

## 14 CFR Part 121 – Sections relevant to OMB #2120-0008

### § 121.133 Preparation.

(a) Each certificate holder shall prepare and keep current a manual for the use and guidance of flight, ground operations, and management personnel in conducting its operations.

(b) For the purpose of this subpart, the certificate holder may prepare that part of the manual containing maintenance information and instructions, in whole or in part, in printed form or other form acceptable to the Administrator.

[Doc. No. 28154, 60 FR 65926, Dec. 20, 1995]

### § 121.153 Aircraft requirements: General.

(a) Except as provided in paragraph (c) of this section, no certificate holder may operate an aircraft unless that aircraft—

(1) Is registered as a civil aircraft of the United States and carries an appropriate current airworthiness certificate issued under this chapter; and

(2) Is in an airworthy condition and meets the applicable airworthiness requirements of this chapter, including those relating to identification and equipment.

(b) A certificate holder may use an approved weight and balance control system based on average, assumed, or estimated weight to comply with applicable airworthiness requirements and operating limitations.

(c) A certificate holder may operate in common carriage, and for the carriage of mail, a civil aircraft which is leased or chartered to it without crew and is registered in a country which is a party to the Convention on International Civil Aviation if—

(1) The aircraft carries an appropriate airworthiness certificate issued by the country of registration and meets the registration and identification requirements of that country;

(2) The aircraft is of a type design which is approved under a U.S. type certificate and complies with all of the requirements of this chapter (14 CFR Chapter 1) that would be applicable to that aircraft were it registered in the United States, including the requirements which must be met for issuance of a U.S. standard airworthiness certificate (including type design conformity, condition for safe operation, and the noise, fuel venting, and engine emission requirements of this chapter), except that a U.S. registration certificate and a U.S. standard airworthiness certificate will not be issued for the aircraft;

(3) The aircraft is operated by U.S.-certificated airmen employed by the certificate holder; and

(4) The certificate holder files a copy of the aircraft lease or charter agreement with the FAA Aircraft Registry, Department of Transportation, 6400 South MacArthur Boulevard, Oklahoma City, OK (Mailing address: P.O. Box 25504, Oklahoma City, OK 73125).

[Doc. No. 6258, 29 FR 19197, Dec. 31, 1964, as amended by Amdt. 121-165, 45 FR 68649, Oct. 16, 1980]

### § 121.207 Provisionally certificated airplanes: Operating limitations.

In addition to the limitations in §91.317 of this chapter, the following limitations apply to the operation of provisionally certificated airplanes by certificate holders:

(a) In addition to crewmembers, each certificate holder may carry on such an airplane only those persons who are listed in §121.547(c) or who are specifically authorized by both the certificate holder and the Administrator.

(b) Each certificate holder shall keep a log of each flight conducted under this section and shall keep accurate and complete records of each inspection made and all maintenance performed on the airplane. The certificate holder shall make the log and records made under this section available to the manufacturer and the Administrator.

[Doc. No. 28154, 61 FR 2611, Jan. 26, 1996]

**§ 121.315 Cockpit check procedure.**

(a) Each certificate holder shall provide an approved cockpit check procedure for each type of aircraft.

(b) The approved procedures must include each item necessary for flight crewmembers to check for safety before starting engines, taking off, or landing, and in engine and systems emergencies. The procedures must be designed so that a flight crewmember will not need to rely upon his memory for items to be checked.

(c) The approved procedures must be readily usable in the cockpit of each aircraft and the flight crew shall follow them when operating the aircraft.

**§ 121.317 Passenger information requirements, smoking prohibitions, and additional seat belt requirements.**

(a) Except as provided in paragraph (l) of this section, no person may operate an airplane unless it is equipped with passenger information signs that meet the requirements of §25.791 of this chapter. Except as provided in paragraph (l) of this section, the signs must be constructed so that the crewmembers can turn them on and off.

(b) Except as provided in paragraph (l) of this section, the "Fasten Seat Belt" sign shall be turned on during any movement on the surface, for each takeoff, for each landing, and at any other time considered necessary by the pilot in command.

(c) No person may operate an airplane on a flight on which smoking is prohibited by part 252 of this title unless either the "No Smoking" passenger information signs are lighted during the entire flight, or one or more "No Smoking" placards meeting the requirements of §25.1541 of this chapter are posted during the entire flight segment. If both the lighted signs and the placards are used, the signs must remain lighted during the entire flight segment.

(d) No person may operate a passenger-carrying airplane under this part unless at least one legible sign or placard that reads "Fasten Seat Belt While Seated" is visible from each passenger seat. These signs or placards need not meet the requirements of paragraph (a) of this section.

(e) No person may operate an airplane unless there is installed in each lavatory a sign or placard that reads: "Federal law provides for a penalty of up to \$2,000 for tampering with the smoke detector installed in this lavatory." These signs or placards need not meet the requirements of paragraph (a) of this section.

(f) Each passenger required by §121.311(b) to occupy a seat or berth shall fasten his or her safety belt about him or her and keep it fastened while the "Fasten Seat Belt" sign is lighted.

(g) No person may smoke while a "No Smoking" sign is lighted or while "No Smoking" placards are posted, except as follows:

(1) *Supplemental operations.* The pilot in command of an airplane engaged in a supplemental operation may authorize smoking on the flight deck (if it is physically separated from any passenger compartment), but not in any of the following situations:

(i) During airplane movement on the surface or during takeoff or landing;

(ii) During scheduled passenger-carrying public charter operations conducted under part 380 of this title; or

(iii) During any operation where smoking is prohibited by part 252 of this title or by international agreement.

(2) *Certain intrastate domestic operations.* Except during airplane movement on the surface or during takeoff or landing, a pilot in command of an airplane engaged in a domestic operation may authorize smoking on the flight deck (if it is physically separated from the passenger compartment) if—

(i) Smoking on the flight deck is not otherwise prohibited by part 252 of this title;

(ii) The flight is conducted entirely within the same State of the United States (a flight from one place in Hawaii to another place in Hawaii through the airspace over a place outside of Hawaii is not entirely within the same State); and

(iii) The airplane is either not turbojet-powered or the airplane is not capable of carrying at least 30 passengers.

(h) No person may smoke in any airplane lavatory.

(i) No person may tamper with, disable, or destroy any smoke detector installed in any airplane lavatory.

