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AUTHORITY: 49 U.S.C. 106(g), 1155, 40103, 40113, 40120, 44101, 44111, 44701, 44709, 44711, 44712, 44715, 44716, 44717, 44722, 46306, 46315, 46316, 46504, 46506-46507, 47122, 47508, 47528-47531, articles 12 and 29 of the Convention on International Civil Aviation (61 stat. 1180).

**SPECIAL FEDERAL AVIATION REGULATION
NO. SFAR NO. 50-2—SPECIAL
FLIGHT RULES IN THE VICINITY OF
THE GRAND CANYON NATIONAL PARK,
AZ**

Section 1. Applicability. This rule prescribes special operating rules for all persons operating aircraft in the following airspace, designated as the Grand Canyon National Park Special Flight Rules Area:

That airspace extending upward from the surface up to but not including 14,500 feet MSL within an area bounded by a line beginning at lat. 36°09'30" N., long. 114°03'00" W.; northeast to lat. 36°14'00" N., long. 113°09'50" W.; thence northeast along the boundary of the Grand Canyon National Park to lat. 36°24'47" N., long. 112°52'00" W.; to lat. 36°30'30" N., long. 112°36'15" W. to lat. 36°21'30" N., long. 112°00'00" W. to lat. 36°35'30" N., long. 111°53'10" W., to lat. 36°53'00" N., long. 111°36'45" W. to lat. 36°53'00" N., long. 111°33'00" W.; to lat. 36°19'00" N., long. 111°50'50" W.; to lat. 36°17'00" N., long. 111°42'00" W.; to lat. 35°59'30" N., long. 111°42'00" W.; to lat. 35°57'30" N., long. 112°03'55" W.; thence counterclockwise via the 5 statute mile radius of the Grand Canyon Airport airport reference point (lat. 35°57'09" N., long. 112°08'47" W.) to lat. 35°57'30" N., long. 112°14'00" W.; to lat. 35°57'30" N., long. 113°11'00" W.; to lat. 35°42'30" N., long. 113°11'00" W.; to 35°38'30" N.; long. 113°27'30" W.; thence counterclockwise via the 5 statute mile radius of the Peach Springs

VORTAC to lat. 35°41'20" N., long. 113°36'00" W.; to lat. 35°55'25" N., long. 113°49'10" W.; to lat. 35°57'45" N., 113°45'20" W.; thence northwest along the park boundary to lat. 36°02'20" N., long. 113°50'15" W.; to 36°00'10" N., long. 113°53'45" W.; thence to the point of beginning.

Section 3. Aircraft operations: general. Except in an emergency, no person may operate an aircraft in the Special Flight Rules, Area under VFR on or after September 22, 1988, or under IFR on or after April 6, 1989, unless the operation—(a) Is conducted in accordance with the following procedures:

NOTE: The following procedures do not relieve the pilot from see-and-avoid responsibility or compliance with FAR 91.119.

(1) Unless necessary to maintain a safe distance from other aircraft or terrain—

(i) Remain clear of the areas described in Section 4; and

(ii) Remain at or above the following altitudes in each sector of the canyon:

Eastern section from Lees Ferry to North Canyon and North Canyon to Boundary Ridge: as prescribed in Section 5.

Boundary Ridge to Supai Point (Yumtheska Point): 10,000 feet MSL.

Western section from Diamond Creek to the Grant Wash Cliffs: 8,000 feet MSL.

(2) Proceed through the four flight corridors describe in Section 4 at the following altitudes unless otherwise authorized in writing by the Flight Standards District Office:

Northbound

11,500 or
13,500 feet MSL

Southbound

>10,500 or
>12,500 feet MSL

(b) Is authorized in writing by the Flight Standards District Office and is conducted in compliance with the conditions contained in that authorization. Normally authorization will be granted for operation in the areas described in Section 4 or below the altitudes listed in Section 5 only for operations of aircraft necessary for law enforcement, firefighting, emergency medical treatment/evacuation of persons in the vicinity of the Park; for support of Park maintenance or activities; or for aerial access to and maintenance of other property located within the Special Flight Rules Area. Authorization may be issued on a continuing basis.(c)(1) Prior to November 1, 1988, is conducted in accordance with a specific authorization to operate in that airspace incorporated in the operator's part 135 operations specifications in accordance with the provisions of SFAR 50-1, notwithstanding the provisions of Sections 4 and 5; and

(2) On or after November 1, 1988, is conducted in accordance with a specific authorization to operate in that airspace incorporated in the operator's operations specifications and approved by the Flight Standards District Office in accordance with the provisions of SFAR 50-2.

(d) Is a search and rescue mission directed by the U.S. Air Force Rescue Coordination Center.

(e) Is conducted within 3 nautical miles of Whitmore Airstrip, Pearce Ferry Airstrip, North Rim Airstrip, Cliff Dwellers Airstrip, or Marble Canyon Airstrip at an altitudes less than 3,000 feet above airport elevation, for the purpose of landing at or taking off from that facility. Or

(f) Is conducted under an IFR clearance and the pilot is acting in accordance with ATC instructions. An IFR flight plan may not be filed on a route or at an altitude that would require operation in an area described in Section 4.

Section 4. Flight-free zones. Except in an emergency or if otherwise necessary for safety of flight, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in Section 3(b), no person may operate an aircraft in the Special Flight Rules Area within the following areas:

(a) Desert View Flight-Free Zone. Within an area bounded by a line beginning at Lat. 35°59'30" N., Long. 111°46'20" W. to 35°59'30" N., Long. 111°52'45" W.; to Lat. 36°04'50" N., Long. 111°52'00" W.; to Lat. 36°06'00" N., Long. 111°46'20" W.; to the point of origin; but not including the airspace at and above 10,500 feet MSL within 1 mile of the western boundary of the zone. The area between the Desert View and Bright Angel Flight-Free Zones is designated the "Zuni Point Corridor."

(b) Bright Angel Flight-Free Zone. Within an area bounded by a line beginning at Lat. 35°59'30" N., Long. 111°55'30" W.; to Lat. 35°59'30" N., Long. 112°04'00" W.; thence counterclockwise via the 5 statute mile radius of the Grand Canyon Airport point (Lat. 35°57'09" N., Long. 112°08'47" W.) to Lat. 36°01'30" N., Long. 112°11'00" W.; to Lat. 36°06'15" N., Long. 112°12'50" W.; to Lat. 36°14'40" N., Long. 112°08'50" W.; to Lat. 36°14'40" N., Long. 111°57'30" W.; to Lat. 36°12'30" N., Long. 111°53'50" W.; to the point of origin; but not including the airspace at and above 10,500 feet MSL within 1 mile of the eastern boundary between the southern boundary and Lat. 36°04'50" N. or the airspace at and above 10,500 feet MSL within 2 miles of the northwest boundary. The area bounded by the Bright Angel and Shinumo Flight-Free Zones is designated the "Dragon Corridor."

(c) Shinumo Flight-Free Zone. Within an area bounded by a line beginning at Lat. 36°04'00" N., Long. 112°16'40" W.; northwest along the park boundary to a point at Lat. 36°12'47" N., Long. 112°30'53" W.; to Lat.

36°21'15" N., Long. 112°20'20" W.; east along the park boundary to Lat. 36°21'15" N., Long. 112°13'55" W.; to Lat. 36°14'40" N., Long. 112°11'25" W.; to the point of origin. The area between the Thunder River/Toroweap and Shinumo Flight Free Zones is designated the "Fossil Canyon Corridor."

(d) Toroweap/Thunder River Flight-Free Zone. Within an area bounded by a line beginning at Lat. 36°22'45" N., Long. 112°20'35" W.; thence northwest along the boundary of the Grand Canyon National Park to Lat. 36°17'48" N., Long. 113°03'15" W.; to Lat. 36°15'00" N., Long. 113°07'10" W.; to Lat. 36°10'30" N., Long. 113°07'10" W.; thence east along the Colorado River to the confluence of Havasu Canyon (Lat. 36°18'40" N., Long. 112°45'45" W.) including that area within a 1.5 nautical mile radius of Toroweap Overlook (Lat. 36°12'45" N., Long. 113°03'30" W.); to the point of origin; but not including the following airspace designated as the "Tuckup Corridor": at or above 10,500 feet MSL within 2 nautical miles either side of a line extending between Lat. 36°24'47" N., Long. 112°48'50" W. and Lat. 36°17'10" N., Long. 112°48'50" W.; to the point of origin.

Section 5. Minimum flight altitudes. Except in an emergency or if otherwise necessary for safety of flight, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in Section 3(b), no person may operate an aircraft in the Special Flight Rules Area at an altitude lower than the following:

- (a) Eastern section from Lees Ferry to North Canyon: 5,000 feet MSL.
- (b) Eastern section from North Canyon to Boundary Ridge: 6,000 feet MSL.
- (c) Boundary Ridge to Supai (Yumtheska) Point: 7,500 feet MSL.
- (d) Supai Point to Diamond Creek: 6,500 feet MSL.
- (e) Western section from Diamond Creek to the Grand Wash Cliffs: 5,000 feet MSL.

Section 9. Termination date. Section 1. Applicability, Section 4, Flight-free zones, and Section 5. Minimum flight altitudes, expire on April 19, 2001.

NOTE: An informational map of the special flight rules areas defined by SFAR 50-2 is available on the Office of Rulemaking's website at <http://www.faa.gov/avr/armhome.htm>. A paper copy is available from the Office of Rulemaking by calling Linda Williams at (202) 267-9685.

[66 FR 1003, Jan. 4, 2001, as amended at 66 FR 16584, Mar. 26, 2001]

**SPECIAL FEDERAL AVIATION REGULATION
NO. 51-1—SPECIAL FLIGHT RULES IN
THE VICINITY OF LOS ANGELES
INTERNATIONAL AIRPORT**

Section 1. Applicability: This rule establishes a special operating area for persons

operating aircraft under visual flight rules (VFR) in the following airspace of the Los Angeles Class B airspace area designated as the Los Angeles Special Flight Rules Area: * * *

That part of Area A of the Los Angeles TCA between 3,500 feet above mean sea level (MSL) and 4,500 feet MSL, inclusive, bounded on the north by Ballona Creek, on the east by the San Diego Freeway, on the south by Imperial Highway, and on the west by the Pacific Ocean shoreline.

Section 2. Aircraft operations, general. Unless otherwise authorized by the Administrator, no person may operate an aircraft in the airspace described in Section 1 unless the operation is conducted under the following rules.

- a. The flight must be conducted under VFR and only when operation may be conducted in compliance with §91.155(a).
- b. The aircraft must be equipped as specified in FAR 91.215(b) replying on Code 1201 prior to entering and while operating in this area.
- c. The pilot shall have a current Los Angeles Terminal Area Chart in the aircraft.
- d. The pilot shall operate on the Santa Monica very high frequency omni-directional radio range (VOR) 132° radial.
- e. Operations in a southeasterly direction shall be in level flight at 3,500 feet MSL.
- f. Operations in a northwesterly direction shall be in level flight at 4,500 feet MSL.
- g. Indicated airspeed shall not exceed 140 knots.
- h. Anticollision lights and aircraft position/navigation lights shall be on. Use of landing lights is recommended.
- i. Turbojet aircraft are prohibited from VFR operations in this area.

Section 3. Notwithstanding the provisions of §91.131(a), an air traffic control authorization is not required in the Los Angeles Special Flight Rules Area for operations in compliance with section 2 of this SFAR. All other provisions of §91.131 apply to operate in the Special Flight Rules Area.

AUTHORITY: 49 U.S.C. app. 1303, 1348, 1354(a), 1421, and 1422; 49 U.S.C. 106(g).

[Doc. No. 87-AWA-31, SFAR 51-1, 53 FR 3812, Feb. 9, 1988, as amended by Amdt. 91-227, 56 FR 65652, Dec. 17, 1991]

**SPECIAL FEDERAL AVIATION REGULATION
NO. 60—AIR TRAFFIC CONTROL SYS-
TEM EMERGENCY OPERATION**

1. Each person shall, before conducting any operation under the Federal Aviation Regulations (14 CFR chapter I), be familiar with all available information concerning that operation, including Notices to Airmen issued under §91.139 and, when activated, the provisions of the National Air Traffic Reduced Complement Operations Plan available for

inspection at operating air traffic facilities and Regional air traffic division offices, and the General Aviation Reservation Program. No operator may change the designated airport of intended operation for any flight contained in the October 1, 1990, OAG.

2. Notwithstanding any provision of the Federal Aviation Regulations to the contrary, no person may operate an aircraft in the Air Traffic Control System:

a. Contrary to any restriction, prohibition, procedure or other action taken by the Director of the Office of Air Traffic Systems Management (Director) pursuant to paragraph 3 of this regulation and announced in a Notice to Airmen pursuant to §91.139 of the Federal Aviation Regulations.

b. When the National Air Traffic Reduced Complement Operations Plan is activated pursuant to paragraph 4 of this regulation, except in accordance with the pertinent provisions of the National Air Traffic Reduced Complement Operations Plan.

3. Prior to or in connection with the implementation of the RCOP, and as conditions warrant, the Director is authorized to:

a. Restrict, prohibit, or permit VFR and/or IFR operations at any airport, Class B airspace area, Class C airspace area, or other class of controlled airspace.

b. Give priority at any airport to flights that are of military necessity, or are medical emergency flights, Presidential flights, and flights transporting critical Government employees.

c. Implement, at any airport, traffic management procedures, that may include reduction of flight operations. Reduction of flight operations will be accomplished, to the extent practical, on a pro rata basis among and between air carrier, commercial operator, and general aviation operations. Flights cancelled under this SFAR at a high density traffic airport will be considered to have been operated for purposes of part 93 of the Federal Aviation Regulations.

4. The Director may activate the National Air Traffic Reduced Complement Operations Plan at any time he finds that it is necessary for the safety and efficiency of the National Airspace System. Upon activation of the RCOP and notwithstanding any provision of the FAR to the contrary, the Director is authorized to suspend or modify any airspace designation.

5. Notice of restrictions, prohibitions, procedures and other actions taken by the Director under this regulation with respect to the operation of the Air Traffic Control system will be announced in Notices to Airmen issued pursuant to §91.139 of the Federal Aviation Regulations.

6. The Director may delegate his authority under this regulation to the extent he considers necessary for the safe and efficient op-

eration of the National Air Traffic Control System.

Authority: 49 U.S.C. app. 1301(7), 1303, 1344, 1348, 1352 through 1355, 1401, 1421 through 1431, 1471, 1472, 1502, 1510, 1522, and 2121 through 2125; articles 12, 29, 31, and 32(a) of the Convention on International Civil Aviation (61 stat. 1180); 42 U.S.C. 4321 *et seq.*; E.O. 11514, 35 FR 4247, 3 CFR, 1966-1970 Comp., p. 902; 49 U.S.C. 106(g).

[Doc. No. 26351, 55 FR 40760, Oct. 4, 1990, as amended by Amdt. 91-227, 56 FR 65652, Dec. 17, 1991]

**SPECIAL FEDERAL AVIATION REGULATION
No. 61-2—PROHIBITION AGAINST CERTAIN FLIGHTS BETWEEN THE UNITED STATES AND IRAQ**

1. Applicability. This Special Federal Aviation Regulation (SFAR) No. 61-2 applies to all aircraft operations originating from, landing in, or overflying the territory of the United States.

2. Special flight restrictions. Except as provided in paragraphs 3 and 4 of this SFAR No. 61-2—

(a) No person shall operate an aircraft on a flight to any point in Iraq, or to any intermediate point on a flight where the ultimate destination is any point in Iraq or that includes a landing at any point in Iraq in its intended itinerary, from any point in the United States;

(b) No person shall operate an aircraft on a flight to any point in the United States from any point in Iraq, or from any intermediate point on a flight where the origin is in Iraq, or from any point on a flight which includes a departure from any point in Iraq in its intended itinerary; or

(c) No person shall operate an aircraft over the territory of the United States if that aircraft's flight itinerary includes any landing at or departure from any point in Iraq.

3. Permitted operations. This SFAR shall not prohibit the flight operations between the United States and Iraq described in section 2 of this SFAR by an aircraft authorized to conduct such operations by the United States Government in consultation with the committee established by UN Security Council Resolution 661 (1990), and in accordance with UN Security Council Resolution 666 (1990).

4. Emergency situations. In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command of an aircraft may deviate from this SFAR to the extent required by that emergency. Except for U.S. air carriers and commercial operators that are subject to the requirements of 14 CFR 121.557, 121.559, or 135.19, each person who deviates from this rule shall, within ten (10) days of the deviation, excluding Saturdays, Sundays, and

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Federal holidays, submit to the nearest FAA Flight Standards District Office a complete report of the operations or the aircraft involved in the deviation, including a description of the deviation and the reasons therefor.

5. Duration. This SFAR No. 61-2 shall remain in effect until further notice.

[Doc. No. 26380, 60 FR 49139, Sept. 21, 1995]

SPECIAL FEDERAL AVIATION REGULATION NO. 65-1—PROHIBITION AGAINST CERTAIN FLIGHTS BETWEEN THE UNITED STATES AND LIBYA

1. Applicability. This Special Federal Aviation Regulation (SFAR) No. 65-1 applies to all aircraft operations originating from, landing in, or overflying the territory of the United States.

2. Special flight restrictions. Except as provided in paragraphs 3 and 4 of this SFAR No. 65-1—

(a) No person shall operate an aircraft on a flight to any point in Libya, or to any intermediate point on a flight where the ultimate destination is any point in Libya or that includes a landing at any point in Libya in its intended itinerary, from any point in the United States;

(b) No person shall operate an aircraft on a flight to any point in the United States from any point in Libya, or from any intermediate point on a flight where the origin is in Libya, or from any point on a flight which includes a departure from any point in Libya in its intended itinerary; or

(c) No person shall operate an aircraft over the territory of the United States if that aircraft's flight itinerary includes any landing at or departure from any point in Libya.

3. Permitted operations. This SFAR shall not prohibit the flight operations between the United States and Libya described in section 2 of this SFAR by an aircraft authorized to conduct such operations by the United States Government in consultation with the committee established by UN Security Council Resolution 748 (1992), as affirmed by UN Security Council Resolution 883 (1993).

4. Emergency situations. In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command of an aircraft may deviate from this SFAR to the extent required by that emergency. Except for U.S. air carriers and commercial operators that are subject to the requirements of 14 CFR 121.557, 121.559, or 135.19, each person who deviates from this rule shall, within ten (10) days of the deviation, excluding Saturdays, Sundays, and Federal holidays, submit to the nearest FAA Flight Standards District Office a complete report of the operations or the aircraft involved in the deviation, including a descrip-

tion of the deviation and the reasons therefor.

5. Duration. This SFAR No. 65-1 shall remain in effect until further notice.

[SFAR 65-1, 60 FR 48644, Sept. 20, 1995]

SPECIAL FEDERAL AVIATION REGULATION NO. 71—SPECIAL OPERATING RULES FOR AIR TOUR OPERATORS IN THE STATE OF HAWAII

Section 1. Applicability. This Special Federal Aviation Regulation prescribes operating rules for airplane and helicopter visual flight rules air tour flights conducted in the State of Hawaii under 14 CFR parts 91, 121, and 135. This rule does not apply to:

(a) Operations conducted under 14 CFR part 121 in airplanes with a passenger seating configuration of more than 30 seats or a payload capacity of more than 7,500 pounds.

(b) Flights conducted in gliders or hot air balloons.

Section 2. Definitions. For the purposes of this SFAR:

“Air tour” means any sightseeing flight conducted under visual flight rules in an airplane or helicopter for compensation or hire.

“Air tour operator” means any person who conducts an air tour.

Section 3. Helicopter flotation equipment. No person may conduct an air tour in Hawaii in a single-engine helicopter beyond the shore of any island, regardless of whether the helicopter is within gliding distance of the shore, unless:

(a) The helicopter is amphibious or is equipped with floats adequate to accomplish a safe emergency ditching and approved flotation gear is easily accessible for each occupant; or

(b) Each person on board the helicopter is wearing approved flotation gear.

Section 4. Helicopter performance plan. Each operator must complete a performance plan before each helicopter air tour flight. The performance plan must be based on the information in the Rotorcraft Flight Manual (RFM), considering the maximum density altitude for which the operation is planned for the flight to determine the following:

(a) Maximum gross weight and center of gravity (CG) limitations for hovering in ground effect;

(b) Maximum gross weight and CG limitations for hovering out of ground effect; and,

(c) Maximum combination of weight, altitude, and temperature for which height-velocity information in the RFM is valid.

The pilot in command (PIC) must comply with the performance plan.

Section 5. Helicopter operating limitations. Except for approach to and transition from a hover, the PIC shall operate the helicopter at a combination of height and forward speed (including hover) that would permit a safe

landing in event of engine power loss, in accordance with the height-speed envelope for that helicopter under current weight and aircraft altitude.

