

(3) It is carried in accordance with each of the following:

(i) It is properly secured by a safety belt or other tiedown having enough strength to eliminate the possibility of shifting under all normally anticipated flight and ground conditions.

(ii) It is packaged or covered to avoid possible injury to passengers.

(iii) It does not impose any load on seats or on the floor structure that exceeds the load limitation for those components.

(iv) It is not located in a position that restricts the access to or use of any required emergency or regular exit, or the use of the aisle between the crew and the passenger compartment.

(v) It is not carried directly above seated passengers.

(b) When cargo is carried in cargo compartments that are designed to require the physical entry of a crewmember to extinguish any fire that may occur during flight, the cargo must be loaded so as to allow a crewmember to effectively reach all parts of the compartment with the contents of a hand fire extinguisher.

**§ 91.527 Operating in icing conditions.**

(a) No pilot may take off an airplane that has frost, ice, or snow adhering to any propeller, windshield, stabilizing or control surface; to a powerplant installation; or to an airspeed, altimeter, rate of climb, or flight attitude instrument system or wing, except that takeoffs may be made with frost under the wing in the area of the fuel tanks if authorized by the FAA.

(b) No pilot may fly under IFR into known or forecast light or moderate icing conditions, or under VFR into known light or moderate icing conditions, unless—

(1) The aircraft has functioning deicing or anti-icing equipment protecting each rotor blade, propeller, windshield, wing, stabilizing or control surface, and each airspeed, altimeter, rate of climb, or flight attitude instrument system;

(2) The airplane has ice protection provisions that meet section 34 of Special Federal Aviation Regulation No. 23; or

(3) The airplane meets transport category airplane type certification provisions,

including the requirements for certification for flight in icing conditions.

(c) Except for an airplane that has ice protection provisions that meet the requirements in section 34 of Special Federal Aviation Regulation No. 23, or those for transport category airplane type certification, no pilot may fly an airplane into known or forecast severe icing conditions.

(d) If current weather reports and briefing information relied upon by the pilot in command indicate that the forecast icing conditions that would otherwise prohibit the flight will not be encountered during the flight because of changed weather conditions since the forecast, the restrictions in paragraphs (b) and (c) of this section based on forecast conditions do not apply.

[Doc. No. 18334, 54 FR 34314, Aug. 18, 1989, as amended by Amdt. 91–310, 74 FR 62696, Dec. 1, 2009]

**§ 91.529 Flight engineer requirements.**

(a) No person may operate the following airplanes without a flight crewmember holding a current flight engineer certificate:

(1) An airplane for which a type certificate was issued before January 2, 1964, having a maximum certificated takeoff weight of more than 80,000 pounds.

(2) An airplane type certificated after January 1, 1964, for which a flight engineer is required by the type certification requirements.

(b) No person may serve as a required flight engineer on an airplane unless, within the preceding 6 calendar months, that person has had at least 50 hours of flight time as a flight engineer on that type airplane or has been checked by the Administrator on that type airplane and is found to be familiar and competent with all essential current information and operating procedures.

**§ 91.531 Second in command requirements.**

(a) Except as provided in paragraph (b) of this section, no person may operate the following airplanes without a pilot designated as second in command:

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(1) Any airplane that is type certificated for more than one required pilot.

(2) Any large airplane.

(3) Any commuter category airplane.

(b) A person may operate the following airplanes without a pilot designated as second in command:

(1) Any airplane certificated for operation with one pilot.

(2) A large airplane or turbojet-powered multiengine airplane that holds a special airworthiness certificate, if:

(i) The airplane was originally designed with only one pilot station; or

(ii) The airplane was originally designed with more than one pilot station, but single pilot operations were permitted by the airplane flight manual or were otherwise permitted by a branch of the United States Armed Forces or the armed forces of a foreign contracting State to the Convention on International Civil Aviation.

(c) No person may designate a pilot to serve as second in command, nor may any pilot serve as second in command, of an airplane required under this section to have two pilots unless that pilot meets the qualifications for second in command prescribed in § 61.55 of this chapter.

[Docket FAA-2016-6142, Amdt. 91-351, 83 FR 30282, June 27, 2018]

**§ 91.533 Flight attendant requirements.**

(a) No person may operate an airplane unless at least the following number of flight attendants are on board the airplane:

(1) For airplanes having more than 19 but less than 51 passengers on board, one flight attendant.

(2) For airplanes having more than 50 but less than 101 passengers on board, two flight attendants.

(3) For airplanes having more than 100 passengers on board, two flight attendants plus one additional flight attendant for each unit (or part of a unit) of 50 passengers above 100.

(b) No person may serve as a flight attendant on an airplane when required by paragraph (a) of this section unless that person has demonstrated to the pilot in command familiarity with the necessary functions to be performed in an emergency or a situation requiring emergency evacuation and is capable of

using the emergency equipment installed on that airplane.

**§ 91.535 Stowage of food, beverage, and passenger service equipment during aircraft movement on the surface, takeoff, and landing.**

(a) No operator may move an aircraft on the surface, take off, or land when any food, beverage, or tableware furnished by the operator is located at any passenger seat.

(b) No operator may move an aircraft on the surface, take off, or land unless each food and beverage tray and seat back tray table is secured in its stowed position.

(c) No operator may permit an aircraft to move on the surface, take off, or land unless each passenger serving cart is secured in its stowed position.

(d) No operator may permit an aircraft to move on the surface, take off, or land unless each movie screen that extends into the aisle is stowed.

(e) Each passenger shall comply with instructions given by a crewmember with regard to compliance with this section.

[Doc. No. 26142, 57 FR 42672, Sept. 15, 1992]

**§§ 91.536–91.599 [Reserved]**

**Subpart G—Additional Equipment and Operating Requirements for Large and Transport Category Aircraft**

SOURCE: Docket No. 18334, 54 FR 34318, Aug. 18, 1989, unless otherwise noted.

**§ 91.601 Applicability.**

This subpart applies to operation of large and transport category U.S.-registered civil aircraft.

**§ 91.603 Aural speed warning device.**

No person may operate a transport category airplane in air commerce unless that airplane is equipped with an aural speed warning device that complies with § 25.1303(c)(1).

**§ 91.605 Transport category civil airplane weight limitations.**

(a) No person may take off any transport category airplane (other than a