(j) On flight segments other than those described in paragraph (c) of this section, the “No Smoking” sign must be turned on during any movement on the surface, for each takeoff, for each landing, and at any other time considered necessary by the pilot in command.

(k) Each passenger shall comply with instructions given him or her by a crewmember regarding compliance with paragraphs (f), (g), (h), and (l) of this section.

(l) A certificate holder may operate a nontransport category airplane type certificated after December 31, 1964, that is manufactured before December 20, 1997, if it is equipped with at least one placard that is legible to each person seated in the cabin that states “Fasten Seat Belt,” and if, during any movement on the surface, for each takeoff, for each landing, and at any other time considered necessary by the pilot in command, a crewmember orally instructs the passengers to fasten their seat belts.

[Doc. No. 25590, 53 FR 12361, Apr. 13, 1988, as amended by Amdt. 121–196, 53 FR 44182, Nov. 2, 1988; Amdt. 121–213, 55 FR 8367, Mar. 7, 1990; Amdt. 121–230, 57 FR 42673, Sept. 15, 1992; Amdt. 121–251, 60 FR 65931, Dec. 20, 1995; Amdt. 121–256, 61 FR 30434, June 14, 1996; Amdt. 121–277, 65 FR 36779, June 9, 2000]

#### **§ 121.340 Emergency flotation means.**

(a) Except as provided in paragraph (b) of this section, no person may operate an airplane in any overwater operation unless it is equipped with life preservers in accordance with §121.339(a)(1) or with an approved flotation means for each occupant. This means must be within easy reach of each seated occupant and must be readily removable from the airplane.

(b) Upon application by the air carrier or commercial operator, the Administrator may approve the operation of an airplane over water without the life preservers or flotation means required by paragraph (a) of this section, if the air carrier or commercial operator shows that the water over which the airplane is to be operated is not of such size and depth that life preservers or flotation means would be required for the survival of its occupants in the event the flight terminates in that water.

[Doc. No. 6713, 31 FR 1147, Jan. 28, 1966, as amended by Amdt. 121–25, 32 FR 3223, Feb. 24, 1967; Amdt. 121–251, 60 FR 65932, Dec. 20, 1995]

#### **§ 121.354 Terrain awareness and warning system.**

(a) *Airplanes manufactured after March 29, 2002.* No person may operate a turbine-powered airplane unless that airplane is equipped with an approved terrain awareness and warning system that meets the requirements for Class A equipment in Technical Standard Order (TSO)—C151. The airplane must also include an approved terrain situational awareness display.

(b) *Airplanes manufactured on or before March 29, 2002.* No person may operate a turbine-powered airplane after March 29, 2005, unless that airplane is equipped with an approved terrain awareness and warning system that meets the requirements for Class A equipment in Technical Standard Order (TSO)–C151. The airplane must also include an approved terrain situational awareness display.

(Approved by the Office of Management and Budget under control number 2120–0631)

(c) *Airplane Flight Manual.* The Airplane Flight Manual shall contain appropriate procedures for—

- (1) The use of the terrain awareness and warning system; and
- (2) Proper flight crew reaction in response to the terrain awareness and warning system audio and visual warnings.

[Doc. No. 29312, 65 FR 16755, Mar. 29, 2000]

**§ 121.371 Required inspection personnel.**

(a) No person may use any person to perform required inspections unless the person performing the inspection is appropriately certificated, properly trained, qualified, and authorized to do so.

(b) No person may allow any person to perform a required inspection unless, at that time, the person performing that inspection is under the supervision and control of an inspection unit.

(c) No person may perform a required inspection if he performed the item of work required to be inspected.

(d) Each certificate holder shall maintain, or shall determine that each person with whom it arranges to perform its required inspections maintains, a current listing of persons who have been trained, qualified, and authorized to conduct required inspections. The persons must be identified by name, occupational title, and the inspections that they are authorized to perform. The certificate holder (or person with whom it arranges to perform its required inspections) shall give written information to each person so authorized describing the extent of his responsibilities, authorities, and inspectional limitations. The list shall be made available for inspection by the Administrator upon request.

**§ 121.403 Training program: Curriculum.**

(a) Each certificate holder must prepare and keep current a written training program curriculum for each type of airplane with respect to dispatchers and each crewmember required for that type airplane. The curriculum must include ground and flight training required by this subpart.

(b) Each training program curriculum must include:

- (1) A list of principal ground training subjects, including emergency training subjects, that are provided.
- (2) A list of all the training devices mockups, systems trainers, procedures trainers, or other training aids that the certificate holder will use.
- (3) Detailed descriptions or pictorial displays of the approved normal, abnormal, and emergency maneuvers, procedures and functions that will be performed during each flight training phase or flight check, indicating those maneuvers, procedures and functions that are to be performed during the inflight portions of flight training and flight checks.
- (4) A list of airplane simulators or other training devices approved under §121.407, including approvals for particular maneuvers, procedures, or functions.
- (5) The programmed hours of training that will be applied to each phase of training.

(6) A copy of each statement issued by the Administrator under §121.405(d) for reduction of programmed hours of training.

**§ 121.405 Training program and revision: Initial and final approval.**

(a) To obtain initial and final approval of a training program, or a revision to an approved training program, each certificate holder must submit to the Administrator—

(1) An outline of the proposed program or revision, including an outline of the proposed or revised curriculum, that provides enough information for a preliminary evaluation of the proposed training program or revised training program; and

(2) Additional relevant information as may be requested by the Administrator.

(b) If the proposed training program or revision complies with this subpart the Administrator grants initial approval in writing after which the certificate holder may conduct the training in accordance with that program. The Administrator then evaluates the effectiveness of the training program and advises the certificate holder of deficiencies, if any, that must be corrected.

(c) The Administrator grants final approval of the training program or revision if the certificate holder shows that the training conducted under the initial approval set forth in paragraph (b) of this section ensures that each person that successfully completes the training is adequately trained to perform his assigned duties.

(d) In granting initial and final approval of training programs or revisions, including reductions in programmed hours specified in this subpart, the Administrator considers the training aids, devices, methods, and procedures listed in the certificate holder's curriculum as set forth in §121.403 that increase the quality and effectiveness of the teaching-learning process.

If approval of reduced programmed hours of training is granted, the Administrator provides the certificate holder with a statement of the basis for the approval.