Section 6. Minimum flight altitudes. Except when necessary for takeoff and landing, or operating in compliance with an air traffic control clearance, or as otherwise authorized by the Administrator, no person may conduct an air tour in Hawaii:

(a) Below an altitude of 1,500 feet above the surface over all areas of the State of Hawaii, and,

(b) Closer than 1,500 feet to any person or property; or,

(c) Below any altitude prescribed by federal statute or regulation.

Section 7. Passenger briefing. Before takeoff, each PIC of an air tour flight of Hawaii with a flight segment beyond the ocean shore of any island shall ensure that each passenger has been briefed on the following, in addition to requirements set forth in 14 CFR 91.107, 121.571, or 135.117:

(a) Water ditching procedures;

(b) Use of required flotation equipment; and

(c) Emergency egress from the aircraft in event of a water landing.

Section 8. Termination date. This Special Federal Aviation Regulation expires on October 26, 2003.

[SFAR 71, 59 FR 49145, Sept. 26, 1994, as amended at 60 FR 65913, Dec. 20, 1995; 62 FR 58859, Oct. 30, 1997; 65 FR 58612, Sept. 29, 2000]

**SPECIAL FEDERAL AVIATION REGULATION
NO. 77—PROHIBITION AGAINST CERTAIN FLIGHTS WITHIN THE TERRITORY AND AIRSPACE OF IRAQ**

1. *Applicability.* This rule applies to the following persons:

(a) All U.S. air carriers or commercial operators;

(b) All persons exercising the privileges of an airman certificate issued by the FAA except such persons operating U.S.-registered aircraft for a foreign air carrier; or

(c) All operators of aircraft registered in the United States except where the operator of such aircraft is a foreign air carrier.

2. *Flight prohibition.* Except as provided in paragraphs 3 and 4 of this SFAR, no person described in paragraph 1 may conduct flight operations over or within the territory and airspace of Iraq.

3. *Permitted operations.* This SFAR does not prohibit persons described in paragraph 1 from conducting flight operations over or within the territory and airspace of Iraq where such operations are authorized either by exemption issued by the Administrator or by another agency of the United States Government.

4. *Emergency situations.* In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command of an aircraft may deviate from this SFAR to the extent required by that emergency. Except for U.S. air carriers or commercial operators that are subject to the requirements of 14 CFR parts 119, 121, or 135, each person who deviates from this rule shall, within ten (10) days of the deviation, excluding Saturdays, Sundays, and Federal holidays, submit to the nearest FAA Flight Standards District Office a complete report of the operations of the aircraft involved in the deviation including a description of the deviation and the reasons therefore.

5. *Expiration.* This Special Federal Aviation Regulation will remain in effect until further notice.

[Doc. No. 28691, 61 FR 54021, Oct. 16, 1996]

**SPECIAL FEDERAL AVIATION REGULATION
NO. 78—SPECIAL OPERATING RULES FOR COMMERCIAL AIR TOUR OPERATORS IN THE VICINITY OF THE ROCKY MOUNTAIN NATIONAL PARK**

Section 1. *Applicability.* This Special Federal Aviation Regulation prescribes operating rules for commercial air tour flight operations within the lateral boundaries of the Rocky Mountain National Park, CO.

Sec. 2. *Definition.* For the purpose of this SFAR: “commercial air tour” means: the operation of an aircraft carrying passengers for compensation or hire for aerial sightseeing.

Sec. 3. *Restriction.* No person may conduct a commercial air tour operation in the airspace over Rocky Mountain National Park, CO.

Expiration: This SFAR will expire on the adoption of a final rule in Docket No. 27643.

[Doc. No. 28577, 62 FR 1205, Jan. 8, 1997]

EFFECTIVE DATE NOTE: By Doc. No. FAA-2001-8690, 67 FR 65667, Oct. 25, 2002, Special Federal Aviation Regulation No. 78, was removed, effective Jan. 23, 2003.

**SPECIAL FEDERAL AVIATION REGULATION
NO. 79—PROHIBITION AGAINST CERTAIN FLIGHTS WITHIN THE FLIGHT INFORMATION REGION (FIR) OF THE DEMOCRATIC PEOPLE’S REPUBLIC OF KOREA (DPRK)**

1. *Applicability.* This rule applies to the following persons:

(a) All U.S. air carriers or commercial operators.

(b) All persons exercising the privileges of an airman certificate issued by the FAA, except such persons operating U.S.-registered aircraft for a foreign air carrier.

(c) All operators of aircraft registered in the United States except where the operator of such aircraft is a foreign air carrier.

2. *Flight Prohibition.* Except as provided in paragraphs 3 and 4 of this SFAR, no person described in paragraph 1 may conduct flight operations through the Pyongyang FIR west of 132 degrees east longitude.

3. *Permitted Operations.* This SFAR does not prohibit persons described in paragraph 1 from conducting flight operations within the Pyongyang FIR west of 132 degrees east longitude where such operations are authorized either by exemption issued by the Administrator or by another agency of the United States Government with FAA approval.

4. *Emergency situations.* In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command of an aircraft may deviate from this SFAR to the extent required by that emergency. Except for U.S. air carriers and commercial operators that are subject to the requirements of 14 CFR parts 121, 125, or 135, each person who deviates from this rule shall, within ten (10) days of the deviation, excluding Saturdays, Sundays, and Federal holidays, submit to the nearest FAA Flight Standards District Office a complete report of the operations of the aircraft involved in the deviation, including a description of the deviation and the reasons therefore.

5. *Expiration.* This Special Federal Aviation Regulation No. 79 will remain in effect until further notice.

[Doc. No. 28831, 62 FR 20078, Apr. 24, 1997, as amended at 63 FR 8017, Feb. 17, 1998; 63 FR 19286, Apr. 17, 1998]

**SPECIAL FEDERAL AVIATION REGULATION
NO. 87—PROHIBITION AGAINST CERTAIN
FLIGHTS WITHIN THE TERRITORY
AND AIRSPACE OF ETHIOPIA**

1. *Applicability.* This Special Federal Aviation Regulation (SFAR) No. 87 applies to all U.S. air carriers or commercial operators, all persons exercising the privileges of an airman certificate issued by the FAA unless that person is engaged in the operation of a U.S.-registered aircraft for a foreign air carrier, and all operators using aircraft registered in the United States except where the operator of such aircraft is a foreign air carrier.

2. *Flight prohibition.* Except as provided in paragraphs 3 and 4 of this SFAR, no person described in paragraph 1 may conduct flight operations within the territory and airspace of Ethiopia north of 12 degrees north latitude.

3. *Permitted operations.* This SFAR does not prohibit persons described in paragraph 1 from conducting flight operations within the territory and airspace of Ethiopia where such operations are authorized either by ex-

emption issued by the Administrator or by an authorization issued by another agency of the United States Government with the approval of the FAA.

4. *Emergency situations.* In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command of an aircraft may deviate from this SFAR to the extent required by that emergency. Except for U.S. air carriers and commercial operators that are subject to the requirements of 14 CFR 121.557, 121.559, or 135.19, each person who deviates from this rule shall, within ten (10) days of the deviation, excluding Saturdays, Sundays, and Federal holidays, submit to the nearest FAA Flight Standards District Office a complete report of the operations of the aircraft involved in the deviation, including a description of the deviation and the reasons therefore.

5. *Expiration.* This Special Federal Aviation Regulation shall remain in effect until further notice.

[Doc. No. FAA-2000-7360; 65 FR 31215, May 16, 2000]

**SFAR NO. 94—ENHANCED SECURITY
PROCEDURES FOR OPERATIONS AT
CERTAIN AIRPORTS IN THE WASH-
INGTON, DC METROPOLITAN AREA
SPECIAL FLIGHT RULES AREA**

1. *Applicability.* This Special Federal Aviation Regulation (SFAR) establishes rules for all persons operating an aircraft to or from the following airports located within the airspace designated as the Washington, DC Metropolitan Area Special Flight Rules Area:

- (a) College Park Airport (CGS).
- (b) Potomac Airfield (VKX).
- (c) Washington Executive/Hyde Field (W32).

2. *Definitions.* For the purposes of this SFAR the following definitions apply:

Administrator means the Federal Aviation Administrator, the Under Secretary of Transportation for Security, or any person delegated the authority of the Federal Aviation Administrator or Under Secretary of Transportation for Security.

Washington, DC Metropolitan Area Special Flight Rules Area means that airspace within an area from the surface up to but not including Flight Level 180, bounded by a line beginning at the Washington (DCA) VOR/DME 300 degree radial at 15 nautical miles (Lat. 38°56'55" N., Long. 77°20'08" W.); thence clockwise along the DCA 15 nautical mile arc to the DCA 022 degree radial at 15 nautical miles (Lat. 39°06'11" N., Long. 76°57'51" W.); thence southeast via a line drawn to the DCA 049 degree radial at 14 nautical miles (Lat. 39°02'18" N., Long. 76°50'38" W.); thence south via a line drawn to the DCA 064 degree radial at 13 nautical miles (Lat. 38°59'01" N.,

Long. 76°48'32' W.); thence clockwise along the DCA 13 nautical mile arc to the DCA 282 degree radial at 13 nautical miles (Lat. 38°52'14' N., Long 77°18'48' W.); thence north via a line drawn to the point of the beginning; excluding the airspace within a one nautical mile radius of Freeway Airport (W00), Mitchellville, Md.

3. Operating requirements.

(a) Except as specified in paragraph 3(c) of this SFAR, no person may operate an aircraft to or from an airport to which this SFAR applies unless security procedures that meet the provisions of paragraph 4 of this SFAR have been approved by the Administrator for operations at that airport.

(b) Except as specified in paragraph 3(c) of this SFAR, each person serving as a required flightcrew member of an aircraft operating to or from an airport to which this SFAR applies must:

(1) Prior to obtaining authorization to operate to or from the airport, present to the Administrator the following:

(i) A current and valid airman certificate;

(ii) A current medical certificate;

(iii) One form of Government issued picture identification; and

(iv) A list containing the make, model, and registration number of each aircraft that the pilot intends to operate to or from the airport;

(2) Successfully complete a background check by a law enforcement agency, which may include submission of fingerprints and the conduct of a criminal history, records check.

(3) Attend a briefing acceptable to the Administrator that describes procedures for operating to or from the airport;

(4) Not have been convicted or found not guilty by reason of insanity, in any jurisdiction, during the 10 years prior to being authorized to operate to or from the airport, or while authorized to operate to or from the airport, of those crimes specified in §108.229 (d) of this chapter;

(5) Not have a record on file with the FAA of:

(i) A violation of a prohibited area designated under part 73 of this chapter, a flight restriction established under §91.141 of this chapter, or special security instructions issued under §99.7 of this chapter; or

(ii) More than one violation of a restricted area designated under part 73 of this chapter, emergency air traffic rules issued under §91.139 of this chapter, a temporary flight restriction designated under §91.137, §91.138, or §91.145 of this chapter, an area designated under §91.143 of this chapter, or any combination thereof;

(6) Be authorized by the Administrator to conduct operations to or from the airport;

(7) Protect from unauthorized disclosure any identification information issued by the

Administrator for the conduct of operations to or from the airport;

(8) Operate an aircraft that is authorized by the Administrator for operations to or from the airport;

(9) File an IFR or VFR flight plan telephonically with Leesburg AFSS prior to departure and obtain an ATC clearance prior to entering the Washington, DC Metropolitan Area Special Flight Rules Area;

(10) Operate the aircraft in accordance with an open IFR or VFR flight plan while in the Washington, DC Metropolitan Area Special Flight Rules Area, unless otherwise authorized by ATC;

(11) Maintain two-way communications with an appropriate ATC facility while in the Washington, DC Metropolitan Area Special Flight Rules Area;

(12) Ensure that the aircraft is equipped with an operable transponder with altitude reporting capability and use an assigned discrete beacon code while operating in the Washington, DC Metropolitan Area Special Flight Rules Area;

(13) Comply with any instructions issued by ATC for the flight;

(14) Secure the aircraft after returning to the airport from any flight;

(15) Comply with all additional safety and security requirements specified in applicable NOTAMs; and

(16) Comply with any Transportation Security Administration, or law enforcement requirements to operate to or from the airport.

(c) A person may operate a U.S. Armed Forces, law enforcement, or aeromedical services aircraft to or from an affected airport provided the operator complies with paragraphs 3(b)(10) through 3(b)(16) of this SFAR and any additional procedures specified by the Administrator necessary to provide for the security of aircraft operations to or from the airport.

4. Airport Security Procedures.

(a) Airport security procedures submitted to the Administrator for approval must:

(1) Identify and provide contact information for the airport manager who is responsible for ensuring that the security procedures at the airport are implemented and maintained;

(2) Contain procedures to identify those aircraft eligible to be authorized for operations to or from the airport;

(3) Contain procedures to ensure that a current record of those persons authorized to conduct operations to or from the airport and the aircraft in which the person is authorized to conduct those operations is maintained at the airport;

(4) Contain airport arrival and departure route descriptions, air traffic control clearance procedures, flight plan requirements, communications procedures, and procedures for transponder use;

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(5) Contain procedures to monitor the security of aircraft at the airport during operational and non-operational hours and to alert aircraft owners and operators, airport operators, and the Administrator of unsecured aircraft;

(6) Contain procedures to ensure that security awareness procedures are implemented and maintained at the airport;

(7) Contain procedures to ensure that a copy of the approved security procedures is maintained at the airport and can be made available for inspection upon request of the Administrator;

(8) Contain procedures to provide the Administrator with the means necessary to make any inspection to determine compliance with the approved security procedures; and

(9) Contain any additional procedures necessary to provide for the security of aircraft operations to or from the airport.

(b) Airport security procedures are approved without an expiration date and remain in effect unless the Administrator makes a determination that operations at the airport have not been conducted in accordance with those procedures or that those procedures must be amended in accordance with paragraph 4.(a)(9) of this SFAR.

5. *Waivers.* The Administrator may permit an operation to or from an airport to which this SFAR applies, in deviation from the provisions of this SFAR if the Administrator finds that such action is in the public interest, provides the level of security required by this SFAR, and the operation can be conducted safely under the terms of the waiver.

6. *Delegation.* The authority of the Administrator under this SFAR is also exercised by the Associate Administrator for Civil Aviation Security and the Deputy Associate Administrator for Civil Aviation Security. This authority may be further delegated.

7. *Expiration.* This Special Federal Aviation Regulation shall remain in effect until February 13, 2003.

[Doc. No. FAA-2002-11580, 67 FR 7544, Feb. 19, 2002]

EFFECTIVE DATE NOTE: At 67 FR 7544, Feb. 19, 2002, SFAR No. 94 was added, effective Feb. 13, 2002, until Feb. 13, 2003.

Subpart A—General

SOURCE: Docket No. 18334, 54 FR 34292, Aug. 18, 1989, unless otherwise noted.

§91.1 Applicability.

(a) Except as provided in paragraphs (b) and (c) of this section and §§91.701 and 91.703, this part prescribes rules governing the operation of aircraft (other than moored balloons, kites, un-

manned rockets, and unmanned free balloons, which are governed by part 101 of this chapter, and ultralight vehicles operated in accordance with part 103 of this chapter) within the United States, including the waters within 3 nautical miles of the U.S. coast.

(b) Each person operating an aircraft in the airspace overlying the waters between 3 and 12 nautical miles from the coast of the United States shall comply with §§91.1 through 91.21; §§91.101 through 91.143; §§91.151 through 91.159; §§91.167 through 91.193; §91.203; §91.205; §§91.209 through 91.217; §91.221; §§91.303 through 91.319; §91.323; §91.605; §91.609; §§91.703 through 91.715; and 91.903.

(c) This part applies to each person on board an aircraft being operated under this part, unless otherwise specified.

[Doc. No. 18334, 54 FR 34292, Aug. 18, 1989, as amended by Amdt. 91-257, 64 FR 1079, Jan. 7, 1999]

§91.3 Responsibility and authority of the pilot in command.

(a) The pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft.

(b) In an in-flight emergency requiring immediate action, the pilot in command may deviate from any rule of this part to the extent required to meet that emergency.

(c) Each pilot in command who deviates from a rule under paragraph (b) of this section shall, upon the request of the Administrator, send a written report of that deviation to the Administrator.

(Approved by the Office of Management and Budget under control number 2120-0005)

§91.5 Pilot in command of aircraft requiring more than one required pilot.

No person may operate an aircraft that is type certificated for more than one required pilot flight crewmember unless the pilot in command meets the requirements of §61.58 of this chapter.

§91.7 Civil aircraft airworthiness.

(a) No person may operate a civil aircraft unless it is in an airworthy condition.

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(b) The pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when un-airworthy mechanical, electrical, or structural conditions occur.

§91.9 Civil aircraft flight manual, marking, and placard requirements.

(a) Except as provided in paragraph (d) of this section, no person may operate a civil aircraft without complying with the operating limitations specified in the approved Airplane or Rotorcraft Flight Manual, markings, and placards, or as otherwise prescribed by the certificating authority of the country of registry.

(b) No person may operate a U.S.-registered civil aircraft—

(1) For which an Airplane or Rotorcraft Flight Manual is required by §21.5 of this chapter unless there is available in the aircraft a current, approved Airplane or Rotorcraft Flight Manual or the manual provided for in §121.141(b); and

(2) For which an Airplane or Rotorcraft Flight Manual is not required by §21.5 of this chapter, unless there is available in the aircraft a current approved Airplane or Rotorcraft Flight Manual, approved manual material, markings, and placards, or any combination thereof.

(c) No person may operate a U.S.-registered civil aircraft unless that aircraft is identified in accordance with part 45 of this chapter.

(d) Any person taking off or landing a helicopter certificated under part 29 of this chapter at a heliport constructed over water may make such momentary flight as is necessary for takeoff or landing through the prohibited range of the limiting height-speed envelope established for the helicopter if that flight through the prohibited range takes place over water on which a safe ditching can be accomplished and if the helicopter is amphibious or is equipped with floats or other emergency flotation gear adequate to accomplish a safe emergency ditching on open water.

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§91.11 Prohibition on interference with crewmembers.

No person may assault, threaten, intimidate, or interfere with a crewmember in the performance of the crewmember's duties aboard an aircraft being operated.

§91.13 Careless or reckless operation.

(a) *Aircraft operations for the purpose of air navigation.* No person may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another.

(b) *Aircraft operations other than for the purpose of air navigation.* No person may operate an aircraft, other than for the purpose of air navigation, on any part of the surface of an airport used by aircraft for air commerce (including areas used by those aircraft for receiving or discharging persons or cargo), in a careless or reckless manner so as to endanger the life or property of another.

§91.15 Dropping objects.

No pilot in command of a civil aircraft may allow any object to be dropped from that aircraft in flight that creates a hazard to persons or property. However, this section does not prohibit the dropping of any object if reasonable precautions are taken to avoid injury or damage to persons or property.

§91.17 Alcohol or drugs.

(a) No person may act or attempt to act as a crewmember of a civil aircraft—

(1) Within 8 hours after the consumption of any alcoholic beverage;

(2) While under the influence of alcohol;

(3) While using any drug that affects the person's faculties in any way contrary to safety; or

(4) While having .04 percent by weight or more alcohol in the blood.

(b) Except in an emergency, no pilot of a civil aircraft may allow a person who appears to be intoxicated or who demonstrates by manner or physical indications that the individual is under the influence of drugs (except a medical patient under proper care) to be carried in that aircraft.

(c) A crewmember shall do the following:

(1) On request of a law enforcement officer, submit to a test to indicate the percentage by weight of alcohol in the blood, when—

(i) The law enforcement officer is authorized under State or local law to conduct the test or to have the test conducted; and

(ii) The law enforcement officer is requesting submission to the test to investigate a suspected violation of State or local law governing the same or substantially similar conduct prohibited by paragraph (a)(1), (a)(2), or (a)(4) of this section.

(2) Whenever the Administrator has a reasonable basis to believe that a person may have violated paragraph (a)(1), (a)(2), or (a)(4) of this section, that person shall, upon request by the Administrator, furnish the Administrator, or authorize any clinic, hospital, doctor, or other person to release to the Administrator, the results of each test taken within 4 hours after acting or attempting to act as a crewmember that indicates percentage by weight of alcohol in the blood.

(d) Whenever the Administrator has a reasonable basis to believe that a person may have violated paragraph (a)(3) of this section, that person shall, upon request by the Administrator, furnish the Administrator, or authorize any clinic, hospital, doctor, or other person to release to the Administrator, the results of each test taken within 4 hours after acting or attempting to act as a crewmember that indicates the presence of any drugs in the body.

