrounding the runway as shown in a profile view of that area. In the plan view, the centerline of the specified area coincides with the centerline of the runway, beginning at the point where the obstruction clearance plane intersects the centerline of the runway and proceeding to a point at least 1,500 feet from the beginning point. Thereafter the centerline coincides with the takeoff path over the ground for the runway (in the case