(e) Whenever the Administrator finds that revisions are necessary for the continued adequacy of a training program that has been granted final approval, the certificate holder shall, after notification by the Administrator, make any changes in the program that are found necessary by the Administrator. Within 30 days after the certificate holder receives such notice, it may file a petition to reconsider the notice with the certificate-holding district office. The filing of a petition to reconsider stays the notice pending a decision by the Administrator. However, if the Administrator finds that there is an emergency that requires immediate action in the interest of safety in air transportation, he may, upon a statement of the reasons, require a change effective without stay.

(f) Each certificate holder described in §135.3 (b) and (c) of this chapter must include the material required by §121.403 in the manual required by §135.21 of this chapter.

(g) The Administrator may grant a deviation to certificate holders described in §135.3 (b) and (c) of this chapter to allow reduced programmed hours of ground training required by §121.419 if it is found that a reduction is warranted based on the certificate holder's operations and the complexity of the make, model, and series of the aircraft used.

[Doc. No. 9509, 35 FR 90, Jan. 3, 1970, as amended by Amdt. 121–207, 54 FR 39293, Sept. 25, 1989; Amdt. 121–250, 60 FR 65948, Dec. 20, 1995; Amdt. 121–253, 61 FR 2612, Jan. 26, 1996]

**§ 121.433 Training required.**

(a) *Initial training.* No certificate holder may use any person nor may any person serve as a required crewmember on an airplane unless that person has satisfactorily completed, in a training program approved under subpart N of this part, initial ground and flight training for that type airplane and for the particular crewmember position, except as follows:

(1) Crewmembers who have qualified and served as a crewmember on another type airplane of the same group may serve in the same crewmember capacity upon completion of transition training as provided in §121.415.

(2) Crewmembers who have qualified and served as second in command or flight engineer on a particular type airplane may serve as pilot in command or second in command, respectively, upon completion of upgrade training for that airplane as provided in §121.415.

(b) *Differences training.* No certificate holder may use any person nor may any person serve as a required crewmember on an airplane of a type for which differences training is included in the certificate holder's approved training program unless that person has satisfactorily completed, with respect to both the crewmember position and the particular variation of the airplane in which he serves, either initial or transition ground and flight training, or differences training, as provided in §121.415.

(c) *Recurrent training.* (1) No certificate holder may use any person nor may any person serve as a required crewmember on an airplane unless, within the preceding 12 calendar months—

(i) For flight crewmembers, he has satisfactorily completed recurrent ground and flight training for that airplane and crewmember position and a flight check as applicable;

(ii) For flight attendants and dispatchers, he has satisfactorily completed recurrent ground training and a competence check; and

(iii) In addition, for pilots in command he has satisfactorily completed, within the preceding 6 calendar months, recurrent flight training in addition to the recurrent flight training required in paragraph (c)(1)(i) of this section, in an airplane in which he serves as pilot in command in operations under this part.

(2) For pilots, a proficiency check as provided in §121.441 of this part may be substituted for the recurrent flight training required by this paragraph and the approved simulator course of training under §121.409(b) of this part may be substituted for alternate periods of recurrent flight training required in that airplane, except as provided in paragraphs (d) and (e) of this section.

(d) For each airplane in which a pilot serves as pilot in command, he must satisfactorily complete either recurrent flight training or a proficiency check within the preceding 12 calendar months.

(e) Notwithstanding paragraphs (c)(2) and (d) of this section, a proficiency check as provided in §121.441 of this part may not be substituted for training in those maneuvers and procedures set forth in a certificate holder's approved low-altitude windshear flight training program when that program is included in a recurrent flight training course as required by §121.409(d) of this part.

[Doc. No. 9509, 35 FR 95, Jan. 3, 1970, as amended by Amdt. 121-91, 37 FR 10729, May 27, 1972; Amdt. 121-199, 53 FR 37697, Sept. 27, 1988]

#### **§ 121.539 Operations notices.**

Each certificate holder shall notify its appropriate operations personnel of each change in equipment and operating procedures, including each known change in the use of navigation aids, airports, air traffic control procedures and regulations, local airport traffic control rules, and known hazards to flight, including icing and other potentially hazardous meteorological conditions and irregularities in ground and navigation facilities.

#### **§ 121.557 Emergencies: Domestic and flag operations.**

(a) In an emergency situation that requires immediate decision and action the pilot in command may take any action that he considers necessary under the circumstances. In such a case he may deviate from prescribed operations procedures and methods, weather minimums, and this chapter, to the extent required in the interests of safety.

(b) In an emergency situation arising during flight that requires immediate decision and action by an aircraft dispatcher, and that is known to him, the aircraft dispatcher shall advise the pilot in command of the emergency, shall ascertain the decision of the pilot in command, and shall have the decision recorded. If the aircraft dispatcher cannot communicate with the pilot, he shall declare an emergency and take any action that he considers necessary under the circumstances.

(c) Whenever a pilot in command or dispatcher exercises emergency authority, he shall keep the appropriate ATC facility and dispatch centers fully informed of the progress of the flight. The person declaring the emergency shall send a written report of any deviation through the certificate holder's operations manager, to the Administrator. A dispatcher shall send his report within 10 days after the date of the emergency, and a pilot in command shall send his report within 10 days after returning to his home base.

[Doc. No. 6258, 29 FR 19219, Dec. 31, 1964, as amended by Amdt. 121-253, 61 FR 2614, Jan. 26, 1996]

**§ 121.559 Emergencies: Supplemental operations.**

(a) In an emergency situation that requires immediate decision and action, the pilot in command may take any action that he considers necessary under the circumstances. In such a case, he may deviate from prescribed operations, procedures and methods, weather minimums, and this chapter, to the extent required in the interests of safety.

(b) In an emergency situation arising during flight that requires immediate decision and action by appropriate management personnel in the case of operations conducted with a flight following service and which is known to them, those personnel shall advise the pilot in command of the emergency, shall ascertain the decision of the pilot in command, and shall have the decision recorded. If they cannot communicate with the pilot, they shall declare an emergency and take any action that they consider necessary under the circumstances.

(c) Whenever emergency authority is exercised, the pilot in command or the appropriate management personnel shall keep the appropriate communication facility fully informed of the progress of the flight. The person declaring the emergency shall send a written report of any deviation, through the certificate holder's director of operations, to the Administrator within 10 days after the flight is completed or, in the case of operations outside the United States, upon return to the home base.