(e) Any test information obtained by the Administrator under paragraph (c) or (d) of this section may be evaluated in determining a person's qualifications for any airman certificate or possible violations of this chapter and may be used as evidence in any legal proceeding under section 602, 609, or 901 of the Federal Aviation Act of 1958.

§91.19 Carriage of narcotic drugs, marihuana, and depressant or stimulant drugs or substances.

(a) Except as provided in paragraph (b) of this section, no person may operate a civil aircraft within the United States with knowledge that narcotic

drugs, marihuana, and depressant or stimulant drugs or substances as defined in Federal or State statutes are carried in the aircraft.

(b) Paragraph (a) of this section does not apply to any carriage of narcotic drugs, marihuana, and depressant or stimulant drugs or substances authorized by or under any Federal or State statute or by any Federal or State agency.

§91.21 Portable electronic devices.

(a) Except as provided in paragraph (b) of this section, no person may operate, nor may any operator or pilot in command of an aircraft allow the operation of, any portable electronic device on any of the following U.S.-registered civil aircraft:

(1) Aircraft operated by a holder of an air carrier operating certificate or an operating certificate; or

(2) Any other aircraft while it is operated under IFR.

(b) Paragraph (a) of this section does not apply to—

(1) Portable voice recorders;

(2) Hearing aids;

(3) Heart pacemakers;

(4) Electric shavers; or

(5) Any other portable electronic device that the operator of the aircraft has determined will not cause interference with the navigation or communication system of the aircraft on which it is to be used.

(c) In the case of an aircraft operated by a holder of an air carrier operating certificate or an operating certificate, the determination required by paragraph (b)(5) of this section shall be made by that operator of the aircraft on which the particular device is to be used. In the case of other aircraft, the determination may be made by the pilot in command or other operator of the aircraft.

§91.23 Truth-in-leasing clause requirement in leases and conditional sales contracts.

(a) Except as provided in paragraph (b) of this section, the parties to a lease or contract of conditional sale involving a U.S.-registered large civil aircraft and entered into after January 2, 1973, shall execute a written lease or contract and include therein a written

truth-in-leasing clause as a concluding paragraph in large print, immediately preceding the space for the signature of the parties, which contains the following with respect to each such aircraft:

(1) Identification of the Federal Aviation Regulations under which the aircraft has been maintained and inspected during the 12 months preceding the execution of the lease or contract of conditional sale, and certification by the parties thereto regarding the aircraft's status of compliance with applicable maintenance and inspection requirements in this part for the operation to be conducted under the lease or contract of conditional sale.

(2) The name and address (printed or typed) and the signature of the person responsible for operational control of the aircraft under the lease or contract of conditional sale, and certification that each person understands that person's responsibilities for compliance with applicable Federal Aviation Regulations.

(3) A statement that an explanation of factors bearing on operational control and pertinent Federal Aviation Regulations can be obtained from the nearest FAA Flight Standards district office.

(b) The requirements of paragraph (a) of this section do not apply—

(1) To a lease or contract of conditional sale when—

(i) The party to whom the aircraft is furnished is a foreign air carrier or certificate holder under part 121, 125, 135, or 141 of this chapter, or

(ii) The party furnishing the aircraft is a foreign air carrier or a person operating under part 121, 125, and 141 of this chapter, or a person operating under part 135 of this chapter having authority to engage in on-demand operations with large aircraft.

(2) To a contract of conditional sale, when the aircraft involved has not been registered anywhere prior to the execution of the contract, except as a new aircraft under a dealer's aircraft registration certificate issued in accordance with §47.61 of this chapter.

(c) No person may operate a large civil aircraft of U.S. registry that is subject to a lease or contract of condi-

tional sale to which paragraph (a) of this section applies, unless—

(1) The lessee or conditional buyer, or the registered owner if the lessee is not a citizen of the United States, has mailed a copy of the lease or contract that complies with the requirements of paragraph (a) of this section, within 24 hours of its execution, to the Aircraft Registration Branch, Attn: Technical Section, P.O. Box 25724, Oklahoma City, OK 73125;

(2) A copy of the lease or contract that complies with the requirements of paragraph (a) of this section is carried in the aircraft. The copy of the lease or contract shall be made available for review upon request by the Administrator, and

(3) The lessee or conditional buyer, or the registered owner if the lessee is not a citizen of the United States, has notified by telephone or in person the FAA Flight Standards district office nearest the airport where the flight will originate. Unless otherwise authorized by that office, the notification shall be given at least 48 hours before takeoff in the case of the first flight of that aircraft under that lease or contract and inform the FAA of—

(i) The location of the airport of departure;

(ii) The departure time; and

(iii) The registration number of the aircraft involved.

(d) The copy of the lease or contract furnished to the FAA under paragraph (c) of this section is commercial or financial information obtained from a person. It is, therefore, privileged and confidential and will not be made available by the FAA for public inspection or copying under 5 U.S.C. 552(b)(4) unless recorded with the FAA under part 49 of this chapter.

(e) For the purpose of this section, a lease means any agreement by a person to furnish an aircraft to another person for compensation or hire, whether with or without flight crewmembers, other than an agreement for the sale of an aircraft and a contract of conditional sale under section 101 of the Federal Aviation Act of 1958. The person furnishing the aircraft is referred to as

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the lessor, and the person to whom it is furnished the lessee.

(Approved by the Office of Management and Budget under control number 2120-0005)

[Doc. No. 18334, 54 FR 34292, Aug. 18, 1989, as amended by Amdt. 91-212, 54 FR 39293, Sept. 25, 1989; Amdt. 91-253, 62 FR 13253, Mar. 19, 1997; Amdt. 91-267, 66 FR 21066, Apr. 27, 2001]

§ 91.25 Aviation Safety Reporting Program: Prohibition against use of reports for enforcement purposes.

The Administrator of the FAA will not use reports submitted to the National Aeronautics and Space Administration under the Aviation Safety Reporting Program (or information derived therefrom) in any enforcement action except information concerning accidents or criminal offenses which are wholly excluded from the Program.

§§ 91.27-91.99 [Reserved]

Subpart B—Flight Rules

SOURCE: Docket No. 18334, 54 FR 34294, Aug. 18, 1989, unless otherwise noted.

GENERAL

§ 91.101 Applicability.

This subpart prescribes flight rules governing the operation of aircraft within the United States and within 12 nautical miles from the coast of the United States.

§ 91.103 Preflight action.

Each pilot in command shall, before beginning a flight, become familiar with all available information concerning that flight. This information must include—

(a) For a flight under IFR or a flight not in the vicinity of an airport, weather reports and forecasts, fuel requirements, alternatives available if the planned flight cannot be completed, and any known traffic delays of which the pilot in command has been advised by ATC;

(b) For any flight, runway lengths at airports of intended use, and the following takeoff and landing distance information:

(1) For civil aircraft for which an approved Airplane or Rotorcraft Flight Manual containing takeoff and landing

distance data is required, the takeoff and landing distance data contained therein; and

(2) For civil aircraft other than those specified in paragraph (b)(1) of this section, other reliable information appropriate to the aircraft, relating to aircraft performance under expected values of airport elevation and runway slope, aircraft gross weight, and wind and temperature.

§ 91.105 Flight crewmembers at stations.

(a) During takeoff and landing, and while en route, each required flight crewmember shall—

(1) Be at the crewmember station unless the absence is necessary to perform duties in connection with the operation of the aircraft or in connection with physiological needs; and

(2) Keep the safety belt fastened while at the crewmember station.

(b) Each required flight crewmember of a U.S.-registered civil aircraft shall, during takeoff and landing, keep his or her shoulder harness fastened while at his or her assigned duty station. This paragraph does not apply if—

(1) The seat at the crewmember's station is not equipped with a shoulder harness; or

(2) The crewmember would be unable to perform required duties with the shoulder harness fastened.

[Doc. No. 18334, 54 FR 34294, Aug. 18, 1989, as amended by Amdt. 91-231, 57 FR 42671, Sept. 15, 1992]

§ 91.107 Use of safety belts, shoulder harnesses, and child restraint systems.

(a) Unless otherwise authorized by the Administrator—

(1) No pilot may take off a U.S.-registered civil aircraft (except a free balloon that incorporates a basket or gondola, or an airship type certificated before November 2, 1987) unless the pilot in command of that aircraft ensures that each person on board is briefed on how to fasten and unfasten that person's safety belt and, if installed, shoulder harness.

(2) No pilot may cause to be moved on the surface, take off, or land a U.S.-registered civil aircraft (except a free balloon that incorporates a basket or

gondola, or an airship type certificated before November 2, 1987) unless the pilot in command of that aircraft ensures that each person on board has been notified to fasten his or her safety belt and, if installed, his or her shoulder harness.

(3) Except as provided in this paragraph, each person on board a U.S.-registered civil aircraft (except a free balloon that incorporates a basket or gondola or an airship type certificated before November 2, 1987) must occupy an approved seat or berth with a safety belt and, if installed, shoulder harness, properly secured about him or her during movement on the surface, takeoff, and landing. For seaplane and float equipped rotorcraft operations during movement on the surface, the person pushing off the seaplane or rotorcraft from the dock and the person mooring the seaplane or rotorcraft at the dock are excepted from the preceding seating and safety belt requirements. Notwithstanding the preceding requirements of this paragraph, a person may:

(i) Be held by an adult who is occupying an approved seat or berth, provided that the person being held has not reached his or her second birthday and does not occupy or use any restraining device;

(ii) Use the floor of the aircraft as a seat, provided that the person is on board for the purpose of engaging in sport parachuting; or

(iii) Notwithstanding any other requirement of this chapter, occupy an approved child restraint system furnished by the operator or one of the persons described in paragraph (a)(3)(iii)(A) of this section provided that:

(A) The child is accompanied by a parent, guardian, or attendant designated by the child's parent or guardian to attend to the safety of the child during the flight;

(B) Except as provided in paragraph (a)(3)(iii)(B)(4) of this section, the approved child restraint system bears one or more labels as follows:

(1) Seats manufactured to U.S. standards between January 1, 1981, and February 25, 1985, must bear the label: "This child restraint system conforms to all applicable Federal motor vehicle safety standards";

(2) Seats manufactured to U.S. standards on or after February 26, 1985, must bear two labels:

(i) "This child restraint system conforms to all applicable Federal motor vehicle safety standards"; and

(ii) "THIS RESTRAINT IS CERTIFIED FOR USE IN MOTOR VEHICLES AND AIRCRAFT" in red lettering;

(3) Seats that do not qualify under paragraphs (a)(3)(iii)(B)(1) and (a)(3)(iii)(B)(2) of this section must bear either a label showing approval of a foreign government or a label showing that the seat was manufactured under the standards of the United Nations;

(4) Notwithstanding any other provision of this section, booster-type child restraint systems (as defined in Federal Motor Vehicle Safety Standard No. 213 (49 CFR 571.213)), vest- and harness-type child restraint systems, and lap held child restraints are not approved for use in aircraft; and

(C) The operator complies with the following requirements:

(1) The restraint system must be properly secured to an approved forward-facing seat or berth;

(2) The child must be properly secured in the restraint system and must not exceed the specified weight limit for the restraint system; and

(3) The restraint system must bear the appropriate label(s).

(b) Unless otherwise stated, this section does not apply to operations conducted under part 121, 125, or 135 of this chapter. Paragraph (a)(3) of this section does not apply to persons subject to §91.105.

[Doc. No. 26142, 57 FR 42671, Sept. 15, 1992, as amended by Amdt. 91-250, 61 FR 28421, June 4, 1996]

§91.109 Flight instruction; Simulated instrument flight and certain flight tests.

(a) No person may operate a civil aircraft (except a manned free balloon) that is being used for flight instruction unless that aircraft has fully functioning dual controls. However, instrument flight instruction may be given in a single-engine airplane equipped with a single, functioning throwover control wheel in place of fixed, dual

controls of the elevator and ailerons when—

(1) The instructor has determined that the flight can be conducted safely; and

(2) The person manipulating the controls has at least a private pilot certificate with appropriate category and class ratings.

(b) No person may operate a civil aircraft in simulated instrument flight unless—

(1) The other control seat is occupied by a safety pilot who possesses at least a private pilot certificate with category and class ratings appropriate to the aircraft being flown.

(2) The safety pilot has adequate vision forward and to each side of the aircraft, or a competent observer in the aircraft adequately supplements the vision of the safety pilot; and

(3) Except in the case of lighter-than-air aircraft, that aircraft is equipped with fully functioning dual controls. However, simulated instrument flight may be conducted in a single-engine airplane, equipped with a single, functioning, throwover control wheel, in place of fixed, dual controls of the elevator and ailerons, when—

(i) The safety pilot has determined that the flight can be conducted safely; and

(ii) The person manipulating the controls has at least a private pilot certificate with appropriate category and class ratings.

(c) No person may operate a civil aircraft that is being used for a flight test for an airline transport pilot certificate or a class or type rating on that certificate, or for a part 121 proficiency flight test, unless the pilot seated at the controls, other than the pilot being checked, is fully qualified to act as pilot in command of the aircraft.

§ 91.111 Operating near other aircraft.

(a) No person may operate an aircraft so close to another aircraft as to create a collision hazard.

(b) No person may operate an aircraft in formation flight except by arrangement with the pilot in command of each aircraft in the formation.

(c) No person may operate an aircraft, carrying passengers for hire, in formation flight.

§ 91.113 Right-of-way rules: Except water operations.

(a) *Inapplicability.* This section does not apply to the operation of an aircraft on water.

(b) *General.* When weather conditions permit, regardless of whether an operation is conducted under instrument flight rules or visual flight rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft. When a rule of this section gives another aircraft the right-of-way, the pilot shall give way to that aircraft and may not pass over, under, or ahead of it unless well clear.

(c) *In distress.* An aircraft in distress has the right-of-way over all other air traffic.

(d) *Converging.* When aircraft of the same category are converging at approximately the same altitude (except head-on, or nearly so), the aircraft to the other's right has the right-of-way. If the aircraft are of different categories—

(1) A balloon has the right-of-way over any other category of aircraft;

(2) A glider has the right-of-way over an airship, airplane, or rotorcraft; and

(3) An airship has the right-of-way over an airplane or rotorcraft.

However, an aircraft towing or refueling other aircraft has the right-of-way over all other engine-driven aircraft.

(e) *Approaching head-on.* When aircraft are approaching each other head-on, or nearly so, each pilot of each aircraft shall alter course to the right.

(f) *Overtaking.* Each aircraft that is being overtaken has the right-of-way and each pilot of an overtaking aircraft shall alter course to the right to pass well clear.

(g) *Landing.* Aircraft, while on final approach to land or while landing, have the right-of-way over other aircraft in flight or operating on the surface, except that they shall not take advantage of this rule to force an aircraft off the runway surface which has already landed and is attempting to make way for an aircraft on final approach. When two or more aircraft are approaching an airport for the purpose of landing, the aircraft at the lower altitude has the right-of-way, but it shall not take advantage of this rule to cut in front of

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another which is on final approach to land or to overtake that aircraft.

§91.115 Right-of-way rules: Water operations.

(a) *General.* Each person operating an aircraft on the water shall, insofar as possible, keep clear of all vessels and avoid impeding their navigation, and shall give way to any vessel or other aircraft that is given the right-of-way by any rule of this section.

(b) *Crossing.* When aircraft, or an aircraft and a vessel, are on crossing courses, the aircraft or vessel to the other's right has the right-of-way.

(c) *Approaching head-on.* When aircraft, or an aircraft and a vessel, are approaching head-on, or nearly so, each shall alter its course to the right to keep well clear.

(d) *Overtaking.* Each aircraft or vessel that is being overtaken has the right-of-way, and the one overtaking shall alter course to keep well clear.

(e) *Special circumstances.* When aircraft, or an aircraft and a vessel, approach so as to involve risk of collision, each aircraft or vessel shall proceed with careful regard to existing circumstances, including the limitations of the respective craft.

§91.117 Aircraft speed.

(a) Unless otherwise authorized by the Administrator, no person may operate an aircraft below 10,000 feet MSL at an indicated airspeed of more than 250 knots (288 m.p.h.).

(b) Unless otherwise authorized or required by ATC, no person may operate an aircraft at or below 2,500 feet above the surface within 4 nautical miles of the primary airport of a Class C or Class D airspace area at an indicated airspeed of more than 200 knots (230 mph.). This paragraph (b) does not apply to any operations within a Class B airspace area. Such operations shall comply with paragraph (a) of this section.

(c) No person may operate an aircraft in the airspace underlying a Class B airspace area designated for an airport or in a VFR corridor designated through such a Class B airspace area, at an indicated airspeed of more than 200 knots (230 mph).

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(d) If the minimum safe airspeed for any particular operation is greater than the maximum speed prescribed in this section, the aircraft may be operated at that minimum speed.

[Doc. No. 18334, 54 FR 34292, Aug. 18, 1989, as amended by Amdt. 91-219, 55 FR 34708, Aug. 24, 1990; Amdt. 91-227, 56 FR 65657, Dec. 17, 1991; Amdt. 91-233, 58 FR 43554, Aug. 17, 1993]

§91.119 Minimum safe altitudes: General.

Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

(a) *Anywhere.* An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.

(b) *Over congested areas.* Over any congested area of a city, town, or settlement, or over any open air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.

(c) *Over other than congested areas.* An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

(d) *Helicopters.* Helicopters may be operated at less than the minimums prescribed in paragraph (b) or (c) of this section if the operation is conducted without hazard to persons or property on the surface. In addition, each person operating a helicopter shall comply with any routes or altitudes specifically prescribed for helicopters by the Administrator.

§91.121 Altimeter settings.

(a) Each person operating an aircraft shall maintain the cruising altitude or flight level of that aircraft, as the case may be, by reference to an altimeter that is set, when operating—

(1) Below 18,000 feet MSL, to—

(i) The current reported altimeter setting of a station along the route and within 100 nautical miles of the aircraft;

(ii) If there is no station within the area prescribed in paragraph (a)(1)(i) of

this section, the current reported altimeter setting of an appropriate available station; or

(iii) In the case of an aircraft not equipped with a radio, the elevation of the departure airport or an appropriate altimeter setting available before departure; or

(2) At or above 18,000 feet MSL, to 29.92" Hg.

(b) The lowest usable flight level is determined by the atmospheric pressure in the area of operation as shown in the following table:

Current altimeter setting	Lowest usable flight level
29.92 (or higher)	180
29.91 through 29.42	185
29.41 through 28.92	190
28.91 through 28.42	195
28.41 through 27.92	200
27.91 through 27.42	205
27.41 through 26.92	210

(c) To convert minimum altitude prescribed under §§91.119 and 91.177 to the minimum flight level, the pilot shall take the flight level equivalent of the minimum altitude in feet and add the appropriate number of feet specified below, according to the current reported altimeter setting:

Current altimeter setting	Adjustment factor
29.92 (or higher)	None
29.91 through 29.42	500
29.41 through 28.92	1,000
28.91 through 28.42	1,500
28.41 through 27.92	2,000
27.91 through 27.42	2,500
27.41 through 26.92	3,000

§ 91.123 Compliance with ATC clearances and instructions.

(a) When an ATC clearance has been obtained, no pilot in command may deviate from that clearance unless an amended clearance is obtained, an emergency exists, or the deviation is in response to a traffic alert and collision avoidance system resolution advisory. However, except in Class A airspace, a pilot may cancel an IFR flight plan if the operation is being conducted in VFR weather conditions. When a pilot is uncertain of an ATC clearance, that pilot shall immediately request clarification from ATC.

(b) Except in an emergency, no person may operate an aircraft contrary to an ATC instruction in an area in which air traffic control is exercised.

(c) Each pilot in command who, in an emergency, or in response to a traffic alert and collision avoidance system resolution advisory, deviates from an ATC clearance or instruction shall notify ATC of that deviation as soon as possible.

(d) Each pilot in command who (though not deviating from a rule of this subpart) is given priority by ATC in an emergency, shall submit a detailed report of that emergency within 48 hours to the manager of that ATC facility, if requested by ATC.

(e) Unless otherwise authorized by ATC, no person operating an aircraft may operate that aircraft according to any clearance or instruction that has been issued to the pilot of another aircraft for radar air traffic control purposes.

(Approved by the Office of Management and Budget under control number 2120-0005)

[Doc. No. 18834, 54 FR 34294, Aug. 18, 1989, as amended by Amdt. 91-227, 56 FR 65658, Dec. 17, 1991; Amdt. 91-244, 60 FR 50679, Sept. 29, 1995]

§ 91.125 ATC light signals.

ATC light signals have the meaning shown in the following table:

Color and type of signal	Meaning with respect to aircraft on the surface	Meaning with respect to aircraft in flight
Steady green	Cleared for takeoff	Cleared to land.
Flashing green	Cleared to taxi	Return for landing (to be followed by steady green at proper time).
Steady red	Stop	Give way to other aircraft and continue circling.
Flashing red	Taxi clear of runway in use.	Airport unsafe—do not land.
Flashing white	Return to starting point on airport.	Not applicable.
Alternating red and green.	Exercise extreme caution.	Exercise extreme caution.

§ 91.126 Operating on or in the vicinity of an airport in Class G airspace.

(a) *General.* Unless otherwise authorized or required, each person operating an aircraft on or in the vicinity of an airport in a Class G airspace area must comply with the requirements of this section.

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(b) *Direction of turns.* When approaching to land at an airport without an operating control tower in Class G airspace—

(1) Each pilot of an airplane must make all turns of that airplane to the left unless the airport displays approved light signals or visual markings indicating that turns should be made to the right, in which case the pilot must make all turns to the right; and

(2) Each pilot of a helicopter must avoid the flow of fixed-wing aircraft.

(c) *Flap settings.* Except when necessary for training or certification, the pilot in command of a civil turbojet-powered aircraft must use, as a final flap setting, the minimum certificated landing flap setting set forth in the approved performance information in the Airplane Flight Manual for the applicable conditions. However, each pilot in command has the final authority and responsibility for the safe operation of the pilot's airplane, and may use a different flap setting for that airplane if the pilot determines that it is necessary in the interest of safety.

(d) *Communications with control towers.* Unless otherwise authorized or required by ATC, no person may operate an aircraft to, from, through, or on an airport having an operational control tower unless two-way radio communications are maintained between that aircraft and the control tower. Communications must be established prior to 4 nautical miles from the airport, up to and including 2,500 feet AGL. However, if the aircraft radio fails in flight, the pilot in command may operate that aircraft and land if weather conditions are at or above basic VFR weather minimums, visual contact with the tower is maintained, and a clearance to land is received. If the aircraft radio fails while in flight under IFR, the pilot must comply with §91.185.

[Doc. No. 24458, 56 FR 65658, Dec. 17, 1991, as amended by Amdt. 91-239, 59 FR 11693, Mar. 11, 1994]

§91.127 Operating on or in the vicinity of an airport in Class E airspace.

(a) Unless otherwise required by part 93 of this chapter or unless otherwise authorized or required by the ATC facility having jurisdiction over the Class E airspace area, each person op-

erating an aircraft on or in the vicinity of an airport in a Class E airspace area must comply with the requirements of §91.126.

(b) *Departures.* Each pilot of an aircraft must comply with any traffic patterns established for that airport in part 93 of this chapter.

(c) *Communications with control towers.* Unless otherwise authorized or required by ATC, no person may operate an aircraft to, from, through, or on an airport having an operational control tower unless two-way radio communications are maintained between that aircraft and the control tower. Communications must be established prior to 4 nautical miles from the airport, up to and including 2,500 feet AGL. However, if the aircraft radio fails in flight, the pilot in command may operate that aircraft and land if weather conditions are at or above basic VFR weather minimums, visual contact with the tower is maintained, and a clearance to land is received. If the aircraft radio fails while in flight under IFR, the pilot must comply with §91.185.

[Doc. No. 24458, 56 FR 65658, Dec. 17, 1991, as amended by Amdt. 91-239, 59 FR 11693, Mar. 11, 1994]

§91.129 Operations in Class D airspace.

(a) *General.* Unless otherwise authorized or required by the ATC facility having jurisdiction over the Class D airspace area, each person operating an aircraft in Class D airspace must comply with the applicable provisions of this section. In addition, each person must comply with §§91.126 and 91.127. For the purpose of this section, the primary airport is the airport for which the Class D airspace area is designated. A satellite airport is any other airport within the Class D airspace area.

(b) *Deviations.* An operator may deviate from any provision of this section under the provisions of an ATC authorization issued by the ATC facility having jurisdiction over the airspace concerned. ATC may authorize a deviation on a continuing basis or for an individual flight, as appropriate.

(c) *Communications.* Each person operating an aircraft in Class D airspace must meet the following two-way radio communications requirements:

(1) *Arrival or through flight.* Each person must establish two-way radio communications with the ATC facility (including foreign ATC in the case of foreign airspace designated in the United States) providing air traffic services prior to entering that airspace and thereafter maintain those communications while within that airspace.

(2) *Departing flight.* Each person—

(i) From the primary airport or satellite airport with an operating control tower must establish and maintain two-way radio communications with the control tower, and thereafter as instructed by ATC while operating in the Class D airspace area; or

(ii) From a satellite airport without an operating control tower, must establish and maintain two-way radio communications with the ATC facility having jurisdiction over the Class D airspace area as soon as practicable after departing.

(d) *Communications failure.* Each person who operates an aircraft in a Class D airspace area must maintain two-way radio communications with the ATC facility having jurisdiction over that area.

(1) If the aircraft radio fails in flight under IFR, the pilot must comply with § 91.185 of the part.

(2) If the aircraft radio fails in flight under VFR, the pilot in command may operate that aircraft and land if—

(i) Weather conditions are at or above basic VFR weather minimums;

(ii) Visual contact with the tower is maintained; and

(iii) A clearance to land is received.

(e) *Minimum Altitudes.* When operating to an airport in Class D airspace, each pilot of—

(1) A large or turbine-powered airplane shall, unless otherwise required by the applicable distance from cloud criteria, enter the traffic pattern at an altitude of at least 1,500 feet above the elevation of the airport and maintain at least 1,500 feet until further descent is required for a safe landing;

(2) A large or turbine-powered airplane approaching to land on a runway served by an instrument landing system (ILS), if the airplane is ILS equipped, shall fly that airplane at an altitude at or above the glide slope between the outer marker (or point of

interception of glide slope, if compliance with the applicable distance from cloud criteria requires interception closer in) and the middle marker; and

(3) An airplane approaching to land on a runway served by a visual approach slope indicator shall maintain an altitude at or above the glide slope until a lower altitude is necessary for a safe landing.

Paragraphs (e)(2) and (e)(3) of this section do not prohibit normal bracketing maneuvers above or below the glide slope that are conducted for the purpose of remaining on the glide slope.

(f) *Approaches.* Except when conducting a circling approach under part 97 of this chapter or unless otherwise required by ATC, each pilot must—

(1) Circle the airport to the left, if operating an airplane; or

(2) Avoid the flow of fixed-wing aircraft, if operating a helicopter.

(g) *Departures.* No person may operate an aircraft departing from an airport except in compliance with the following:

(1) Each pilot must comply with any departure procedures established for that airport by the FAA.

(2) Unless otherwise required by the prescribed departure procedure for that airport or the applicable distance from clouds criteria, each pilot of a turbine-powered airplane and each pilot of a large airplane must climb to an altitude of 1,500 feet above the surface as rapidly as practicable.

(h) *Noise abatement.* Where a formal runway use program has been established by the FAA, each pilot of a large or turbine-powered airplane assigned a noise abatement runway by ATC must use that runway. However, consistent with the final authority of the pilot in command concerning the safe operation of the aircraft as prescribed in § 91.3(a), ATC may assign a different runway if requested by the pilot in the interest of safety.

(i) *Takeoff, landing, taxi clearance.* No person may, at any airport with an operating control tower, operate an aircraft on a runway or taxiway, or take off or land an aircraft, unless an appropriate clearance is received from ATC. A clearance to “taxi to” the takeoff runway assigned to the aircraft is not a

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clearance to cross that assigned take-off runway, or to taxi on that runway at any point, but is a clearance to cross other runways that intersect the taxi route to that assigned takeoff runway. A clearance to “taxi to” any point other than an assigned takeoff runway is clearance to cross all runways that intersect the taxi route to that point.

[Doc. No. 24458, 56 FR 65658, Dec. 17, 1991, as amended by Amdt. 91–234, 58 FR 48793, Sept. 20, 1993]

§91.130 Operations in Class C airspace.

(a) *General.* Unless otherwise authorized by ATC, each aircraft operation in Class C airspace must be conducted in compliance with this section and §91.129. For the purpose of this section, the primary airport is the airport for which the Class C airspace area is designated. A satellite airport is any other airport within the Class C airspace area.

(b) *Traffic patterns.* No person may take off or land an aircraft at a satellite airport within a Class C airspace area except in compliance with FAA arrival and departure traffic patterns.

(c) *Communications.* Each person operating an aircraft in Class C airspace must meet the following two-way radio communications requirements:

(1) *Arrival or through flight.* Each person must establish two-way radio communications with the ATC facility (including foreign ATC in the case of foreign airspace designated in the United States) providing air traffic services prior to entering that airspace and thereafter maintain those communications while within that airspace.

(2) *Departing flight.* Each person—

(i) From the primary airport or satellite airport with an operating control tower must establish and maintain two-way radio communications with the control tower, and thereafter as instructed by ATC while operating in the Class C airspace area; or

(ii) From a satellite airport without an operating control tower, must establish and maintain two-way radio communications with the ATC facility having jurisdiction over the Class C airspace area as soon as practicable after departing.

(d) *Equipment requirements.* Unless otherwise authorized by the ATC having jurisdiction over the Class C airspace area, no person may operate an aircraft within a Class C airspace area designated for an airport unless that aircraft is equipped with the applicable equipment specified in §91.215.

(e) *Deviations.* An operator may deviate from any provision of this section under the provisions of an ATC authorization issued by the ATC facility having jurisdiction over the airspace concerned. ATC may authorize a deviation on a continuing basis or for an individual flight, as appropriate.

[Doc. No. 24458, 56 FR 65659, Dec. 17, 1991, as amended by Amdt. 91–232, 58 FR 40736, July 30, 1993; Amdt. 91–239, 59 FR 11693, Mar. 11, 1994]

§91.131 Operations in Class B airspace.

(a) *Operating rules.* No person may operate an aircraft within a Class B airspace area except in compliance with §91.129 and the following rules:

(1) The operator must receive an ATC clearance from the ATC facility having jurisdiction for that area before operating an aircraft in that area.

(2) Unless otherwise authorized by ATC, each person operating a large turbine engine-powered airplane to or from a primary airport for which a Class B airspace area is designated must operate at or above the designated floors of the Class B airspace area while within the lateral limits of that area.

(3) Any person conducting pilot training operations at an airport within a Class B airspace area must comply with any procedures established by ATC for such operations in that area.

(b) *Pilot requirements.* (1) No person may take off or land a civil aircraft at an airport within a Class B airspace area or operate a civil aircraft within a Class B airspace area unless—

(i) The pilot in command holds at least a private pilot certificate; or

(ii) The aircraft is operated by a student pilot or recreational pilot who seeks private pilot certification and has met the requirements of §61.95 of this chapter.

(2) Notwithstanding the provisions of paragraph (b)(1)(ii) of this section, no

person may take off or land a civil aircraft at those airports listed in section 4 of appendix D of this part unless the pilot in command holds at least a private pilot certificate.

(c) *Communications and navigation equipment requirements.* Unless otherwise authorized by ATC, no person may operate an aircraft within a Class B airspace area unless that aircraft is equipped with—

(1) *For IFR operation.* An operable VOR or TACAN receiver; and

(2) *For all operations.* An operable two-way radio capable of communications with ATC on appropriate frequencies for that Class B airspace area.

(d) *Transponder requirements.* No person may operate an aircraft in a Class B airspace area unless the aircraft is equipped with the applicable operating transponder and automatic altitude reporting equipment specified in paragraph (a) of § 91.215, except as provided in paragraph (d) of that section.

[Doc. No. 24458, 56 FR 65658, Dec. 17, 1991]

§ 91.133 Restricted and prohibited areas.

(a) No person may operate an aircraft within a restricted area (designated in part 73) contrary to the restrictions imposed, or within a prohibited area, unless that person has the permission of the using or controlling agency, as appropriate.

(b) Each person conducting, within a restricted area, an aircraft operation (approved by the using agency) that creates the same hazards as the operations for which the restricted area was designated may deviate from the rules of this subpart that are not compatible with the operation of the aircraft.

§ 91.135 Operations in Class A airspace.

Except as provided in paragraph (d) of this section, each person operating an aircraft in Class A airspace must conduct that operation under instrument flight rules (IFR) and in compliance with the following:

(a) *Clearance.* Operations may be conducted only under an ATC clearance received prior to entering the airspace.

(b) *Communications.* Unless otherwise authorized by ATC, each aircraft oper-

ating in Class A airspace must be equipped with a two-way radio capable of communicating with ATC on a frequency assigned by ATC. Each pilot must maintain two-way radio communications with ATC while operating in Class A airspace.

(c) *Transponder requirement.* Unless otherwise authorized by ATC, no person may operate an aircraft within Class A airspace unless that aircraft is equipped with the applicable equipment specified in § 91.215.

(d) *ATC authorizations.* An operator may deviate from any provision of this section under the provisions of an ATC authorization issued by the ATC facility having jurisdiction of the airspace concerned. In the case of an inoperative transponder, ATC may immediately approve an operation within a Class A airspace area allowing flight to continue, if desired, to the airport of ultimate destination, including any intermediate stops, or to proceed to a place where suitable repairs can be made, or both. Requests for deviation from any provision of this section must be submitted in writing, at least 4 days before the proposed operation. ATC may authorize a deviation on a continuing basis or for an individual flight.

[Doc. No. 24458, 56 FR 65659, Dec. 17, 1991]

§ 91.137 Temporary flight restrictions in the vicinity of disaster/hazard areas.

(a) The Administrator will issue a Notice to Airmen (NOTAM) designating an area within which temporary flight restrictions apply and specifying the hazard or condition requiring their imposition, whenever he determines it is necessary in order to—

(1) Protect persons and property on the surface or in the air from a hazard associated with an incident on the surface;

(2) Provide a safe environment for the operation of disaster relief aircraft; or

(3) Prevent an unsafe congestion of sightseeing and other aircraft above an incident or event which may generate a high degree of public interest.

The Notice to Airmen will specify the hazard or condition that requires the

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imposition of temporary flight restrictions.

(b) When a NOTAM has been issued under paragraph (a)(1) of this section, no person may operate an aircraft within the designated area unless that aircraft is participating in the hazard relief activities and is being operated under the direction of the official in charge of on scene emergency response activities.

(c) When a NOTAM has been issued under paragraph (a)(2) of this section, no person may operate an aircraft within the designated area unless at least one of the following conditions are met:

(1) The aircraft is participating in hazard relief activities and is being operated under the direction of the official in charge of on scene emergency response activities.

(2) The aircraft is carrying law enforcement officials.

(3) The aircraft is operating under the ATC approved IFR flight plan.

(4) The operation is conducted directly to or from an airport within the area, or is necessitated by the impracticability of VFR flight above or around the area due to weather, or terrain; notification is given to the Flight Service Station (FSS) or ATC facility specified in the NOTAM to receive advisories concerning disaster relief aircraft operations; and the operation does not hamper or endanger relief activities and is not conducted for the purpose of observing the disaster.

(5) The aircraft is carrying properly accredited news representatives, and, prior to entering the area, a flight plan is filed with the appropriate FAA or ATC facility specified in the Notice to Airmen and the operation is conducted above the altitude used by the disaster relief aircraft, unless otherwise authorized by the official in charge of on scene emergency response activities.

(d) When a NOTAM has been issued under paragraph (a)(3) of this section, no person may operate an aircraft within the designated area unless at least one of the following conditions is met:

(1) The operation is conducted directly to or from an airport within the area, or is necessitated by the impracticability of VFR flight above or

around the area due to weather or terrain, and the operation is not conducted for the purpose of observing the incident or event.

(2) The aircraft is operating under an ATC approved IFR flight plan.

(3) The aircraft is carrying incident or event personnel, or law enforcement officials.

(4) The aircraft is carrying properly accredited news representatives and, prior to entering that area, a flight plan is filed with the appropriate FSS or ATC facility specified in the NOTAM.

(e) Flight plans filed and notifications made with an FSS or ATC facility under this section shall include the following information:

(1) Aircraft identification, type and color.

(2) Radio communications frequencies to be used.

(3) Proposed times of entry of, and exit from, the designated area.

(4) Name of news media or organization and purpose of flight.

(5) Any other information requested by ATC.

§91.138 Temporary flight restrictions in national disaster areas in the State of Hawaii.

(a) When the Administrator has determined, pursuant to a request and justification provided by the Governor of the State of Hawaii, or the Governor's designee, that an inhabited area within a declared national disaster area in the State of Hawaii is in need of protection for humanitarian reasons, the Administrator will issue a Notice to Airmen (NOTAM) designating an area within which temporary flight restrictions apply. The Administrator will designate the extent and duration of the temporary flight restrictions necessary to provide for the protection of persons and property on the surface.

(b) When a NOTAM has been issued in accordance with this section, no person may operate an aircraft within the designated area unless at least one of the following conditions is met:

(1) That person has obtained authorization from the official in charge of associated emergency or disaster relief response activities, and is operating

the aircraft under the conditions of that authorization.

(2) The aircraft is carrying law enforcement officials.

(3) The aircraft is carrying persons involved in an emergency or a legitimate scientific purpose.

(4) The aircraft is carrying properly accredited newsmen, and that prior to entering the area, a flight plan is filed with the appropriate FAA or ATC facility specified in the NOTAM and the operation is conducted in compliance with the conditions and restrictions established by the official in charge of on-scene emergency response activities.

(5) The aircraft is operating in accordance with an ATC clearance or instruction.

(c) A NOTAM issued under this section is effective for 90 days or until the national disaster area designation is terminated, whichever comes first, unless terminated by notice or extended by the Administrator at the request of the Governor of the State of Hawaii or the Governor's designee.

[Doc. No. 26476, 56 FR 23178, May 20, 1991, as amended by Amdt. 91-270, 66 FR 47377, Sept. 11, 2001]

§ 91.139 Emergency air traffic rules.

(a) This section prescribes a process for utilizing Notices to Airmen (NOTAMs) to advise of the issuance and operations under emergency air traffic rules and regulations and designates the official who is authorized to issue NOTAMs on behalf of the Administrator in certain matters under this section.

(b) Whenever the Administrator determines that an emergency condition exists, or will exist, relating to the FAA's ability to operate the air traffic control system and during which normal flight operations under this chapter cannot be conducted consistent with the required levels of safety and efficiency—

(1) The Administrator issues an immediately effective air traffic rule or regulation in response to that emergency condition; and

(2) The Administrator or the Associate Administrator for Air Traffic may utilize the NOTAM system to pro-

vide notification of the issuance of the rule or regulation.

Those NOTAMs communicate information concerning the rules and regulations that govern flight operations, the use of navigation facilities, and designation of that airspace in which the rules and regulations apply.

(c) When a NOTAM has been issued under this section, no person may operate an aircraft, or other device governed by the regulation concerned, within the designated airspace except in accordance with the authorizations, terms, and conditions prescribed in the regulation covered by the NOTAM.

§ 91.141 Flight restrictions in the proximity of the Presidential and other parties.

No person may operate an aircraft over or in the vicinity of any area to be visited or traveled by the President, the Vice President, or other public figures contrary to the restrictions established by the Administrator and published in a Notice to Airmen (NOTAM).

§ 91.143 Flight limitation in the proximity of space flight operations.

No person may operate any aircraft of U.S. registry, or pilot any aircraft under the authority of an airman certificate issued by the Federal Aviation Administration within areas designated in a Notice to Airmen (NOTAM) for space flight operations except when authorized by ATC, or operated under the control of the Department of Defense Manager for Space Transportation System Contingency Support Operations.

§ 91.144 Temporary restriction on flight operations during abnormally high barometric pressure conditions.

(a) *Special flight restrictions.* When any information indicates that barometric pressure on the route of flight currently exceeds or will exceed 31 inches of mercury, no person may operate an aircraft or initiate a flight contrary to the requirements established by the Administrator and published in a Notice to Airmen issued under this section.

(b) *Waivers.* The Administrator is authorized to waive any restriction

issued under paragraph (a) of this section to permit emergency supply, transport, or medical services to be delivered to isolated communities, where the operation can be conducted with an acceptable level of safety.

[Amdt. 91–240, 59 FR 17452, Apr. 12, 1994; 59 FR 37669, July 25, 1994]

§91.145 Management of aircraft operations in the vicinity of aerial demonstrations and major sporting events.

(a) The FAA will issue a Notice to Airmen (NOTAM) designating an area of airspace in which a temporary flight restriction applies when it determines that a temporary flight restriction is necessary to protect persons or property on the surface or in the air, to maintain air safety and efficiency, or to prevent the unsafe congestion of aircraft in the vicinity of an aerial demonstration or major sporting event. These demonstrations and events may include:

- (1) United States Naval Flight Demonstration Team (Blue Angels);
- (2) United States Air Force Air Demonstration Squadron (Thunderbirds);
- (3) United States Army Parachute Team (Golden Knights);
- (4) Summer/Winter Olympic Games;
- (5) Annual Tournament of Roses Football Game;
- (6) World Cup Soccer;
- (7) Major League Baseball All-Star Game;
- (8) World Series;
- (9) Kodak Albuquerque International Balloon Fiesta;
- (10) Sandia Classic Hang Gliding Competition;
- (11) Indianapolis 500 Mile Race;
- (12) Any other aerial demonstration or sporting event the FAA determines to need a temporary flight restriction in accordance with paragraph (b) of this section.