[Doc. No. 6258, 29 FR 19219, Dec. 31, 1964, as amended by Amdt. 121-253, 61 FR 2614, Jan. 26, 1996; Amdt. 121-333, 72 FR 31682, June 7, 2007]

**§ 121.563 Reporting mechanical irregularities.**

The pilot in command shall ensure that all mechanical irregularities occurring during flight time are entered in the maintenance log of the airplane at the end of that flight time. Before each flight the pilot in command shall ascertain the status of each irregularity entered in the log at the end of the preceding flight.

[Doc. No. 17897, 45 FR 41594, June 19, 1980, as amended by Amdt. 121-179, 47 FR 33390, Aug. 2, 1982]

**§ 121.565 Engine inoperative: Landing; reporting.**

(a) Except as provided in paragraph (b) of this section, whenever an airplane engine fails or whenever an engine is shutdown to prevent possible damage, the pilot in command must land the airplane at the nearest suitable airport, in point of time, at which a safe landing can be made.

(b) If not more than one engine of an airplane that has three or more engines fails or is shut down to prevent possible damage, the pilot-in-command may proceed to an airport that the pilot selects if, after considering the following, the pilot makes a reasonable decision that proceeding to that airport is as safe as landing at the nearest suitable airport:

(1) The nature of the malfunction and the possible mechanical difficulties that may occur if flight is continued.

(2) The altitude, weight, and useable fuel at the time that the engine is shutdown.

(3) The weather conditions en route and at possible landing points.

(4) The air traffic congestion.

(5) The kind of terrain.

(6) His familiarity with the airport to be used.

(c) The pilot-in-command must report each engine shutdown in flight to the appropriate communication facility as soon as practicable and must keep that facility fully informed of the progress of the flight.

(d) If the pilot in command lands at an airport other than the nearest suitable airport, in point of time, he or she shall (upon completing the trip) send a written report, in duplicate, to his or her director of operations stating the reasons for determining that the selection of an airport, other than the nearest airport, was as safe a course of action as landing at the nearest suitable airport. The director of operations shall, within 10 days after the pilot returns to his or her home base, send a copy of this report with the director of operation's comments to the certificate-holding district office.

[Doc. No. 6258, 29 FR 19219, Dec. 31, 1964, as amended by Amdt. 121-207, 54 FR 39293, Sept. 25, 1989; Amdt. 121-253, 61 FR 2614, Jan. 26, 1996; Amdt. 121-329, 72 FR 1881, Jan. 16, 2007; Amdt. 121-333, 72 FR 31682, June 7, 2007]

#### **§ 121.575 Alcoholic beverages.**

(a) No person may drink any alcoholic beverage aboard an aircraft unless the certificate holder operating the aircraft has served that beverage to him.

(b) No certificate holder may serve any alcoholic beverage to any person aboard any of its aircraft who—

(1) Appears to be intoxicated;

(2) Is escorting a person or being escorted in accordance with 49 CFR 1544.221; or

(3) Has a deadly or dangerous weapon accessible to him while aboard the aircraft in accordance with 49 CFR 1544.219, 1544.221, or 1544.223.

(c) No certificate holder may allow any person to board any of its aircraft if that person appears to be intoxicated.

(d) Each certificate holder shall, within five days after the incident, report to the Administrator the refusal of any person to comply with paragraph (a) of this section, or of any disturbance caused by a person who appears to be intoxicated aboard any of its aircraft.

[Doc. No. 6258, 29 FR 19219, Dec. 31, 1964, as amended by Amdt. 121-118, 40 FR 17552, Apr. 21, 1975; Amdt. 121-178, 47 FR 13316, Mar. 29, 1982; Amdt. 121-275, 67 FR 31932, May 10, 2002]

#### **§ 121.586 Authority to refuse transportation.**

(a) No certificate holder may refuse transportation to a passenger on the basis that, because the passenger may need the assistance of another person to move expeditiously to an exit in the event of an emergency, his transportation would or might be inimical to safety of flight unless—

(1) The certificate holder has established procedures (including reasonable notice requirements) for the carriage of passengers who may need the assistance of another person to move expeditiously to an exit in the event of an emergency; and

(2) At least one of the following conditions exist:



(i) The passenger fails to comply with the notice requirements in the certificate holder's procedures.

(ii) The passenger cannot be carried in accordance with the certificate holder's procedures.

(b) Each certificate holder shall provide the certificate-holding district office with a copy of each procedure it establishes in accordance with paragraph (a)(2) of this section.

(c) Whenever the Administrator finds that revisions in the procedures described in paragraph (a)(2) of this section are necessary in the interest of safety or in the public interest, the certificate holder, after notification by the Administrator, shall make those revisions in its procedures. Within 30 days after the certificate holder receives such notice, it may file a petition to reconsider the notice with the certificate-holding district office. The filing of a petition to reconsider stays the notice pending a decision by the Administrator. However, if the Administrator finds that there is an emergency that requires immediate action in the interest of safety in air commerce, he may, upon a statement of the reasons, require a change effective without stay.

(d) Each certificate holder shall make available to the public at each airport it serves a copy of each procedure it establishes in accordance with paragraph (a)(1) of this section.

[Doc. No. 12881, 42 FR 18394, Apr. 7, 1977, as amended by Amdt. 121–174, 46 FR 38051, July 23, 1981; Amdt. 121–207, 54 FR 39293, Sept. 25, 1989; Amdt. 121–253, 61 FR 2614, Jan. 26, 1996]

**§ 121.631 Original dispatch or flight release, redispach or amendment of dispatch or flight release.**

(a) A certificate holder may specify any regular, provisional, or refueling airport, authorized for the type of aircraft, as a destination for the purpose of original dispatch or release.

(b) No person may allow a flight to continue to an airport to which it has been dispatched or released unless the weather conditions at an alternate airport that was specified in the dispatch or flight release are forecast to be at or above the alternate minimums specified in the operations specifications for that airport at the time the aircraft would arrive at the alternate airport. However, the dispatch or flight release may be amended en route to include any alternate airport that is within the fuel range of the aircraft as specified in §§121.639 through 121.647.

(c) No person may allow a flight to continue beyond the ETOPS Entry Point unless—

(1) Except as provided in paragraph (d) of this section, the weather conditions at each ETOPS Alternate Airport required by §121.624 are forecast to be at or above the operating minima for that airport in the certificate holder's operations specifications when it might be used (from the earliest to the latest possible landing time); and

(2) All ETOPS Alternate Airports within the authorized ETOPS maximum diversion time are reviewed and the flight crew advised of any changes in conditions that have occurred since dispatch.