(b) In deciding whether a temporary flight restriction is necessary for an aerial demonstration or major sporting event not listed in paragraph (a) of this section, the FAA considers the following factors:

- (1) Area where the event will be held.
- (2) Effect flight restrictions will have on known aircraft operations.

(3) Any existing ATC airspace traffic management restrictions.

- (4) Estimated duration of the event.
- (5) Degree of public interest.
- (6) Number of spectators.
- (7) Provisions for spectator safety.
- (8) Number and types of participating aircraft.
- (9) Use of mixed high and low performance aircraft.
- (10) Impact on non-participating aircraft.
- (11) Weather minimums.
- (12) Emergency procedures that will be in effect.

(c) A NOTAM issued under this section will state the name of the aerial demonstration or sporting event and specify the effective dates and times, the geographic features or coordinates, and any other restrictions or procedures governing flight operations in the designated airspace.

(d) When a NOTAM has been issued in accordance with this section, no person may operate an aircraft or device, or engage in any activity within the designated airspace area, except in accordance with the authorizations, terms, and conditions of the temporary flight restriction published in the NOTAM, unless otherwise authorized by:

- (1) Air traffic control; or
- (2) A Flight Standards Certificate of Waiver or Authorization issued for the demonstration or event.

(e) For the purpose of this section:

(1) *Flight restricted airspace area for an aerial demonstration*—The amount of airspace needed to protect persons and property on the surface or in the air, to maintain air safety and efficiency, or to prevent the unsafe congestion of aircraft will vary depending on the aerial demonstration and the factors listed in paragraph (b) of this section. The restricted airspace area will normally be limited to a 5 nautical mile radius from the center of the demonstration and an altitude 17000 mean sea level (for high performance aircraft) or 13000 feet above the surface (for certain parachute operations), but will be no greater than the minimum airspace necessary for the management of aircraft operations in the vicinity of the specified area.

(2) *Flight restricted area for a major sporting event*—The amount of airspace

needed to protect persons and property on the surface or in the air, to maintain air safety and efficiency, or to prevent the unsafe congestion of aircraft will vary depending on the size of the event and the factors listed in paragraph (b) of this section. The restricted airspace will normally be limited to a 3 nautical mile radius from the center of the event and 2500 feet above the surface but will not be greater than the minimum airspace necessary for the management of aircraft operations in the vicinity of the specified area.

(f) A NOTAM issued under this section will be issued at least 30 days in advance of an aerial demonstration or a major sporting event, unless the FAA finds good cause for a shorter period and explains this in the NOTAM.

(g) When warranted, the FAA Administrator may exclude the following flights from the provisions of this section:

- (1) Essential military.
- (2) Medical and rescue.
- (3) Presidential and Vice Presidential.
- (4) Visiting heads of state.
- (5) Law enforcement and security.
- (6) Public health and welfare.

[Doc. No. FAA-2000-8274, 66 FR 47378, Sept. 11, 2001]

§§ 91.146-91.149 [Reserved]

VISUAL FLIGHT RULES

§ 91.151 Fuel requirements for flight in VFR conditions.

(a) No person may begin a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed—

- (1) During the day, to fly after that for at least 30 minutes; or
- (2) At night, to fly after that for at least 45 minutes.

(b) No person may begin a flight in a rotorcraft under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed, to fly after that for at least 20 minutes.

§ 91.153 VFR flight plan: Information required.

(a) *Information required.* Unless otherwise authorized by ATC, each person filing a VFR flight plan shall include in it the following information:

- (1) The aircraft identification number and, if necessary, its radio call sign.
- (2) The type of the aircraft or, in the case of a formation flight, the type of each aircraft and the number of aircraft in the formation.
- (3) The full name and address of the pilot in command or, in the case of a formation flight, the formation commander.
- (4) The point and proposed time of departure.
- (5) The proposed route, cruising altitude (or flight level), and true airspeed at that altitude.
- (6) The point of first intended landing and the estimated elapsed time until over that point.
- (7) The amount of fuel on board (in hours).
- (8) The number of persons in the aircraft, except where that information is otherwise readily available to the FAA.
- (9) Any other information the pilot in command or ATC believes is necessary for ATC purposes.

(b) *Cancellation.* When a flight plan has been activated, the pilot in command, upon canceling or completing the flight under the flight plan, shall notify an FAA Flight Service Station or ATC facility.

§ 91.155 Basic VFR weather minimums.

(a) Except as provided in paragraph (b) of this section and § 91.157, no person may operate an aircraft under VFR when the flight visibility is less, or at a distance from clouds that is less, than that prescribed for the corresponding altitude and class of airspace in the following table:

Airspace	Flight visibility	Distance from clouds
Class A	Not Applicable	Not Applicable.
Class B	3 statute miles	Clear of Clouds.
Class C	3 statute miles	500 feet below. 1,000 feet above. 2,000 feet horizontal.

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Airspace	Flight visibility	Distance from clouds
Class D	3 statute miles	500 feet below. 1,000 feet above. 2,000 feet horizontal.
Class E: Less than 10,000 feet MSL.	3 statute miles	500 feet below. 1,000 feet above. 2,000 feet horizontal.
At or above 10,000 feet MSL.	5 statute miles	1,000 feet below. 1,000 feet above. 1 statute mile horizontal.
Class G: 1,200 feet or less above the surface (regardless of MSL altitude).		
Day, except as provided in §91.155(b).	1 statute mile	Clear of clouds.
Night, except as provided in §91.155(b).	3 statute miles	500 feet below. 1,000 feet above. 2,000 feet horizontal.
More than 1,200 feet above the surface but less than 10,000 feet MSL		
Day	1 statute mile	500 feet below. 1,000 feet above. 2,000 feet horizontal.
Night	3 statute miles	500 feet below. 1,000 feet above. 2,000 feet horizontal.
More than 1,200 feet above the surface and at or above 10,000 feet MSL.	5 statute miles	1,000 feet below. 1,000 feet above. 1 statute mile horizontal.

(b) *Class G Airspace.* Notwithstanding the provisions of paragraph (a) of this section, the following operations may be conducted in Class G airspace below 1,200 feet above the surface:

(1) *Helicopter.* A helicopter may be operated clear of clouds if operated at a speed that allows the pilot adequate opportunity to see any air traffic or obstruction in time to avoid a collision.

(2) *Airplane.* When the visibility is less than 3 statute miles but not less than 1 statute mile during night hours, an airplane may be operated clear of clouds if operated in an airport traffic pattern within one-half mile of the runway.

(c) Except as provided in §91.157, no person may operate an aircraft beneath

the ceiling under VFR within the lateral boundaries of controlled airspace designated to the surface for an airport when the ceiling is less than 1,000 feet.

(d) Except as provided in §91.157 of this part, no person may take off or land an aircraft, or enter the traffic pattern of an airport, under VFR, within the lateral boundaries of the surface areas of Class B, Class C, Class D, or Class E airspace designated for an airport—

(1) Unless ground visibility at that airport is at least 3 statute miles; or

(2) If ground visibility is not reported at that airport, unless flight visibility during landing or takeoff, or while operating in the traffic pattern is at least 3 statute miles.

(e) For the purpose of this section, an aircraft operating at the base altitude of a Class E airspace area is considered to be within the airspace directly below that area.

[Doc. No. 24458, 56 FR 65660, Dec. 17, 1991, as amended by Amdt. 91-235, 58 FR 51968, Oct. 5, 1993]

§91.157 Special VFR weather minimums.

(a) Except as provided in appendix D, section 3, of this part, special VFR operations may be conducted under the weather minimums and requirements of this section, instead of those contained in §91.155, below 10,000 feet MSL within the airspace contained by the upward extension of the lateral boundaries of the controlled airspace designated to the surface for an airport.

(b) Special VFR operations may only be conducted—

(1) With an ATC clearance;

(2) Clear of clouds;

(3) Except for helicopters, when flight visibility is at least 1 statute mile; and

(4) Except for helicopters, between sunrise and sunset (or in Alaska, when the sun is 6 degrees or more below the horizon) unless—

(i) The person being granted the ATC clearance meets the applicable requirements for instrument flight under part 61 of this chapter; and

(ii) The aircraft is equipped as required in §91.205(d).

(c) No person may take off or land an aircraft (other than a helicopter) under special VFR—

(1) Unless ground visibility is at least 1 statute mile; or

(2) If ground visibility is not reported, unless flight visibility is at least 1 statute mile. For the purposes of this paragraph, the term flight visibility includes the visibility from the cockpit of an aircraft in takeoff position if:

(i) The flight is conducted under this part 91; and

(ii) The airport at which the aircraft is located is a satellite airport that does not have weather reporting capabilities.

(d) The determination of visibility by a pilot in accordance with paragraph (c)(2) of this section is not an official weather report or an official ground visibility report.

[Amdt. 91-235, 58 FR 51968, Oct. 5, 1993, as amended by Amdt. 91-247, 60 FR 66874, Dec. 27, 1995; Amdt. 91-262, 65 FR 16116, Mar. 24, 2000]

§ 91.159 VFR cruising altitude or flight level.

Except while holding in a holding pattern of 2 minutes or less, or while turning, each person operating an aircraft under VFR in level cruising flight more than 3,000 feet above the surface shall maintain the appropriate altitude or flight level prescribed below, unless otherwise authorized by ATC:

(a) When operating below 18,000 feet MSL and—

(1) On a magnetic course of zero degrees through 179 degrees, any odd thousand foot MSL altitude +500 feet (such as 3,500, 5,500, or 7,500); or

(2) On a magnetic course of 180 degrees through 359 degrees, any even thousand foot MSL altitude +500 feet (such as 4,500, 6,500, or 8,500).

(b) When operating above 18,000 feet MSL to flight level 290 (inclusive) and—

(1) On a magnetic course of zero degrees through 179 degrees, any odd flight level +500 feet (such as 195, 215, or 235); or

(2) On a magnetic course of 180 degrees through 359 degrees, any even flight level +500 feet (such as 185, 205, or 225).

(c) When operating above flight level 290 and—

(1) On a magnetic course of zero degrees through 179 degrees, any flight level, at 4,000-foot intervals, beginning at and including flight level 300 (such as flight level 300, 340, or 380); or

(2) On a magnetic course of 180 degrees through 359 degrees, any flight level, at 4,000-foot intervals, beginning at and including flight level 320 (such as flight level 320, 360, or 400).

§§ 91.161–91.165 [Reserved]

INSTRUMENT FLIGHT RULES

§ 91.167 Fuel requirements for flight in IFR conditions.

(a) No person may operate a civil aircraft in IFR conditions unless it carries enough fuel (considering weather reports and forecasts and weather conditions) to—

(1) Complete the flight to the first airport of intended landing;

(2) Except as provided in paragraph (b) of this section, fly from that airport to the alternate airport; and

(3) Fly after that for 45 minutes at normal cruising speed or, for helicopters, fly after that for 30 minutes at normal cruising speed.

(b) Paragraph (a)(2) of this section does not apply if:

(1) Part 97 of this chapter prescribes a standard instrument approach procedure to, or a special instrument approach procedure has been issued by the Administrator to the operator for, the first airport of intended landing; and

(2) Appropriate weather reports or weather forecasts, or a combination of them, indicate the following:

(i) *For aircraft other than helicopters.* For at least 1 hour before and for 1 hour after the estimated time of arrival, the ceiling will be at least 2,000 feet above the airport elevation and the visibility will be at least 3 statute miles.

(ii) *For helicopters.* At the estimated time of arrival and for 1 hour after the estimated time of arrival, the ceiling will be at least 1,000 feet above the airport elevation, or at least 400 feet above the lowest applicable approach minima, whichever is higher, and the

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visibility will be at least 2 statute miles.

[Doc. No. 98-4390, 65 FR 3546, Jan. 21, 2000]

§91.169 IFR flight plan: Information required.

(a) *Information required.* Unless otherwise authorized by ATC, each person filing an IFR flight plan must include in it the following information:

(1) Information required under §91.153 (a) of this part;

(2) Except as provided in paragraph (b) of this section, an alternate airport.

(b) Paragraph (a)(2) of this section does not apply if:

(1) Part 97 of this chapter prescribes a standard instrument approach procedure to, or a special instrument approach procedure has been issued by the Administrator to the operator for, the first airport of intended landing; and

(2) Appropriate weather reports or weather forecasts, or a combination of them, indicate the following:

(i) *For aircraft other than helicopters.* For at least 1 hour before and for 1 hour after the estimated time of arrival, the ceiling will be at least 2,000 feet above the airport elevation and the visibility will be at least 3 statute miles.

(ii) *For helicopters.* At the estimated time of arrival and for 1 hour after the estimated time of arrival, the ceiling will be at least 1,000 feet above the airport elevation, or at least 400 feet above the lowest applicable approach minima, whichever is higher, and the visibility will be at least 2 statute miles.

(c) *IFR alternate airport weather minima.* Unless otherwise authorized by the Administrator, no person may include an alternate airport in an IFR flight plan unless appropriate weather reports or weather forecasts, or a combination of them, indicate that, at the estimated time of arrival at the alternate airport, the ceiling and visibility at that airport will be at or above the following weather minima:

(1) If an instrument approach procedure has been published in part 97 of this chapter, or a special instrument approach procedure has been issued by the Administrator to the operator, for that airport, the following minima:

(i) *For aircraft other than helicopters:* The alternate airport minima specified in that procedure, or if none are specified the following standard approach minima:

(A) *For a precision approach procedure.* Ceiling 600 feet and visibility 2 statute miles.

(B) *For a nonprecision approach procedure.* Ceiling 800 feet and visibility 2 statute miles.

(ii) *For helicopters:* Ceiling 200 feet above the minimum for the approach to be flown, and visibility at least 1 statute mile but never less than the minimum visibility for the approach to be flown, and

(2) If no instrument approach procedure has been published in part 97 of this chapter and no special instrument approach procedure has been issued by the Administrator to the operator, for the alternate airport, the ceiling and visibility minima are those allowing descent from the MEA, approach, and landing under basic VFR.

(d) *Cancellation.* When a flight plan has been activated, the pilot in command, upon canceling or completing the flight under the flight plan, shall notify an FAA Flight Service Station or ATC facility.

[Doc. No. 18334, 54 FR 34294, Aug. 18, 1989, as amended by Amdt. 91-259, 65 FR 3546, Jan. 21, 2000]

§91.171 VOR equipment check for IFR operations.

(a) No person may operate a civil aircraft under IFR using the VOR system of radio navigation unless the VOR equipment of that aircraft—

(1) Is maintained, checked, and inspected under an approved procedure; or

(2) Has been operationally checked within the preceding 30 days, and was found to be within the limits of the permissible indicated bearing error set forth in paragraph (b) or (c) of this section.

(b) Except as provided in paragraph (c) of this section, each person conducting a VOR check under paragraph (a)(2) of this section shall—

(1) Use, at the airport of intended departure, an FAA-operated or approved test signal or a test signal radiated by a certificated and appropriately rated

radio repair station or, outside the United States, a test signal operated or approved by an appropriate authority to check the VOR equipment (the maximum permissible indicated bearing error is plus or minus 4 degrees); or

(2) Use, at the airport of intended departure, a point on the airport surface designated as a VOR system checkpoint by the Administrator, or, outside the United States, by an appropriate authority (the maximum permissible bearing error is plus or minus 4 degrees);

(3) If neither a test signal nor a designated checkpoint on the surface is available, use an airborne checkpoint designated by the Administrator or, outside the United States, by an appropriate authority (the maximum permissible bearing error is plus or minus 6 degrees); or

(4) If no check signal or point is available, while in flight—

(i) Select a VOR radial that lies along the centerline of an established VOR airway;

(ii) Select a prominent ground point along the selected radial preferably more than 20 nautical miles from the VOR ground facility and maneuver the aircraft directly over the point at a reasonably low altitude; and

(iii) Note the VOR bearing indicated by the receiver when over the ground point (the maximum permissible variation between the published radial and the indicated bearing is 6 degrees).

(c) If dual system VOR (units independent of each other except for the antenna) is installed in the aircraft, the person checking the equipment may check one system against the other in place of the check procedures specified in paragraph (b) of this section. Both systems shall be tuned to the same VOR ground facility and note the indicated bearings to that station. The maximum permissible variation between the two indicated bearings is 4 degrees.

(d) Each person making the VOR operational check, as specified in paragraph (b) or (c) of this section, shall enter the date, place, bearing error, and sign the aircraft log or other record. In addition, if a test signal radiated by a repair station, as specified in paragraph (b)(1) of this section, is

used, an entry must be made in the aircraft log or other record by the repair station certificate holder or the certificate holder's representative certifying to the bearing transmitted by the repair station for the check and the date of transmission.

(Approved by the Office of Management and Budget under control number 2120-0005)

§ 91.173 ATC clearance and flight plan required.

No person may operate an aircraft in controlled airspace under IFR unless that person has—

(a) Filed an IFR flight plan; and

(b) Received an appropriate ATC clearance.

§ 91.175 Takeoff and landing under IFR.

(a) *Instrument approaches to civil airports.*

Unless otherwise authorized by the Administrator, when an instrument letdown to a civil airport is necessary, each person operating an aircraft, except a military aircraft of the United States, shall use a standard instrument approach procedure prescribed for the airport in part 97 of this chapter.

(b) *Authorized DH or MDA.* For the purpose of this section, when the approach procedure being used provides for and requires the use of a DH or MDA, the authorized DH or MDA is the highest of the following:

(1) The DH or MDA prescribed by the approach procedure.

(2) The DH or MDA prescribed for the pilot in command.

(3) The DH or MDA for which the aircraft is equipped.

(c) *Operation below DH or MDA.* Where a DH or MDA is applicable, no pilot may operate an aircraft, except a military aircraft of the United States, at any airport below the authorized MDA or continue an approach below the authorized DH unless—

(1) The aircraft is continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal maneuvers, and for operations conducted under part 121 or part 135 unless that descent rate will allow touch-down to occur within the touchdown zone of the runway of intended landing;

(2) The flight visibility is not less than the visibility prescribed in the standard instrument approach being used; and

(3) Except for a Category II or Category III approach where any necessary visual reference requirements are specified by the Administrator, at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:

(i) The approach light system, except that the pilot may not descend below 100 feet above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable.

(ii) The threshold.

(iii) The threshold markings.

(iv) The threshold lights.

(v) The runway end identifier lights.

(vi) The visual approach slope indicator.

(vii) The touchdown zone or touchdown zone markings.

(viii) The touchdown zone lights.

(ix) The runway or runway markings.

(x) The runway lights.

(d) *Landing.* No pilot operating an aircraft, except a military aircraft of the United States, may land that aircraft when the flight visibility is less than the visibility prescribed in the standard instrument approach procedure being used.

(e) *Missed approach procedures.* Each pilot operating an aircraft, except a military aircraft of the United States, shall immediately execute an appropriate missed approach procedure when either of the following conditions exist:

(1) Whenever the requirements of paragraph (c) of this section are not met at either of the following times:

(i) When the aircraft is being operated below MDA; or

(ii) Upon arrival at the missed approach point, including a DH where a DH is specified and its use is required, and at any time after that until touchdown.

(2) Whenever an identifiable part of the airport is not distinctly visible to the pilot during a circling maneuver at or above MDA, unless the inability to see an identifiable part of the airport results only from a normal bank of the aircraft during the circling approach.

(f) *Civil airport takeoff minimums.* Unless otherwise authorized by the Administrator, no pilot operating an aircraft under parts 121, 125, 129, or 135 of this chapter may take off from a civil airport under IFR unless weather conditions are at or above the weather minimum for IFR takeoff prescribed for that airport under part 97 of this chapter. If takeoff minimums are not prescribed under part 97 of this chapter for a particular airport, the following minimums apply to takeoffs under IFR for aircraft operating under those parts:

(1) For aircraft, other than helicopters, having two engines or less—1 statute mile visibility.

(2) For aircraft having more than two engines— $\frac{1}{2}$ statute mile visibility.

(3) For helicopters— $\frac{1}{2}$ statute mile visibility.

(g) *Military airports.* Unless otherwise prescribed by the Administrator, each person operating a civil aircraft under IFR into or out of a military airport shall comply with the instrument approach procedures and the takeoff and landing minimum prescribed by the military authority having jurisdiction of that airport.

(h) *Comparable values of RVR and ground visibility.* (1) Except for Category II or Category III minimums, if RVR minimums for takeoff or landing are prescribed in an instrument approach procedure, but RVR is not reported for the runway of intended operation, the RVR minimum shall be converted to ground visibility in accordance with the table in paragraph (h)(2) of this section and shall be the visibility minimum for takeoff or landing on that runway.

(2)

RVR (feet)	Visibility (statute miles)
1,600	$\frac{1}{4}$
2,400	$\frac{1}{2}$
3,200	$\frac{5}{8}$
4,000	$\frac{3}{4}$
4,500	$\frac{7}{8}$
5,000	1
6,000	$1\frac{1}{4}$

(i) *Operations on unpublished routes and use of radar in instrument approach procedures.* When radar is approved at certain locations for ATC purposes, it

may be used not only for surveillance and precision radar approaches, as applicable, but also may be used in conjunction with instrument approach procedures predicated on other types of radio navigational aids. Radar vectors may be authorized to provide course guidance through the segments of an approach to the final course or fix. When operating on an unpublished route or while being radar vectored, the pilot, when an approach clearance is received, shall, in addition to complying with § 91.177, maintain the last altitude assigned to that pilot until the aircraft is established on a segment of a published route or instrument approach procedure unless a different altitude is assigned by ATC. After the aircraft is so established, published altitudes apply to descent within each succeeding route or approach segment unless a different altitude is assigned by ATC. Upon reaching the final approach course or fix, the pilot may either complete the instrument approach in accordance with a procedure approved for the facility or continue a surveillance or precision radar approach to a landing.

(j) *Limitation on procedure turns.* In the case of a radar vector to a final approach course or fix, a timed approach from a holding fix, or an approach for which the procedure specifies "No PT," no pilot may make a procedure turn unless cleared to do so by ATC.

(k) *ILS components.* The basic ground components of an ILS are the localizer, glide slope, outer marker, middle marker, and, when installed for use with Category II or Category III instrument approach procedures, an inner marker. A compass locator or precision radar may be substituted for the outer or middle marker. DME, VOR, or non-directional beacon fixes authorized in the standard instrument approach procedure or surveillance radar may be substituted for the outer marker. Applicability of, and substitution for, the inner marker for Category II or III approaches is determined by the appropriate part 97 approach procedure, letter of authorization, or operations

specification pertinent to the operations.

[Doc. No. 18334, 54 FR 34294, Aug. 18, 1989, as amended by Amdt. 91-267, 66 FR 21066, Apr. 27, 2001]

§ 91.177 Minimum altitudes for IFR operations.

(a) *Operation of aircraft at minimum altitudes.* Except when necessary for takeoff or landing, no person may operate an aircraft under IFR below—

(1) The applicable minimum altitudes prescribed in parts 95 and 97 of this chapter; or

(2) If no applicable minimum altitude is prescribed in those parts—

(i) In the case of operations over an area designated as a mountainous area in part 95, an altitude of 2,000 feet above the highest obstacle within a horizontal distance of 4 nautical miles from the course to be flown; or

(ii) In any other case, an altitude of 1,000 feet above the highest obstacle within a horizontal distance of 4 nautical miles from the course to be flown. However, if both a MEA and a MOCA are prescribed for a particular route or route segment, a person may operate an aircraft below the MEA down to, but not below, the MOCA, when within 22 nautical miles of the VOR concerned (based on the pilot's reasonable estimate of that distance).

(b) *Climb.* Climb to a higher minimum IFR altitude shall begin immediately after passing the point beyond which that minimum altitude applies, except that when ground obstructions intervene, the point beyond which that higher minimum altitude applies shall be crossed at or above the applicable MCA.

§ 91.179 IFR cruising altitude or flight level.

(a) *In controlled airspace.* Each person operating an aircraft under IFR in level cruising flight in controlled airspace shall maintain the altitude or flight level assigned that aircraft by ATC. However, if the ATC clearance assigns "VFR conditions on-top," that person shall maintain an altitude or flight level as prescribed by § 91.159.

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(b) *In uncontrolled airspace.* Except while in a holding pattern of 2 minutes or less or while turning, each person operating an aircraft under IFR in level cruising flight in uncontrolled airspace shall maintain an appropriate altitude as follows:

(1) When operating below 18,000 feet MSL and—

(i) On a magnetic course of zero degrees through 179 degrees, any odd thousand foot MSL altitude (such as 3,000, 5,000, or 7,000); or

(ii) On a magnetic course of 180 degrees through 359 degrees, any even thousand foot MSL altitude (such as 2,000, 4,000, or 6,000).

(2) When operating at or above 18,000 feet MSL but below flight level 290, and—

(i) On a magnetic course of zero degrees through 179 degrees, any odd flight level (such as 190, 210, or 230); or

(ii) On a magnetic course of 180 degrees through 359 degrees, any even flight level (such as 180, 200, or 220).

(3) When operating at flight level 290 and above, and—

(i) On a magnetic course of zero degrees through 179 degrees, any flight level, at 4,000-foot intervals, beginning at and including flight level 290 (such as flight level 290, 330, or 370); or

(ii) On a magnetic course of 180 degrees through 359 degrees, any flight level, at 4,000-foot intervals, beginning at and including flight level 310 (such as flight level 310, 350, or 390).

§91.181 Course to be flown.

Unless otherwise authorized by ATC, no person may operate an aircraft within controlled airspace under IFR except as follows:

(a) On a Federal airway, along the centerline of that airway.

(b) On any other route, along the direct course between the navigational aids or fixes defining that route. However, this section does not prohibit maneuvering the aircraft to pass well clear of other air traffic or the maneuvering of the aircraft in VFR conditions to clear the intended flight path both before and during climb or descent.

§91.183 IFR radio communications.

The pilot in command of each aircraft operated under IFR in controlled airspace shall have a continuous watch maintained on the appropriate frequency and shall report by radio as soon as possible—

(a) The time and altitude of passing each designated reporting point, or the reporting points specified by ATC, except that while the aircraft is under radar control, only the passing of those reporting points specifically requested by ATC need be reported;

(b) Any unforecast weather conditions encountered; and

(c) Any other information relating to the safety of flight.

§91.185 IFR operations: Two-way radio communications failure.

(a) *General.* Unless otherwise authorized by ATC, each pilot who has two-way radio communications failure when operating under IFR shall comply with the rules of this section.

(b) *VFR conditions.* If the failure occurs in VFR conditions, or if VFR conditions are encountered after the failure, each pilot shall continue the flight under VFR and land as soon as practicable.

(c) *IFR conditions.* If the failure occurs in IFR conditions, or if paragraph (b) of this section cannot be complied with, each pilot shall continue the flight according to the following:

(1) *Route.* (i) By the route assigned in the last ATC clearance received;

(ii) If being radar vectored, by the direct route from the point of radio failure to the fix, route, or airway specified in the vector clearance;

(iii) In the absence of an assigned route, by the route that ATC has advised may be expected in a further clearance; or

(iv) In the absence of an assigned route or a route that ATC has advised may be expected in a further clearance, by the route filed in the flight plan.

(2) *Altitude.* At the highest of the following altitudes or flight levels for the route segment being flown:

(i) The altitude or flight level assigned in the last ATC clearance received;

(ii) The minimum altitude (converted, if appropriate, to minimum

flight level as prescribed in § 91.121(c) for IFR operations; or

(iii) The altitude or flight level ATC has advised may be expected in a further clearance.

(3) *Leave clearance limit.* (i) When the clearance limit is a fix from which an approach begins, commence descent or descent and approach as close as possible to the expect-further-clearance time if one has been received, or if one has not been received, as close as possible to the estimated time of arrival as calculated from the filed or amended (with ATC) estimated time en route.

(ii) If the clearance limit is not a fix from which an approach begins, leave the clearance limit at the expect-further-clearance time if one has been received, or if none has been received, upon arrival over the clearance limit, and proceed to a fix from which an approach begins and commence descent or descent and approach as close as possible to the estimated time of arrival as calculated from the filed or amended (with ATC) estimated time en route.

[Doc. No. 18334, 54 FR 34294, Aug. 18, 1989; Amdt. 91-211, 54 FR 41211, Oct. 5, 1989]

§ 91.187 Operation under IFR in controlled airspace: Malfunction reports.

(a) The pilot in command of each aircraft operated in controlled airspace under IFR shall report as soon as practical to ATC any malfunctions of navigational, approach, or communication equipment occurring in flight.

(b) In each report required by paragraph (a) of this section, the pilot in command shall include the—

- (1) Aircraft identification;
- (2) Equipment affected;
- (3) Degree to which the capability of the pilot to operate under IFR in the ATC system is impaired; and
- (4) Nature and extent of assistance desired from ATC.

§ 91.189 Category II and III operations: General operating rules.

(a) No person may operate a civil aircraft in a Category II or III operation unless—

(1) The flight crew of the aircraft consists of a pilot in command and a second in command who hold the ap-

propriate authorizations and ratings prescribed in § 61.3 of this chapter;

(2) Each flight crewmember has adequate knowledge of, and familiarity with, the aircraft and the procedures to be used; and

(3) The instrument panel in front of the pilot who is controlling the aircraft has appropriate instrumentation for the type of flight control guidance system that is being used.

(b) Unless otherwise authorized by the Administrator, no person may operate a civil aircraft in a Category II or Category III operation unless each ground component required for that operation and the related airborne equipment is installed and operating.

(c) *Authorized DH.* For the purpose of this section, when the approach procedure being used provides for and requires the use of a DH, the authorized DH is the highest of the following:

(1) The DH prescribed by the approach procedure.

(2) The DH prescribed for the pilot in command.

(3) The DH for which the aircraft is equipped.

(d) Unless otherwise authorized by the Administrator, no pilot operating an aircraft in a Category II or Category III approach that provides and requires use of a DH may continue the approach below the authorized decision height unless the following conditions are met:

(1) The aircraft is in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal maneuvers, and where that descent rate will allow touchdown to occur within the touchdown zone of the runway of intended landing.

(2) At least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:

(i) The approach light system, except that the pilot may not descend below 100 feet above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable.

(ii) The threshold.

(iii) The threshold markings.

(iv) The threshold lights.

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(v) The touchdown zone or touchdown zone markings.

(vi) The touchdown zone lights.

(e) Unless otherwise authorized by the Administrator, each pilot operating an aircraft shall immediately execute an appropriate missed approach whenever, prior to touchdown, the requirements of paragraph (d) of this section are not met.

(f) No person operating an aircraft using a Category III approach without decision height may land that aircraft except in accordance with the provisions of the letter of authorization issued by the Administrator.

(g) Paragraphs (a) through (f) of this section do not apply to operations conducted by the holders of certificates issued under part 121, 125, 129, or 135 of this chapter. No person may operate a civil aircraft in a Category II or Category III operation conducted by the holder of a certificate issued under part 121, 125, 129, or 135 of this chapter unless the operation is conducted in accordance with that certificate holder's operations specifications.

§91.191 Category II and Category III manual.

(a) Except as provided in paragraph (c) of this section, after August 4, 1997, no person may operate a U.S.-registered civil aircraft in a Category II or a Category III operation unless—

(1) There is available in the aircraft a current and approved Category II or Category III manual, as appropriate, for that aircraft;

(2) The operation is conducted in accordance with the procedures, instructions, and limitations in the appropriate manual; and

(3) The instruments and equipment listed in the manual that are required for a particular Category II or Category III operation have been inspected and maintained in accordance with the maintenance program contained in the manual.

(b) Each operator must keep a current copy of each approved manual at its principal base of operations and must make each manual available for inspection upon request by the Administrator.

(c) This section does not apply to operations conducted by a holder of a cer-

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tificate issued under part 121 or part 135 of this chapter.

[Doc. No. 26933, 61 FR 34560, July 2, 1996]

§91.193 Certificate of authorization for certain Category II operations.

The Administrator may issue a certificate of authorization authorizing deviations from the requirements of §§91.189, 91.191, and 91.205(f) for the operation of small aircraft identified as Category A aircraft in §97.3 of this chapter in Category II operations if the Administrator finds that the proposed operation can be safely conducted under the terms of the certificate. Such authorization does not permit operation of the aircraft carrying persons or property for compensation or hire.

§§91.195-91.199 [Reserved]

Subpart C—Equipment, Instrument, and Certificate Requirements

SOURCE: Docket No. 18334, 54 FR 34304, Aug. 18, 1989, unless otherwise noted.

§91.201 [Reserved]

§91.203 Civil aircraft: Certifications required.

(a) Except as provided in §91.715, no person may operate a civil aircraft unless it has within it the following:

(1) An appropriate and current airworthiness certificate. Each U.S. airworthiness certificate used to comply with this subparagraph (except a special flight permit, a copy of the applicable operations specifications issued under §21.197(c) of this chapter, appropriate sections of the air carrier manual required by parts 121 and 135 of this chapter containing that portion of the operations specifications issued under §21.197(c), or an authorization under §91.611) must have on it the registration number assigned to the aircraft under part 47 of this chapter. However, the airworthiness certificate need not have on it an assigned special identification number before 10 days after that number is first affixed to the aircraft. A revised airworthiness certificate having on it an assigned special identification number, that has been

affixed to an aircraft, may only be obtained upon application to an FAA Flight Standards district office.

(2) An effective U.S. registration certificate issued to its owner or, for operation within the United States, the second duplicate copy (pink) of the Aircraft Registration Application as provided for in § 47.31(b), or a registration certificate issued under the laws of a foreign country.

(b) No person may operate a civil aircraft unless the airworthiness certificate required by paragraph (a) of this section or a special flight authorization issued under § 91.715 is displayed at the cabin or cockpit entrance so that it is legible to passengers or crew.

(c) No person may operate an aircraft with a fuel tank installed within the passenger compartment or a baggage compartment unless the installation was accomplished pursuant to part 43 of this chapter, and a copy of FAA Form 337 authorizing that installation is on board the aircraft.

(d) No person may operate a civil airplane (domestic or foreign) into or out of an airport in the United States unless it complies with the fuel venting and exhaust emissions requirements of part 34 of this chapter.

[Doc. No. 18334, 54 FR 34292, Aug. 18, 1989, as amended by Amdt. 91-218, 55 FR 32861, Aug. 10, 1990]

§ 91.205 Powered civil aircraft with standard category U.S. airworthiness certificates: Instrument and equipment requirements.

(a) *General.* Except as provided in paragraphs (c)(3) and (e) of this section, no person may operate a powered civil aircraft with a standard category U.S. airworthiness certificate in any operation described in paragraphs (b) through (f) of this section unless that aircraft contains the instruments and equipment specified in those paragraphs (or FAA-approved equivalents) for that type of operation, and those instruments and items of equipment are in operable condition.

(b) *Visual-flight rules (day).* For VFR flight during the day, the following instruments and equipment are required:

- (1) Airspeed indicator.
- (2) Altimeter.
- (3) Magnetic direction indicator.

(4) Tachometer for each engine.

(5) Oil pressure gauge for each engine using pressure system.

(6) Temperature gauge for each liquid-cooled engine.

(7) Oil temperature gauge for each air-cooled engine.

(8) Manifold pressure gauge for each altitude engine.

(9) Fuel gauge indicating the quantity of fuel in each tank.

(10) Landing gear position indicator, if the aircraft has a retractable landing gear.

(11) For small civil airplanes certificated after March 11, 1996, in accordance with part 23 of this chapter, an approved aviation red or aviation white anticollision light system. In the event of failure of any light of the anticollision light system, operation of the aircraft may continue to a location where repairs or replacement can be made.

(12) If the aircraft is operated for hire over water and beyond power-off gliding distance from shore, approved flotation gear readily available to each occupant and at least one pyrotechnic signaling device. As used in this section, "shore" means that area of the land adjacent to the water which is above the high water mark and excludes land areas which are intermittently under water.

(13) An approved safety belt with an approved metal-to-metal latching device for each occupant 2 years of age or older.

(14) For small civil airplanes manufactured after July 18, 1978, an approved shoulder harness for each front seat. The shoulder harness must be designed to protect the occupant from serious head injury when the occupant experiences the ultimate inertia forces specified in § 23.561(b)(2) of this chapter. Each shoulder harness installed at a flight crewmember station must permit the crewmember, when seated and with the safety belt and shoulder harness fastened, to perform all functions necessary for flight operations. For purposes of this paragraph—

(i) The date of manufacture of an airplane is the date the inspection acceptance records reflect that the airplane is complete and meets the FAA-approved type design data; and

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(ii) A front seat is a seat located at a flight crewmember station or any seat located alongside such a seat.

(15) An emergency locator transmitter, if required by §91.207.

(16) For normal, utility, and acrobatic category airplanes with a seating configuration, excluding pilot seats, of 9 or less, manufactured after December 12, 1986, a shoulder harness for—

(i) Each front seat that meets the requirements of §23.785 (g) and (h) of this chapter in effect on December 12, 1985;

(ii) Each additional seat that meets the requirements of §23.785(g) of this chapter in effect on December 12, 1985.

(17) For rotorcraft manufactured after September 16, 1992, a shoulder harness for each seat that meets the requirements of §27.2 or §29.2 of this chapter in effect on September 16, 1991.

(c) *Visual flight rules (night)*. For VFR flight at night, the following instruments and equipment are required:

(1) Instruments and equipment specified in paragraph (b) of this section.

(2) Approved position lights.

(3) An approved aviation red or aviation white anticollision light system on all U.S.-registered civil aircraft. Anticollision light systems initially installed after August 11, 1971, on aircraft for which a type certificate was issued or applied for before August 11, 1971, must at least meet the anticollision light standards of part 23, 25, 27, or 29 of this chapter, as applicable, that were in effect on August 10, 1971, except that the color may be either aviation red or aviation white. In the event of failure of any light of the anticollision light system, operations with the aircraft may be continued to a stop where repairs or replacement can be made.

(4) If the aircraft is operated for hire, one electric landing light.

(5) An adequate source of electrical energy for all installed electrical and radio equipment.

(6) One spare set of fuses, or three spare fuses of each kind required, that are accessible to the pilot in flight.

(d) *Instrument flight rules*. For IFR flight, the following instruments and equipment are required:

(1) Instruments and equipment specified in paragraph (b) of this section, and, for night flight, instruments and

equipment specified in paragraph (c) of this section.

(2) Two-way radio communications system and navigational equipment appropriate to the ground facilities to be used.

(3) Gyroscopic rate-of-turn indicator, except on the following aircraft:

(i) Airplanes with a third attitude instrument system usable through flight attitudes of 360 degrees of pitch and roll and installed in accordance with the instrument requirements prescribed in §121.305(j) of this chapter; and

(ii) Rotorcraft with a third attitude instrument system usable through flight attitudes of ± 80 degrees of pitch and ± 120 degrees of roll and installed in accordance with §29.1303(g) of this chapter.

(4) Slip-skid indicator.

(5) Sensitive altimeter adjustable for barometric pressure.

(6) A clock displaying hours, minutes, and seconds with a sweep-second pointer or digital presentation.

(7) Generator or alternator of adequate capacity.

(8) Gyroscopic pitch and bank indicator (artificial horizon).

(9) Gyroscopic direction indicator (directional gyro or equivalent).

(e) *Flight at and above 24,000 ft. MSL (FL 240)*. If VOR navigational equipment is required under paragraph (d)(2) of this section, no person may operate a U.S.-registered civil aircraft within the 50 states and the District of Columbia at or above FL 240 unless that aircraft is equipped with approved distance measuring equipment (DME). When DME required by this paragraph fails at and above FL 240, the pilot in command of the aircraft shall notify ATC immediately, and then may continue operations at and above FL 240 to the next airport of intended landing at which repairs or replacement of the equipment can be made.

(f) *Category II operations*. The requirements for Category II operations are the instruments and equipment specified in—

- (1) Paragraph (d) of this section; and
- (2) Appendix A to this part.

(g) *Category III operations.* The instruments and equipment required for Category III operations are specified in paragraph (d) of this section.

(h) *Exclusions.* Paragraphs (f) and (g) of this section do not apply to operations conducted by a holder of a certificate issued under part 121 or part 135 of this chapter.

[Doc. No. 18334, 54 FR 34292, Aug. 18, 1989, as amended by Amdt. 91-220, 55 FR 43310, Oct. 26, 1990; Amdt. 91-223, 56 FR 41052, Aug. 16, 1991; Amdt. 91-231, 57 FR 42672, Sept. 15, 1992; Amdt. 91-248, 61 FR 5171, Feb. 9, 1996; Amdt. 91-251, 61 FR 34560, July 2, 1996]

§ 91.207 Emergency locator transmitters.