(d) If paragraph (c)(1) of this section cannot be met for a specific airport, the dispatch or flight release may be amended to add an ETOPS Alternate Airport within the maximum ETOPS diversion time that could be authorized for that flight with weather conditions at or above operating minima.

(e) Before the ETOPS Entry Point, the pilot in command for a supplemental operator or a dispatcher for a flag operator must use company communications to update the flight plan if needed because of a re-evaluation of aircraft system capabilities.

(f) No person may change an original destination or alternate airport that is specified in the original dispatch or flight release to another airport while the aircraft is en route unless the other airport is authorized for that type of aircraft and the appropriate requirements of §§121.593 through 121.661 and 121.173 are met at the time of redispach or amendment of the flight release.

(g) Each person who amends a dispatch or flight release en route shall record that amendment.

[Doc. No. 628, 29 FR 19222, Dec. 31, 1964, as amended by Amdt. 121–65, 35 FR 12709, Aug. 11, 1970; Amdt. 121–329, 72 FR 1881, Jan. 16, 2007]

**§ 121.633 Considering time-limited systems in planning ETOPS alternates.**

(a) For ETOPS up to and including 180 minutes, no person may list an airport as an ETOPS Alternate Airport in a dispatch or flight release if the time needed to fly to that airport (at the approved one-engine inoperative cruise speed under standard conditions in still air) would exceed the approved time for the airplane's most limiting ETOPS Significant System (including the airplane's most limiting fire suppression system time for those cargo and baggage compartments required by regulation to have fire-suppression systems) minus 15 minutes.

(b) For ETOPS beyond 180 minutes, no person may list an airport as an ETOPS Alternate Airport in a dispatch or flight release if the time needed to fly to that airport:

(1) at the all engine operating cruise speed, corrected for wind and temperature, exceeds the airplane's most limiting fire suppression system time minus 15 minutes for those cargo and baggage compartments required by regulation to have fire suppression systems (except as provided in paragraph (c) of this section), or

(2) at the one-engine-inoperative cruise speed, corrected for wind and temperature, exceeds the airplane's most limiting ETOPS Significant System time (other than the airplane's most limiting fire suppression system time minus 15 minutes for those cargo and baggage compartments required by regulation to have fire-suppression systems).

(c) For turbine-engine powered airplanes with more than two engines, the certificate holder need not meet paragraph (b)(1) of this section until February 15, 2013.

[Doc. No. FAA–2002–6717, 72 FR 1882, Jan. 16, 2007]

**§ 121.665 Load manifest.**

Each certificate holder is responsible for the preparation and accuracy of a load manifest form before each takeoff. The form must be prepared and signed for each flight by employees of the certificate holder who have the duty of supervising the loading of aircraft and preparing the load manifest forms or by other qualified persons authorized by the certificate holder.

**§ 121.683 Crewmember and dispatcher record.**

(a) Each certificate holder shall—

(1) Maintain current records of each crewmember and each aircraft dispatcher (domestic and flag operations only) that show whether the crewmember or aircraft dispatcher complies with the applicable sections of this chapter, including, but not limited to, proficiency and route checks, airplane and route qualifications, training, any required physical examinations, flight, duty, and rest time records; and

(2) Record each action taken concerning the release from employment or physical or professional disqualification of any flight crewmember or aircraft dispatcher (domestic and flag operations only) and keep the record for at least six months thereafter.

(b) Each certificate holder conducting supplemental operations shall maintain the records required by paragraph (a) of this section at its principal base of operations, or at another location used by it and approved by the Administrator.

(c) Computer record systems approved by the Administrator may be used in complying with the requirements of paragraph (a) of this section.

[Doc. No. 6258, 29 FR 19226, Dec. 31, 1964, as amended by Amdt. 121–144, 43 FR 22649, May 25, 1978; Amdt. 121–241, 59 FR 42993, Aug. 19, 1994; Amdt. 121–253, 61 FR 2615, Jan. 26, 1996]

**§ 121.695 Disposition of load manifest, dispatch release, and flight plans: Domestic and flag operations.**

(a) The pilot in command of an airplane shall carry in the airplane to its destination—

- (1) A copy of the completed load manifest (or information from it, except information concerning cargo and passenger distribution);
- (2) A copy of the dispatch release; and
- (3) A copy of the flight plan.

(b) The certificate holder shall keep copies of the records required in this section for at least three months.

[Doc. No. 6258, 29 FR 19226, Dec. 31, 1964, as amended by Amdt. 121-178, 47 FR 13316, Mar. 29, 1982; Amdt. 121-253, 61 FR 2616, Jan. 26, 1996]

**§ 121.701 Maintenance log: Aircraft.**

(a) Each person who takes action in the case of a reported or observed failure or malfunction of an airframe, engine, propeller, or appliance that is critical to the safety of flight shall make, or have made, a record of that action in the airplane's maintenance log.

(b) Each certificate holder shall have an approved procedure for keeping adequate copies of the record required in paragraph (a) of this section in the airplane in a place readily accessible to each flight crewmember and shall put that procedure in the certificate holder's manual.

**§ 121.703 Service difficulty reports.**

(a) Each certificate holder shall report the occurrence or detection of each failure, malfunction, or defect concerning —

- (1) Fires during flight and whether the related fire-warning system functioned properly;
- (2) Fires during flight not protected by a related fire-warning system;
- (3) False fire warning during flight;
- (4) An engine exhaust system that causes damage during flight to the engine, adjacent structure, equipment, or components;
- (5) An aircraft component that causes accumulation or circulation of smoke, vapor, or toxic or noxious fumes in the crew compartment or passenger cabin during flight;
- (6) Engine shutdown during flight because of flameout;
- (7) Engine shutdown during flight when external damage to the engine or airplane structure occurs;
- (8) Engine shutdown during flight due to foreign object ingestion or icing;
- (9) Engine shutdown during flight of more than one engine;
- (10) A propeller feathering system or ability of the system to control overspeed during flight;
- (11) A fuel or fuel-dumping system that affects fuel flow or causes hazardous leakage during flight;
- (12) An unwanted landing gear extension or retraction, or an unwanted opening or closing of landing gear doors during flight;
- (13) Brake system components that result in loss of brake actuating force when the airplane is in motion on the ground;

(14) Aircraft structure that requires major repair;

(15) Cracks, permanent deformation, or corrosion of aircraft structures, if more than the maximum acceptable to the manufacturer or the FAA;

(16) Aircraft components or systems that result in taking emergency actions during flight (except action to shut down an engine); and

(17) Emergency evacuation systems or components including all exit doors, passenger emergency evacuation lighting systems, or evacuation equipment that are found defective, or that fail to perform the intended functions during an actual emergency or during training, testing, maintenance, demonstrations, or inadvertent deployments.

(b) For the purpose of this section *during flight* means the period from the moment the aircraft leaves the surface of the earth on takeoff until it touches down on landing.

(c) In addition to the reports required by paragraph (a) of this section, each certificate holder shall report any other failure, malfunction, or defect in an aircraft that occurs or is detected at any time if, in its opinion, that failure, malfunction, or defect has endangered or may endanger the safe operation of an aircraft used by it.

(d) Each certificate holder shall submit each report required by this section, covering each 24-hour period beginning at 0900 local time of each day and ending at 0900 local time on the next day, to the FAA offices in Oklahoma City, Oklahoma. Each report of occurrences during a 24-hour period shall be submitted to the collection point within the next 96 hours. However, a report due on Saturday or Sunday may be submitted on the following Monday, and a report due on a holiday may be submitted on the next work day.

(e) The certificate holder shall submit the reports required by this section on a form or in another format acceptable to the Administrator. The reports shall include the following information:

(1) Type and identification number of the aircraft.

(2) The name of the operator.

(3) The date, flight number, and stage during which the incident occurred (e.g., preflight, takeoff, climb, cruise, descent landing, and inspection).

(4) The emergency procedure effected (e.g., unscheduled landing and emergency descent).

(5) The nature of the failure, malfunction, or defect.

(6) Identification of the part and system involved, including available information pertaining to type designation of the major component and time since overhaul.

(7) Apparent cause of the failure, malfunction, or defect (e.g., wear, crack, design deficiency, or personnel error).

(8) Whether the part was repaired, replaced, sent to the manufacturer, or other action taken.

(9) Whether the aircraft was grounded.

(10) Other pertinent information necessary for more complete identification, determination of seriousness, or corrective action.

(f) A certificate holder that is also the holder of a Type Certificate (including a Supplemental Type Certificate), a Parts Manufacturer Approval, or a Technical Standard Order Authorization, or that is the licensee of a type certificate holder, need not report a failure, malfunction, or defect under this section if the failure, malfunction, or defect has been reported by it under §21.3 of this chapter or under the accident reporting provisions of 14 CFR part 830.

(g) No person may withhold a report required by this section even though all information required in this section is not available.

(h) When certificate holder gets additional information, including information from the manufacturer or other agency, concerning a report required by this section, it shall expeditiously submit it as a supplement to the first report and reference the date and place of submission of the first report.

[Doc. No. 6258, 29 FR 19226, Dec. 31, 1964, as amended by Doc. No. 8084, 32 FR 5770, Apr. 11, 1967; Amdt. 121-72, 35 FR 18188, Nov. 28, 1970; Amdt. 121-143, 43 FR 22642, May 25, 1978; Amdt. 121-178, 47 FR 13316, Mar. 29, 1982; Amdt. 121-187, 50 FR 32375, Aug. 9, 1985; Amdt. 121-195, 53 FR 8728, Mar. 16, 1988; Amdt. 121-251, 60 FR 65936, Dec. 20, 1995; Amdt. 121-319, 70 FR 76979, Dec. 29, 2005]

#### **§ 121.705 Mechanical interruption summary report.**

Each certificate holder shall submit to the Administrator, before the end of the 10th day of the following month, a summary report for the previous month of:

(a) Each interruption to a flight, unscheduled change of aircraft en route, or unscheduled stop or diversion from a route, caused by known or suspected mechanical difficulties or malfunctions that are not required to be reported under §121.703.

(b) The number of engines removed prematurely because of malfunction, failure or defect, listed by make and model and the aircraft type in which it was installed.

(c) The number of propeller featherings in flight, listed by type of propeller and engine and aircraft on which it was installed. Propeller featherings for training, demonstration, or flight check purposes need not be reported.

[Doc. No. 6258, 29 FR 19226, Dec. 31, 1964, as amended by Amdt. 121-10, 30 FR 10025, Aug. 12, 1965; Amdt. 121-319, 70 FR 76979, Dec. 29, 2005]

#### **§ 121.709 Airworthiness release or aircraft log entry.**

(a) No certificate holder may operate an aircraft after maintenance, preventive maintenance or alterations are performed on the aircraft unless the certificate holder, or the person with whom the certificate holder arranges for the performance of the maintenance, preventive maintenance, or alterations, prepares or causes to be prepared—

(1) An airworthiness release; or

(2) An appropriate entry in the aircraft log.

(b) The airworthiness release or log entry required by paragraph (a) of this section must—

(1) Be prepared in accordance with the procedures set forth in the certificate holder's manual;

(2) Include a certification that—

(i) The work was performed in accordance with the requirements of the certificate holder's manual;

(ii) All items required to be inspected were inspected by an authorized person who determined that the work was satisfactorily completed;

(iii) No known condition exists that would make the airplane unairworthy; and

(iv) So far as the work performed is concerned, the aircraft is in condition for safe operation; and

(3) Be signed by an authorized certificated mechanic or repairman except that a certificated repairman may sign the release or entry only for the work for which he is employed and certificated.

(c) Notwithstanding paragraph (b)(3) of this section, after maintenance, preventive maintenance, or alterations performed by a repair station that is located outside the United States, the airworthiness release or log entry required by paragraph (a) of this section may be signed by a person authorized by that repair station.

(d) When an airworthiness release form is prepared the certificate holder must give a copy to the pilot in command and must keep a record thereof for at least 2 months.

(e) Instead of restating each of the conditions of the certification required by paragraph (b) of this section, the air carrier may state in its manual that the signature of an authorized certificated mechanic or repairman constitutes that certification.

[Doc. No. 6258, 29 FR 19226, Dec. 31, 1964, as amended by Amdt. 121-6, 30 FR 6432, May 8, 1965; Amdt. 121-21, 31 FR 10613, Aug. 9, 1966; Amdt. 121-286, 66 FR 41116, Aug. 6, 2001]

#### **§ 121.711 Communication records: Domestic and flag operations.**

Each certificate holder conducting domestic or flag operations shall record each en route radio contact between the certificate holder and its pilots and shall keep that record for at least 30 days.