(a) Except as provided in paragraphs (e) and (f) of this section, no person may operate a U.S.-registered civil airplane unless—

(1) There is attached to the airplane an approved automatic type emergency locator transmitter that is in operable condition for the following operations, except that after June 21, 1995, an emergency locator transmitter that meets the requirements of TSO-C91 may not be used for new installations:

(i) Those operations governed by the supplemental air carrier and commercial operator rules of parts 121 and 125;

(ii) Charter flights governed by the domestic and flag air carrier rules of part 121 of this chapter; and

(iii) Operations governed by part 135 of this chapter; or

(2) For operations other than those specified in paragraph (a)(1) of this section, there must be attached to the airplane an approved personal type or an approved automatic type emergency locator transmitter that is in operable condition, except that after June 21, 1995, an emergency locator transmitter that meets the requirements of TSO-C91 may not be used for new installations.

(b) Each emergency locator transmitter required by paragraph (a) of this section must be attached to the airplane in such a manner that the probability of damage to the transmitter in the event of crash impact is minimized. Fixed and deployable automatic type transmitters must be attached to the airplane as far aft as practicable.

(c) Batteries used in the emergency locator transmitters required by paragraphs (a) and (b) of this section must be replaced (or recharged, if the batteries are rechargeable)—

(1) When the transmitter has been in use for more than 1 cumulative hour; or

(2) When 50 percent of their useful life (or, for rechargeable batteries, 50 percent of their useful life of charge) has expired, as established by the transmitter manufacturer under its approval.

The new expiration date for replacing (or recharging) the battery must be legibly marked on the outside of the transmitter and entered in the aircraft maintenance record. Paragraph (c)(2) of this section does not apply to batteries (such as water-activated batteries) that are essentially unaffected during probable storage intervals.

(d) Each emergency locator transmitter required by paragraph (a) of this section must be inspected within 12 calendar months after the last inspection for—

(1) Proper installation;

(2) Battery corrosion;

(3) Operation of the controls and crash sensor; and

(4) The presence of a sufficient signal radiated from its antenna.

(e) Notwithstanding paragraph (a) of this section, a person may—

(1) Ferry a newly acquired airplane from the place where possession of it was taken to a place where the emergency locator transmitter is to be installed; and

(2) Ferry an airplane with an inoperative emergency locator transmitter from a place where repairs or replacements cannot be made to a place where they can be made.

No person other than required crewmembers may be carried aboard an airplane being ferried under paragraph (e) of this section.

(f) Paragraph (a) of this section does not apply to—

(1) Before January 1, 2004, turbojet-powered aircraft;

(2) Aircraft while engaged in scheduled flights by scheduled air carriers;

(3) Aircraft while engaged in training operations conducted entirely within a 50-nautical mile radius of the airport

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from which such local flight operations began;

(4) Aircraft while engaged in flight operations incident to design and testing;

(5) New aircraft while engaged in flight operations incident to their manufacture, preparation, and delivery;

(6) Aircraft while engaged in flight operations incident to the aerial application of chemicals and other substances for agricultural purposes;

(7) Aircraft certificated by the Administrator for research and development purposes;

(8) Aircraft while used for showing compliance with regulations, crew training, exhibition, air racing, or market surveys;

(9) Aircraft equipped to carry not more than one person.

(10) An aircraft during any period for which the transmitter has been temporarily removed for inspection, repair, modification, or replacement, subject to the following:

(i) No person may operate the aircraft unless the aircraft records contain an entry which includes the date of initial removal, the make, model, serial number, and reason for removing the transmitter, and a placard located in view of the pilot to show “ELT not installed.”

(ii) No person may operate the aircraft more than 90 days after the ELT is initially removed from the aircraft; and

(11) On and after January 1, 2004, aircraft with a maximum payload capacity of more than 18,000 pounds when used in air transportation.

[Doc. No. 18334, 54 FR 34304, Aug. 18, 1989, as amended by Amdt. 91–242, 59 FR 32057, June 21, 1994; 59 FR 34578, July 6, 1994; Amdt. 91–265, 65 FR 81319, Dec. 22, 2000; 66 FR 16316, Mar. 23, 2001]

§ 91.209 Aircraft lights.

No person may:

(a) During the period from sunset to sunrise (or, in Alaska, during the period a prominent unlighted object cannot be seen from a distance of 3 statute miles or the sun is more than 6 degrees below the horizon)—

(1) Operate an aircraft unless it has lighted position lights;

(2) Park or move an aircraft in, or in dangerous proximity to, a night flight operations area of an airport unless the aircraft—

(i) Is clearly illuminated;

(ii) Has lighted position lights; or

(iii) is in an area that is marked by obstruction lights;

(3) Anchor an aircraft unless the aircraft—

(i) Has lighted anchor lights; or

(ii) Is in an area where anchor lights are not required on vessels; or

(b) Operate an aircraft that is equipped with an anticollision light system, unless it has lighted anticollision lights. However, the anticollision lights need not be lighted when the pilot-in-command determines that, because of operating conditions, it would be in the interest of safety to turn the lights off.

[Doc. No. 27806, 61 FR 5171, Feb. 9, 1996]

§ 91.211 Supplemental oxygen.

(a) *General.* No person may operate a civil aircraft of U.S. registry—

(1) At cabin pressure altitudes above 12,500 feet (MSL) up to and including 14,000 feet (MSL) unless the required minimum flight crew is provided with and uses supplemental oxygen for that part of the flight at those altitudes that is of more than 30 minutes duration;

(2) At cabin pressure altitudes above 14,000 feet (MSL) unless the required minimum flight crew is provided with and uses supplemental oxygen during the entire flight time at those altitudes; and

(3) At cabin pressure altitudes above 15,000 feet (MSL) unless each occupant of the aircraft is provided with supplemental oxygen.

(b) *Pressurized cabin aircraft.* (1) No person may operate a civil aircraft of U.S. registry with a pressurized cabin—

(i) At flight altitudes above flight level 250 unless at least a 10-minute supply of supplemental oxygen, in addition to any oxygen required to satisfy paragraph (a) of this section, is available for each occupant of the aircraft for use in the event that a descent is necessitated by loss of cabin pressurization; and

(ii) At flight altitudes above flight level 350 unless one pilot at the controls of the airplane is wearing and using an oxygen mask that is secured and sealed and that either supplies oxygen at all times or automatically supplies oxygen whenever the cabin pressure altitude of the airplane exceeds 14,000 feet (MSL), except that the one pilot need not wear and use an oxygen mask while at or below flight level 410 if there are two pilots at the controls and each pilot has a quick-donning type of oxygen mask that can be placed on the face with one hand from the ready position within 5 seconds, supplying oxygen and properly secured and sealed.

(2) Notwithstanding paragraph (b)(1)(ii) of this section, if for any reason at any time it is necessary for one pilot to leave the controls of the aircraft when operating at flight altitudes above flight level 350, the remaining pilot at the controls shall put on and use an oxygen mask until the other pilot has returned to that crew-member's station.

§ 91.213 Inoperative instruments and equipment.

(a) Except as provided in paragraph (d) of this section, no person may take off an aircraft with inoperative instruments or equipment installed unless the following conditions are met:

(1) An approved Minimum Equipment List exists for that aircraft.

(2) The aircraft has within it a letter of authorization, issued by the FAA Flight Standards district office having jurisdiction over the area in which the operator is located, authorizing operation of the aircraft under the Minimum Equipment List. The letter of authorization may be obtained by written request of the airworthiness certificate holder. The Minimum Equipment List and the letter of authorization constitute a supplemental type certificate for the aircraft.

(3) The approved Minimum Equipment List must—

(i) Be prepared in accordance with the limitations specified in paragraph (b) of this section; and

(ii) Provide for the operation of the aircraft with the instruments and equipment in an inoperable condition.

(4) The aircraft records available to the pilot must include an entry describing the inoperable instruments and equipment.

(5) The aircraft is operated under all applicable conditions and limitations contained in the Minimum Equipment List and the letter authorizing the use of the list.

(b) The following instruments and equipment may not be included in a Minimum Equipment List:

(1) Instruments and equipment that are either specifically or otherwise required by the airworthiness requirements under which the aircraft is type certificated and which are essential for safe operations under all operating conditions.

(2) Instruments and equipment required by an airworthiness directive to be in operable condition unless the airworthiness directive provides otherwise.

(3) Instruments and equipment required for specific operations by this part.

(c) A person authorized to use an approved Minimum Equipment List issued for a specific aircraft under part 121, 125, or 135 of this chapter shall use that Minimum Equipment List in connection with operations conducted with that aircraft under this part without additional approval requirements.

(d) Except for operations conducted in accordance with paragraph (a) or (c) of this section, a person may takeoff an aircraft in operations conducted under this part with inoperative instruments and equipment without an approved Minimum Equipment List provided—

(1) The flight operation is conducted in a—

(i) Rotorcraft, nonturbine-powered airplane, glider, or lighter-than-air aircraft for which a master Minimum Equipment List has not been developed; or

(ii) Small rotorcraft, nonturbine-powered small airplane, glider, or lighter-than-air aircraft for which a Master Minimum Equipment List has been developed; and

(2) The inoperative instruments and equipment are not—

(i) Part of the VFR-day type certification instruments and equipment prescribed in the applicable airworthiness

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regulations under which the aircraft was type certificated;

(ii) Indicated as required on the aircraft's equipment list, or on the Kinds of Operations Equipment List for the kind of flight operation being conducted;

(iii) Required by §91.205 or any other rule of this part for the specific kind of flight operation being conducted; or

(iv) Required to be operational by an airworthiness directive; and

(3) The inoperative instruments and equipment are—

(i) Removed from the aircraft, the cockpit control placarded, and the maintenance recorded in accordance with §43.9 of this chapter; or

(ii) Deactivated and placarded "Inoperative." If deactivation of the inoperative instrument or equipment involves maintenance, it must be accomplished and recorded in accordance with part 43 of this chapter; and

(4) A determination is made by a pilot, who is certificated and appropriately rated under part 61 of this chapter, or by a person, who is certificated and appropriately rated to perform maintenance on the aircraft, that the inoperative instrument or equipment does not constitute a hazard to the aircraft.

An aircraft with inoperative instruments or equipment as provided in paragraph (d) of this section is considered to be in a properly altered condition acceptable to the Administrator.

(e) Notwithstanding any other provision of this section, an aircraft with inoperable instruments or equipment may be operated under a special flight permit issued in accordance with §§21.197 and 21.199 of this chapter.

§91.215 ATC transponder and altitude reporting equipment and use.

(a) *All airspace: U.S.-registered civil aircraft.* For operations not conducted under part 121 or 135 of this chapter, ATC transponder equipment installed must meet the performance and environmental requirements of any class of TSO-C74b (Mode A) or any class of TSO-C74c (Mode A with altitude reporting capability) as appropriate, or the appropriate class of TSO-C112 (Mode S).

(b) *All airspace.* Unless otherwise authorized or directed by ATC, no person may operate an aircraft in the airspace described in paragraphs (b)(1) through (b)(5) of this section, unless that aircraft is equipped with an operable coded radar beacon transponder having either Mode 3/A 4096 code capability, replying to Mode 3/A interrogations with the code specified by ATC, or a Mode S capability, replying to Mode 3/A interrogations with the code specified by ATC and intermode and Mode S interrogations in accordance with the applicable provisions specified in TSO C-112, and that aircraft is equipped with automatic pressure altitude reporting equipment having a Mode C capability that automatically replies to Mode C interrogations by transmitting pressure altitude information in 100-foot increments. This requirement applies—

(1) *All aircraft.* In Class A, Class B, and Class C airspace areas;

(2) *All aircraft.* In all airspace within 30 nautical miles of an airport listed in appendix D, section 1 of this part from the surface upward to 10,000 feet MSL;

(3) Notwithstanding paragraph (b)(2) of this section, any aircraft which was not originally certificated with an engine-driven electrical system or which has not subsequently been certified with such a system installed, balloon or glider may conduct operations in the airspace within 30 nautical miles of an airport listed in appendix D, section 1 of this part provided such operations are conducted—

(i) Outside any Class A, Class B, or Class C airspace area; and

(ii) Below the altitude of the ceiling of a Class B or Class C airspace area designated for an airport or 10,000 feet MSL, whichever is lower; and

(4) All aircraft in all airspace above the ceiling and within the lateral boundaries of a Class B or Class C airspace area designated for an airport upward to 10,000 feet MSL; and

(5) All aircraft except any aircraft which was not originally certificated with an engine-driven electrical system or which has not subsequently been certified with such a system installed, balloon, or glider—

(i) In all airspace of the 48 contiguous states and the District of Columbia at

and above 10,000 feet MSL, excluding the airspace at and below 2,500 feet above the surface; and

(ii) In the airspace from the surface to 10,000 feet MSL within a 10-nautical-mile radius of any airport listed in appendix D, section 2 of this part, excluding the airspace below 1,200 feet outside of the lateral boundaries of the surface area of the airspace designated for that airport.

(c) *Transponder-on operation.* While in the airspace as specified in paragraph (b) of this section or in all controlled airspace, each person operating an aircraft equipped with an operable ATC transponder maintained in accordance with § 91.413 of this part shall operate the transponder, including Mode C equipment if installed, and shall reply on the appropriate code or as assigned by ATC.

(d) *ATC authorized deviations.* Requests for ATC authorized deviations must be made to the ATC facility having jurisdiction over the concerned airspace within the time periods specified as follows:

(1) For operation of an aircraft with an operating transponder but without operating automatic pressure altitude reporting equipment having a Mode C capability, the request may be made at any time.

(2) For operation of an aircraft with an inoperative transponder to the airport of ultimate destination, including any intermediate stops, or to proceed to a place where suitable repairs can be made or both, the request may be made at any time.

(3) For operation of an aircraft that is not equipped with a transponder, the request must be made at least one hour before the proposed operation.

(Approved by the Office of Management and Budget under control number 2120-0005)

[Doc. No. 18334, 54 FR 34304, Aug. 18, 1989, as amended by Amdt. 91-221, 56 FR 469, Jan. 4, 1991; Amdt. 91-227, 56 FR 65660, Dec. 17, 1991; Amdt. 91-227, 7 FR 328, Jan. 3, 1992; Amdt. 91-229, 57 FR 34618, Aug. 5, 1992; Amdt. 91-267, 66 FR 21066, Apr. 27, 2001]

§ 91.217 Data correspondence between automatically reported pressure altitude data and the pilot's altitude reference.

No person may operate any automatic pressure altitude reporting equipment associated with a radar beacon transponder—

(a) When deactivation of that equipment is directed by ATC;

(b) Unless, as installed, that equipment was tested and calibrated to transmit altitude data corresponding within 125 feet (on a 95 percent probability basis) of the indicated or calibrated datum of the altimeter normally used to maintain flight altitude, with that altimeter referenced to 29.92 inches of mercury for altitudes from sea level to the maximum operating altitude of the aircraft; or

(c) Unless the altimeters and digitizers in that equipment meet the standards of TSO-C10b and TSO-C88, respectively.

§ 91.219 Altitude alerting system or device: Turbojet-powered civil airplanes.

(a) Except as provided in paragraph (d) of this section, no person may operate a turbojet-powered U.S.-registered civil airplane unless that airplane is equipped with an approved altitude alerting system or device that is in operable condition and meets the requirements of paragraph (b) of this section.

(b) Each altitude alerting system or device required by paragraph (a) of this section must be able to—

(1) Alert the pilot—

(i) Upon approaching a preselected altitude in either ascent or descent, by a sequence of both aural and visual signals in sufficient time to establish level flight at that preselected altitude; or

(ii) Upon approaching a preselected altitude in either ascent or descent, by a sequence of visual signals in sufficient time to establish level flight at that preselected altitude, and when deviating above and below that preselected altitude, by an aural signal;

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(2) Provide the required signals from sea level to the highest operating altitude approved for the airplane in which it is installed;

(3) Preselect altitudes in increments that are commensurate with the altitudes at which the aircraft is operated;

(4) Be tested without special equipment to determine proper operation of the alerting signals; and

(5) Accept necessary barometric pressure settings if the system or device operates on barometric pressure. However, for operation below 3,000 feet AGL, the system or device need only provide one signal, either visual or aural, to comply with this paragraph. A radio altimeter may be included to provide the signal if the operator has an approved procedure for its use to determine DH or MDA, as appropriate.

(c) Each operator to which this section applies must establish and assign procedures for the use of the altitude alerting system or device and each flight crewmember must comply with those procedures assigned to him.

(d) Paragraph (a) of this section does not apply to any operation of an airplane that has an experimental certificate or to the operation of any airplane for the following purposes:

(1) Ferrying a newly acquired airplane from the place where possession of it was taken to a place where the altitude alerting system or device is to be installed.

(2) Continuing a flight as originally planned, if the altitude alerting system or device becomes inoperative after the airplane has taken off; however, the flight may not depart from a place where repair or replacement can be made.

(3) Ferrying an airplane with any inoperative altitude alerting system or device from a place where repairs or replacements cannot be made to a place where it can be made.

(4) Conducting an airworthiness flight test of the airplane.

(5) Ferrying an airplane to a place outside the United States for the purpose of registering it in a foreign country.

(6) Conducting a sales demonstration of the operation of the airplane.

(7) Training foreign flight crews in the operation of the airplane before

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ferrying it to a place outside the United States for the purpose of registering it in a foreign country.

§91.221 Traffic alert and collision avoidance system equipment and use.

(a) *All airspace: U.S.-registered civil aircraft.* Any traffic alert and collision avoidance system installed in a U.S.-registered civil aircraft must be approved by the Administrator.

(b) *Traffic alert and collision avoidance system, operation required.* Each person operating an aircraft equipped with an operable traffic alert and collision avoidance system shall have that system on and operating.

§91.223 Terrain awareness and warning system.

(a) *Airplanes manufactured after March 29, 2002.* Except as provided in paragraph (d) of this section, no person may operate a turbine-powered U.S.-registered airplane configured with six or more passenger seats, excluding any pilot seat, unless that airplane is equipped with an approved terrain awareness and warning system that as a minimum meets the requirements for Class B equipment in Technical Standard Order (TSO)-C151.

(b) *Airplanes manufactured on or before March 29, 2002.* Except as provided in paragraph (d) of this section, no person may operate a turbine-powered U.S.-registered airplane configured with six or more passenger seats, excluding any pilot seat, after March 29, 2005, unless that airplane is equipped with an approved terrain awareness and warning system that as a minimum meets the requirements for Class B equipment in Technical Standard Order (TSO)-C151.

(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.

(d) *Exceptions.* Paragraphs (a) and (b) of this section do not apply to—

(1) Parachuting operations when conducted entirely within a 50 nautical mile radius of the airport from which such local flight operations began.

(2) Firefighting operations.

(3) Flight operations when incident to the aerial application of chemicals and other substances.

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

§§ 91.224–91.299 [Reserved]

Subpart D—Special Flight Operations

SOURCE: Docket No. 18334, 54 FR 34308, Aug. 18, 1989, unless otherwise noted.

§ 91.301 [Reserved]

§ 91.303 Aerobatic flight.

No person may operate an aircraft in aerobatic flight—

(a) Over any congested area of a city, town, or settlement;

(b) Over an open air assembly of persons;

(c) Within the lateral boundaries of the surface areas of Class B, Class C, Class D, or Class E airspace designated for an airport;

(d) Within 4 nautical miles of the center line of any Federal airway;

(e) Below an altitude of 1,500 feet above the surface; or

(f) When flight visibility is less than 3 statute miles.

For the purposes of this section, aerobatic flight means an intentional maneuver involving an abrupt change in an aircraft's attitude, an abnormal attitude, or abnormal acceleration, not necessary for normal flight.

[Doc. No. 18834, 54 FR 34308, Aug. 18, 1989, as amended by Amdt. 91-227, 56 FR 65661, Dec. 17, 1991]

§ 91.305 Flight test areas.

No person may flight test an aircraft except over open water, or sparsely populated areas, having light air traffic.

§ 91.307 Parachutes and parachuting.

(a) No pilot of a civil aircraft may allow a parachute that is available for emergency use to be carried in that

aircraft unless it is an approved type and—

(1) If a chair type (canopy in back), it has been packed by a certificated and appropriately rated parachute rigger within the preceding 120 days; or

(2) If any other type, it has been packed by a certificated and appropriately rated parachute rigger—

(i) Within the preceding 120 days, if its canopy, shrouds, and harness are composed exclusively of nylon, rayon, or other similar synthetic fiber or materials that are substantially resistant to damage from mold, mildew, or other fungi and other rotting agents propagated in a moist environment; or

(ii) Within the preceding 60 days, if any part of the parachute is composed of silk, pongee, or other natural fiber, or materials not specified in paragraph (a)(2)(i) of this section.

(b) Except in an emergency, no pilot in command may allow, and no person may conduct, a parachute operation from an aircraft within the United States except in accordance with part 105 of this chapter.