[Doc. No. 28154, 61 FR 2616, Jan. 26, 1996]

#### **§ 121.713 Retention of contracts and amendments: Commercial operators who conduct intrastate operations for compensation or hire.**

(a) Each commercial operator who conducts intrastate operations for compensation or hire shall keep a copy of each written contract under which it provides services as a commercial operator for a period of at least 1 year after the date of execution of the contract. In the case of an oral contract, it shall keep a memorandum stating its elements, and of any amendments to it, for a period of at least one year after the execution of that contract or change.

(b) Each commercial operator who conducts intrastate operations for compensation or hire shall submit a financial report for the first 6 months of each fiscal year and another financial report for each complete fiscal year. If that person's operating certificate is suspended for more than 29 days, that person shall submit a financial report as of the last day of the month in which the suspension is terminated. The report required to be submitted by this section shall be submitted within 60 days of the last day of the period covered by the report and must include—

(1) A balance sheet that shows assets, liabilities, and net worth on the last day of the reporting period;

(2) The information required by §119.36 (e)(2), (e)(7), and (e)(8) of this chapter;

(3) An itemization of claims in litigation against the applicant, if any, as of the last day of the period covered by the report;

(4) A profit and loss statement with the separation of items relating to the applicant's commercial operator activities from his other business activities, if any; and

(5) A list of each contract that gave rise to operating income on the profit and loss statement, including the names and addresses of the contracting parties and the nature, scope, date, and duration of each contract.

[Doc. No. 28154, 60 FR 65936, Dec. 20, 1995, as amended by Amdt. 121-262, 62 FR 13257, Mar. 19, 1997]

#### **Appendix G to Part 121—Doppler Radar and Inertial Navigation System (INS): Request for Evaluation; Equipment and Equipment Installation; Training Program; Equipment Accuracy and Reliability; Evaluation Program**

1. *Application authority.* (a) An applicant for authority to use a Doppler Radar or Inertial Navigation System must submit a request for evaluation of the system to the Flight Standards District Office or International Field Office charged with the overall inspection of its operations 30 days prior to the start of evaluation flights.

(b) The application must contain:

(1) A summary of experience with the system showing to the satisfaction of the Administrator a history of the accuracy and reliability of the system proposed to be used.

(2) A training program curriculum for initial approval under §121.405.

(3) A maintenance program for compliance with subpart L of this part.

(4) A description of equipment installation.

(5) Proposed revisions to the Operations Manual outlining all normal and emergency procedures relative to use of the proposed system, including detailed methods for continuing the navigational function with partial or complete equipment failure, and methods for determining the most accurate system when an unusually large divergence between systems occurs. For the purpose of this appendix, a large divergence is a divergence that results in a track that falls beyond clearance limits.

(6) Any proposed revisions to the minimum equipment list with adequate justification therefor.

(7) A list of operations to be conducted using the system, containing an analysis of each with respect to length, magnetic compass reliability, availability of en route aids, and adequacy of gateway and terminal radio facilities to support the system. For the purpose of this appendix, a gateway is a specific navigational fix where use of long range navigation commences or terminates.

2. *Equipment and equipment installation—Inertial Navigation Systems ( INS ) or Doppler Radar System.* (a) Inertial Navigation and Doppler Radar Systems must be installed in accordance with applicable airworthiness requirements.

(b) Cockpit arrangement must be visible and useable by either pilot seated at his duty station.

(c) The equipment must provide, by visual, mechanical, or electrical output signals, indications of the invalidity of output data upon the occurrence of probable failures or malfunctions within the system.

(d) A probable failure or malfunction within the system must not result in loss of the aircraft's required navigation capability.

(e) The alignment, updating, and navigation computer functions of the system must not be invalidated by normal aircraft power interruptions and transients.

(f) The system must not be the source of cause of objectionable radio frequency interference, and must not be adversely affected by radio frequency interference from other aircraft systems.

(g) The FAA-approved airplane flight manual, or supplement thereto, must include pertinent material as required to define the normal and emergency operating procedures and applicable operating limitations associated with INS and Doppler performance (such as maximum latitude at which ground alignment capability is provided, or deviations between systems).

3. *Equipment and equipment installation—Inertial Navigation Systems ( INS ).* (a) If an applicant elects to use an Inertial Navigation System it must be at least a dual system (including navigational computers and reference units). At least two systems must be operational at takeoff. The dual system may consist of either two INS units, or one INS unit and one Doppler Radar unit.

(b) Each Inertial Navigation System must incorporate the following:

(1) Valid ground alignment capability at all latitudes appropriate for intended use of the installation.

(2) A display of alignment status or a ready to navigate light showing completed alignment to the flight crew.

(3) The present position of the airplane in suitable coordinates.

(4) Information relative to destinations or waypoint positions:

(i) The information needed to gain and maintain a desired track and to determine deviations from the desired track.

(ii) The information needed to determine distance and time to go to the next waypoint or destination.

(c) For INS installations that do not have memory or other inflight alignment means, a separate electrical power source (independent of the main propulsion system) must be provided which can supply, for at least 5 minutes, enough power (as shown by analysis or as demonstrated in the airplane) to maintain the INS in such condition that its full capability is restored upon the reactivation of the normal electrical supply.

(d) The equipment must provide such visual, mechanical, or electrical output signals as may be required to permit the flight crew to detect probable failures or malfunctions in the system.

4. *Equipment and equipment installation—Doppler Radar Systems.* (a) If an applicant elects to use a Doppler Radar System it must be at least a dual system (including dual antennas or a combined antenna designed for multiple operation), except that:

(1) A single operating transmitter with a standby capable of operation may be used in lieu of two operating transmitters.

(2) Single heading source information to all installations may be utilized, provided a compass comparator system is installed and operational procedures call for frequent cross-checks of all compass heading indicators by crewmembers.

The dual system may consist of either two Doppler Radar units or one Doppler Radar unit and one INS unit.

(b) At least two systems must be operational at takeoff.

(c) As determined by the Administrator and specified in the certificate holder's operations specifications, other navigational aids may be required to update the Doppler Radar for a particular operation. These may include Loran, Consol, DME, VOR, ADF, ground-based radar, and airborne weather radar. When these aids are required, the cockpit arrangement must be such that all controls are accessible to each pilot seated at his duty station.

5. *Training programs.* The initial training program for Doppler Radar and Inertial Navigation Systems must include the following:

(a) Duties and responsibilities of flight crewmembers, dispatchers, and maintenance personnel.

(b) For pilots, instruction in the following:

(1) Theory and procedures, limitations, detection of malfunctions, preflight and inflight testing, and cross-checking methods.

(2) The use of computers, an explanation of all systems, compass limitations at high latitudes, a review of navigation, flight planning, and applicable meteorology.

(3) The methods for updating by means of reliable fixes.

(4) The actual plotting of fixes.

(c) Abnormal and emergency procedures.

6. *Equipment accuracy and reliability.* (a) Each Inertial Navigation System must meet the following accuracy requirements, as appropriate:



(1) For flights up to 10 hours' duration, no greater than 2 nautical miles per hour of circular error on 95 percent of system flights completed is permitted.

(2) For flights over 10 hours' duration, a tolerance of  $\pm 20$  miles cross-track and  $\pm 25$  miles along-track on 95 percent of system flights completed is permitted.

(b) Compass heading information to the Doppler Radar must be maintained to an accuracy of  $\pm 1^\circ$  and total system deviations must not exceed  $2^\circ$ . When free gyro techniques are used, procedures shall be utilized to ensure that an equivalent level of heading accuracy and total system deviation is attained.

(c) Each Doppler Radar System must meet accuracy requirements of  $\pm 20$  miles cross-track and  $\pm 25$  miles along-track for 95 percent of the system flights completed. Updating is permitted.

A system that does not meet the requirements of this section will be considered a failed system.

7. *Evaluation program.* (a) Approval by evaluation must be requested as a part of the application for operational approval of a Doppler Radar or Inertial Navigation System.

(b) The applicant must provide sufficient flights which show to the satisfaction of the Administrator the applicant's ability to use cockpit navigation in his operation.

(c) The Administrator bases his evaluation on the following:

(1) Adequacy of operational procedures.

(2) Operational accuracy and reliability of equipment and feasibility of the system with regard to proposed operations.

(3) Availability of terminal, gateway, area, and en route ground-based aids, if required, to support the self-contained system.

(4) Acceptability of cockpit workload.

(5) Adequacy of flight crew qualifications.

(6) Adequacy of maintenance training and availability of spare parts.

After successful completion of evaluation demonstrations, FAA approval is indicated by issuance of amended operations specifications and en route flight procedures defining the new operation. Approval is limited to those operations for which the adequacy of the equipment and the feasibility of cockpit navigation has been satisfactorily demonstrated.

[Doc. No. 10204, 37 FR 6464, Mar. 30, 1972, as amended by Amdt. 121-207, 54 FR 39293, Sept. 25, 1989]

#### **Appendix H to Part 121—Advanced Simulation**

This appendix provides guidelines and a means for achieving flightcrew training in advanced airplane simulators. The requirements in this appendix are in addition to the simulator approval requirements in §121.407. Each simulator used under this appendix must be approved as a Level B, C, or D simulator, as appropriate.

##### **Advanced Simulation Training Program**

For an operator to conduct Level C or D training under this appendix all required simulator instruction and checks must be conducted under an advanced simulation training program approved by the Administrator for the operator. This program must also ensure that all instructors and check airmen used in appendix H training and checking are highly qualified to provide the training required in the training program. The advanced simulation training program must include the following:

1. The operator's initial, transition, upgrade, and recurrent simulator training programs and its procedures for re-establishing recency of experience in the simulator.
2. How the training program will integrate Level B, C, and D simulators with other simulators and training devices to maximize the total training, checking, and certification functions.
3. Documentation that each instructor and check airman has served for at least 1 year in that capacity in a certificate holder's approved program or has served for at least 1 year as a pilot in command or second in command in an airplane of the group in which that pilot is instructing or checking.
4. A procedure to ensure that each instructor and check airman actively participates in either an approved regularly scheduled line flying program as a flight crewmember or an approved line observation program in the same airplane type for which that person is instructing or checking.
5. A procedure to ensure that each instructor and check airman is given a minimum of 4 hours of training each year to become familiar with the operator's advanced simulation training program, or changes to it, and to emphasize their respective roles in the program. Training for simulator instructors and check airmen must include training policies and procedures, instruction methods and techniques, operation of simulator controls (including environmental and trouble panels), limitations of the simulator, and minimum equipment required for each course of training.
6. A special Line Oriented Flight Training (LOFT) program to facilitate the transition from the simulator to line flying. This LOFT program must consist of at least a 4-hour course of training for each flightcrew. It also must contain at least two representative flight segments of the operator's route. One of the flight segments must contain strictly normal operating procedures from push back at one airport to arrival at another. Another flight segment must contain training in appropriate abnormal and emergency flight operations.

#### Level B

##### *Training and Checking Permitted*

1. Recency of experience (§121.439).
2. Night takeoffs and landings (Part 121, Appendix E).
3. Landings in a proficiency check without the landing on the line requirements (§121.441).

#### Level C

##### *Training and Checking Permitted*

1. For all pilots, transition training between airplanes in the same group, and for a pilot in command the certification check required by §61.153 of this chapter.
2. Upgrade to pilot-in-command training and the certification check when the pilot—
  - a. Has previously qualified as second in command in the equipment to which the pilot is upgrading;
  - b. Has at least 500 hours of actual flight time while serving as second in command in an airplane of the same group; and
  - c. Is currently serving as second in command in an airplane in this same group.
3. Initial pilot-in-command training and the certification check when the pilot—
  - a. Is currently serving as second in command in an airplane of the same group;
  - b. Has a minimum of 2,500 flight hours as second in command in an airplane of the same group; and

c. Has served as second in command on at least two airplanes of the same group.

4. For all second-in-command pilot applicants who meet the aeronautical experience requirements of §61.159 of this chapter in the airplane, the initial and upgrade training and checking required by this part, and the certification check requirements of §61.153 of this chapter.

Level D

*Training and Checking Permitted*

Except for the requirements listed in the next sentence, all pilot flight training and checking required by this part and the certification check requirements of §61.153(g) of this chapter. The line check required by §121.440, the static airplane requirements of appendix E of this part, and the operating experience requirements of §121.434 must still be performed in the airplane.

[Doc. No. FAA–2002–12461, 71 FR 63640, Oct. 30, 2006]