(c) Unless each occupant of the aircraft is wearing an approved parachute, no pilot of a civil aircraft carrying any person (other than a crewmember) may execute any intentional maneuver that exceeds—

(1) A bank of 60 degrees relative to the horizon; or

(2) A nose-up or nose-down attitude of 30 degrees relative to the horizon.

(d) Paragraph (c) of this section does not apply to—

(1) Flight tests for pilot certification or rating; or

(2) Spins and other flight maneuvers required by the regulations for any certificate or rating when given by—

(i) A certificated flight instructor; or

(ii) An airline transport pilot instructing in accordance with § 61.67 of this chapter.

(e) For the purposes of this section, *approved parachute* means—

(1) A parachute manufactured under a type certificate or a technical standard order (C-23 series); or

(2) A personnel-carrying military parachute identified by an NAF, AAF, or AN drawing number, an AAF order

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number, or any other military designation or specification number.

[Doc. No. 18334, 54 FR 34308, Aug. 18, 1989, as amended by Amdt. 91-255, 62 FR 68137, Dec. 30, 1997; Amdt. 91-268, 66 FR 23553, May 9, 2001]

§91.309 Towing: Gliders.

(a) No person may operate a civil aircraft towing a glider unless—

(1) The pilot in command of the towing aircraft is qualified under §61.69 of this chapter;

(2) The towing aircraft is equipped with a tow-hitch of a kind, and installed in a manner, that is approved by the Administrator;

(3) The towline used has breaking strength not less than 80 percent of the maximum certificated operating weight of the glider and not more than twice this operating weight. However, the towline used may have a breaking strength more than twice the maximum certificated operating weight of the glider if—

(i) A safety link is installed at the point of attachment of the towline to the glider with a breaking strength not less than 80 percent of the maximum certificated operating weight of the glider and not greater than twice this operating weight.

(ii) A safety link is installed at the point of attachment of the towline to the towing aircraft with a breaking strength greater, but not more than 25 percent greater, than that of the safety link at the towed glider end of the towline and not greater than twice the maximum certificated operating weight of the glider;

(4) Before conducting any towing operation within the lateral boundaries of the surface areas of Class B, Class C, Class D, or Class E airspace designated for an airport, or before making each towing flight within such controlled airspace if required by ATC, the pilot in command notifies the control tower. If a control tower does not exist or is not in operation, the pilot in command must notify the FAA flight service station serving that controlled airspace before conducting any towing operations in that airspace; and

(5) The pilots of the towing aircraft and the glider have agreed upon a general course of action, including takeoff

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and release signals, airspeeds, and emergency procedures for each pilot.

(b) No pilot of a civil aircraft may intentionally release a towline, after release of a glider, in a manner that endangers the life or property of another.

[Doc. No. 18834, 54 FR 34308, Aug. 18, 1989, as amended by Amdt. 91-227, 56 FR 65661, Dec. 17, 1991]

§91.311 Towing: Other than under §91.309.

No pilot of a civil aircraft may tow anything with that aircraft (other than under §91.309) except in accordance with the terms of a certificate of waiver issued by the Administrator.

§91.313 Restricted category civil aircraft: Operating limitations.

(a) No person may operate a restricted category civil aircraft—

(1) For other than the special purpose for which it is certificated; or

(2) In an operation other than one necessary to accomplish the work activity directly associated with that special purpose.

(b) For the purpose of paragraph (a) of this section, operating a restricted category civil aircraft to provide flight crewmember training in a special purpose operation for which the aircraft is certificated is considered to be an operation for that special purpose.

(c) No person may operate a restricted category civil aircraft carrying persons or property for compensation or hire. For the purposes of this paragraph, a special purpose operation involving the carriage of persons or material necessary to accomplish that operation, such as crop dusting, seeding, spraying, and banner towing (including the carrying of required persons or material to the location of that operation), and operation for the purpose of providing flight crewmember training in a special purpose operation, are not considered to be the carriage of persons or property for compensation or hire.

(d) No person may be carried on a restricted category civil aircraft unless that person—

(1) Is a flight crewmember;

(2) Is a flight crewmember trainee;

(3) Performs an essential function in connection with a special purpose operation for which the aircraft is certificated; or

(4) Is necessary to accomplish the work activity directly associated with that special purpose.

(e) Except when operating in accordance with the terms and conditions of a certificate of waiver or special operating limitations issued by the Administrator, no person may operate a restricted category civil aircraft within the United States—

(1) Over a densely populated area;

(2) In a congested airway; or

(3) Near a busy airport where passenger transport operations are conducted.

(f) This section does not apply to nonpassenger-carrying civil rotorcraft external-load operations conducted under part 133 of this chapter.

(g) No person may operate a small restricted-category civil airplane manufactured after July 18, 1978, unless an approved shoulder harness is installed for each front seat. The shoulder harness must be designed to protect each occupant from serious head injury when the occupant experiences the ultimate inertia forces specified in §23.561(b)(2) of this chapter. The shoulder harness installation at each flight crewmember station must permit the crewmember, when seated and with the safety belt and shoulder harness fastened, to perform all functions necessary for flight operation. For purposes of this paragraph—

(1) The date of manufacture of an airplane is the date the inspection acceptance records reflect that the airplane is complete and meets the FAA-approved type design data; and

(2) A front seat is a seat located at a flight crewmember station or any seat located alongside such a seat.

§91.315 Limited category civil aircraft: Operating limitations.

No person may operate a limited category civil aircraft carrying persons or property for compensation or hire.

§91.317 Provisionally certificated civil aircraft: Operating limitations.

(a) No person may operate a provisionally certificated civil aircraft un-

less that person is eligible for a provisional airworthiness certificate under §21.213 of this chapter.

(b) No person may operate a provisionally certificated civil aircraft outside the United States unless that person has specific authority to do so from the Administrator and each foreign country involved.

(c) Unless otherwise authorized by the Director, Flight Standards Service, no person may operate a provisionally certificated civil aircraft in air transportation.

(d) Unless otherwise authorized by the Administrator, no person may operate a provisionally certificated civil aircraft except—

(1) In direct conjunction with the type or supplemental type certification of that aircraft;

(2) For training flight crews, including simulated air carrier operations;

(3) Demonstration flight by the manufacturer for prospective purchasers;

(4) Market surveys by the manufacturer;

(5) Flight checking of instruments, accessories, and equipment that do not affect the basic airworthiness of the aircraft; or

(6) Service testing of the aircraft.

(e) Each person operating a provisionally certificated civil aircraft shall operate within the prescribed limitations displayed in the aircraft or set forth in the provisional aircraft flight manual or other appropriate document. However, when operating in direct conjunction with the type or supplemental type certification of the aircraft, that person shall operate under the experimental aircraft limitations of §21.191 of this chapter and when flight testing, shall operate under the requirements of §91.305 of this part.

(f) Each person operating a provisionally certificated civil aircraft shall establish approved procedures for—

(1) The use and guidance of flight and ground personnel in operating under this section; and

(2) Operating in and out of airports where takeoffs or approaches over populated areas are necessary. No person may operate that aircraft except in compliance with the approved procedures.

(g) Each person operating a provisionally certificated civil aircraft shall ensure that each flight crewmember is properly certificated and has adequate knowledge of, and familiarity with, the aircraft and procedures to be used by that crewmember.

(h) Each person operating a provisionally certificated civil aircraft shall maintain it as required by applicable regulations and as may be specially prescribed by the Administrator.

(i) Whenever the manufacturer, or the Administrator, determines that a change in design, construction, or operation is necessary to ensure safe operation, no person may operate a provisionally certificated civil aircraft until that change has been made and approved. Section 21.99 of this chapter applies to operations under this section.

(j) Each person operating a provisionally certificated civil aircraft—

(1) May carry in that aircraft only persons who have a proper interest in the operations allowed by this section or who are specifically authorized by both the manufacturer and the Administrator; and

(2) Shall advise each person carried that the aircraft is provisionally certificated.

(k) The Administrator may prescribe additional limitations or procedures that the Administrator considers necessary, including limitations on the number of persons who may be carried in the aircraft.

(Approved by the Office of Management and Budget under control number 2120-0005)

[Doc. No. 18334, 54 FR 34308, Aug. 18, 1989, as amended by Amdt. 91-212, 54 FR 39293, Sept. 25, 1989]

§91.319 Aircraft having experimental certificates: Operating limitations.

(a) No person may operate an aircraft that has an experimental certificate—

(1) For other than the purpose for which the certificate was issued; or

(2) Carrying persons or property for compensation or hire.

(b) No person may operate an aircraft that has an experimental certificate outside of an area assigned by the Administrator until it is shown that—

(1) The aircraft is controllable throughout its normal range of speeds

and throughout all the maneuvers to be executed; and

(2) The aircraft has no hazardous operating characteristics or design features.

(c) Unless otherwise authorized by the Administrator in special operating limitations, no person may operate an aircraft that has an experimental certificate over a densely populated area or in a congested airway. The Administrator may issue special operating limitations for particular aircraft to permit takeoffs and landings to be conducted over a densely populated area or in a congested airway, in accordance with terms and conditions specified in the authorization in the interest of safety in air commerce.

(d) Each person operating an aircraft that has an experimental certificate shall—

(1) Advise each person carried of the experimental nature of the aircraft;

(2) Operate under VFR, day only, unless otherwise specifically authorized by the Administrator; and

(3) Notify the control tower of the experimental nature of the aircraft when operating the aircraft into or out of airports with operating control towers.

(e) The Administrator may prescribe additional limitations that the Administrator considers necessary, including limitations on the persons that may be carried in the aircraft.

(Approved by the Office of Management and Budget under control number 2120-0005)

§91.321 Carriage of candidates in Federal elections.

(a) An aircraft operator, other than one operating an aircraft under the rules of part 121, 125, or 135 of this chapter, may receive payment for the carriage of a candidate in a Federal election, an agent of the candidate, or a person traveling on behalf of the candidate, if—

(1) That operator's primary business is not as an air carrier or commercial operator;

(2) The carriage is conducted under the rules of this part 91; and

(3) The payment for the carriage is required, and does not exceed the amount required to be paid, by regulations of the Federal Election Commission (11 CFR *et seq.*).

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(b) For the purposes of this section, the terms *candidate* and *election* have the same meaning as that set forth in the regulations of the Federal Election Commission.

§ 91.323 Increased maximum certificated weights for certain airplanes operated in Alaska.

(a) Notwithstanding any other provision of the Federal Aviation Regulations, the Administrator will approve, as provided in this section, an increase in the maximum certificated weight of an airplane type certificated under Aeronautics Bulletin No. 7-A of the U.S. Department of Commerce dated January 1, 1931, as amended, or under the normal category of part 4a of the former Civil Air Regulations (14 CFR part 4a, 1964 ed.) if that airplane is operated in the State of Alaska by—

(1) A certificate holder conducting operations under part 121 or part 135 of this chapter; or

(2) The U.S. Department of Interior in conducting its game and fish law enforcement activities or its management, fire detection, and fire suppression activities concerning public lands.

(b) The maximum certificated weight approved under this section may not exceed—

(1) 12,500 pounds;

(2) 115 percent of the maximum weight listed in the FAA aircraft specifications;

(3) The weight at which the airplane meets the positive maneuvering load factor requirement for the normal category specified in § 23.337 of this chapter; or

(4) The weight at which the airplane meets the climb performance requirements under which it was type certificated.

(c) In determining the maximum certificated weight, the Administrator considers the structural soundness of the airplane and the terrain to be traversed.

(d) The maximum certificated weight determined under this section is added to the airplane's operation limitations and is identified as the maximum

weight authorized for operations within the State of Alaska.

[Doc. No. 18334, 54 FR 34308, Aug. 18, 1989; Amdt. 91-211, 54 FR 41211, Oct. 5, 1989, as amended by Amdt. 91-253, 62 FR 13253, Mar. 19, 1997]

§ 91.325 Primary category aircraft: Operating limitations.

(a) No person may operate a primary category aircraft carrying persons or property for compensation or hire.

(b) No person may operate a primary category aircraft that is maintained by the pilot-owner under an approved special inspection and maintenance program except—

(1) The pilot-owner; or

(2) A designee of the pilot-owner, provided that the pilot-owner does not receive compensation for the use of the aircraft.

[Doc. No. 23345, 57 FR 41370, Sept. 9, 1992]

§§ 91.326-91.399 [Reserved]

Subpart E—Maintenance, Preventive Maintenance, and Alterations

SOURCE: Docket No. 18334, 54 FR 34311, Aug. 18, 1989, unless otherwise noted.

§ 91.401 Applicability.

(a) This subpart prescribes rules governing the maintenance, preventive maintenance, and alterations of U.S.-registered civil aircraft operating within or outside of the United States.

(b) Sections 91.405, 91.409, 91.411, 91.417, and 91.419 of this subpart do not apply to an aircraft maintained in accordance with a continuous airworthiness maintenance program as provided in part 121, 129, or § 135.411(a)(2) of this chapter.

(c) Sections 91.405 and 91.409 of this part do not apply to an airplane inspected in accordance with part 125 of this chapter.

[Doc. No. 18334, 54 FR 34311, Aug. 18, 1989, as amended by Amdt. 91-267, 66 FR 21066, Apr. 27, 2001]

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§ 91.403 General.

(a) The owner or operator of an aircraft is primarily responsible for maintaining that aircraft in an airworthy condition, including compliance with part 39 of this chapter.

(b) No person may perform maintenance, preventive maintenance, or alterations on an aircraft other than as prescribed in this subpart and other applicable regulations, including part 43 of this chapter.

(c) No person may operate an aircraft for which a manufacturer's maintenance manual or instructions for continued airworthiness has been issued that contains an airworthiness limitations section unless the mandatory replacement times, inspection intervals, and related procedures specified in that section or alternative inspection intervals and related procedures set forth in an operations specification approved by the Administrator under part 121 or 135 of this chapter or in accordance with an inspection program approved under § 91.409(e) have been complied with.

[Doc. No. 18334, 54 FR 34311, Aug. 18, 1989, as amended by Amdt. 91-267, 66 FR 21066, Apr. 27, 2001]

§ 91.405 Maintenance required.

Each owner or operator of an aircraft—

(a) Shall have that aircraft inspected as prescribed in subpart E of this part and shall between required inspections, except as provided in paragraph (c) of this section, have discrepancies repaired as prescribed in part 43 of this chapter;

(b) Shall ensure that maintenance personnel make appropriate entries in the aircraft maintenance records indicating the aircraft has been approved for return to service;

(c) Shall have any inoperative instrument or item of equipment, permitted to be inoperative by § 91.213(d)(2) of this part, repaired, replaced, removed, or inspected at the next required inspection; and

(d) When listed discrepancies include inoperative instruments or equipment, shall ensure that a placard has been installed as required by § 43.11 of this chapter.

§ 91.407 Operation after maintenance, preventive maintenance, rebuilding, or alteration.

(a) No person may operate any aircraft that has undergone maintenance, preventive maintenance, rebuilding, or alteration unless—

(1) It has been approved for return to service by a person authorized under § 43.7 of this chapter; and

(2) The maintenance record entry required by § 43.9 or § 43.11, as applicable, of this chapter has been made.

(b) No person may carry any person (other than crewmembers) in an aircraft that has been maintained, rebuilt, or altered in a manner that may have appreciably changed its flight characteristics or substantially affected its operation in flight until an appropriately rated pilot with at least a private pilot certificate flies the aircraft, makes an operational check of the maintenance performed or alteration made, and logs the flight in the aircraft records.

(c) The aircraft does not have to be flown as required by paragraph (b) of this section if, prior to flight, ground tests, inspection, or both show conclusively that the maintenance, preventive maintenance, rebuilding, or alteration has not appreciably changed the flight characteristics or substantially affected the flight operation of the aircraft.

(Approved by the Office of Management and Budget under control number 2120-0005)

§ 91.409 Inspections.

(a) Except as provided in paragraph (c) of this section, no person may operate an aircraft unless, within the preceding 12 calendar months, it has had—

(1) An annual inspection in accordance with part 43 of this chapter and has been approved for return to service by a person authorized by § 43.7 of this chapter; or

(2) An inspection for the issuance of an airworthiness certificate in accordance with part 21 of this chapter.

No inspection performed under paragraph (b) of this section may be substituted for any inspection required by this paragraph unless it is performed by a person authorized to perform annual inspections and is entered as an

“annual” inspection in the required maintenance records.

(b) Except as provided in paragraph (c) of this section, no person may operate an aircraft carrying any person (other than a crewmember) for hire, and no person may give flight instruction for hire in an aircraft which that person provides, unless within the preceding 100 hours of time in service the aircraft has received an annual or 100-hour inspection and been approved for return to service in accordance with part 43 of this chapter or has received an inspection for the issuance of an airworthiness certificate in accordance with part 21 of this chapter. The 100-hour limitation may be exceeded by not more than 10 hours while en route to reach a place where the inspection can be done. The excess time used to reach a place where the inspection can be done must be included in computing the next 100 hours of time in service.

(c) Paragraphs (a) and (b) of this section do not apply to—

(1) An aircraft that carries a special flight permit, a current experimental certificate, or a provisional airworthiness certificate;

(2) An aircraft inspected in accordance with an approved aircraft inspection program under part 125 or 135 of this chapter and so identified by the registration number in the operations specifications of the certificate holder having the approved inspection program;

(3) An aircraft subject to the requirements of paragraph (d) or (e) of this section; or

(4) Turbine-powered rotorcraft when the operator elects to inspect that rotorcraft in accordance with paragraph (e) of this section.

(d) *Progressive inspection.* Each registered owner or operator of an aircraft desiring to use a progressive inspection program must submit a written request to the FAA Flight Standards district office having jurisdiction over the area in which the applicant is located, and shall provide—

(1) A certificated mechanic holding an inspection authorization, a certificated airframe repair station, or the manufacturer of the aircraft to supervise or conduct the progressive inspection;

(2) A current inspection procedures manual available and readily understandable to pilot and maintenance personnel containing, in detail—

(i) An explanation of the progressive inspection, including the continuity of inspection responsibility, the making of reports, and the keeping of records and technical reference material;

(ii) An inspection schedule, specifying the intervals in hours or days when routine and detailed inspections will be performed and including instructions for exceeding an inspection interval by not more than 10 hours while en route and for changing an inspection interval because of service experience;

(iii) Sample routine and detailed inspection forms and instructions for their use; and

(iv) Sample reports and records and instructions for their use;

(3) Enough housing and equipment for necessary disassembly and proper inspection of the aircraft; and

(4) Appropriate current technical information for the aircraft.

The frequency and detail of the progressive inspection shall provide for the complete inspection of the aircraft within each 12 calendar months and be consistent with the manufacturer's recommendations, field service experience, and the kind of operation in which the aircraft is engaged. The progressive inspection schedule must ensure that the aircraft, at all times, will be airworthy and will conform to all applicable FAA aircraft specifications, type certificate data sheets, airworthiness directives, and other approved data. If the progressive inspection is discontinued, the owner or operator shall immediately notify the local FAA Flight Standards district office, in writing, of the discontinuance. After the discontinuance, the first annual inspection under § 91.409(a)(1) is due within 12 calendar months after the last complete inspection of the aircraft under the progressive inspection. The 100-hour inspection under § 91.409(b) is due within 100 hours after that complete inspection. A complete inspection of the aircraft, for the purpose of determining when the annual and 100-hour inspections are due, requires a detailed inspection of the aircraft and all its

components in accordance with the progressive inspection. A routine inspection of the aircraft and a detailed inspection of several components is not considered to be a complete inspection.

(e) *Large airplanes (to which part 125 is not applicable), turbojet multiengine airplanes, turbopropeller-powered multiengine airplanes, and turbine-powered rotorcraft.* No person may operate a large airplane, turbojet multiengine airplane, turbopropeller-powered multiengine airplane, or turbine-powered rotorcraft unless the replacement times for life-limited parts specified in the aircraft specifications, type data sheets, or other documents approved by the Administrator are complied with and the airplane or turbine-powered rotorcraft, including the airframe, engines, propellers, rotors, appliances, survival equipment, and emergency equipment, is inspected in accordance with an inspection program selected under the provisions of paragraph (f) of this section, except that, the owner or operator of a turbine-powered rotorcraft may elect to use the inspection provisions of §91.409(a), (b), (c), or (d) in lieu of an inspection option of §91.409(f).

(f) *Selection of inspection program under paragraph (e) of this section.* The registered owner or operator of each airplane or turbine-powered rotorcraft described in paragraph (e) of this section must select, identify in the aircraft maintenance records, and use one of the following programs for the inspection of the aircraft:

(1) A continuous airworthiness inspection program that is part of a continuous airworthiness maintenance program currently in use by a person holding an air carrier operating certificate or an operating certificate issued under part 121 or 135 of this chapter and operating that make and model aircraft under part 121 of this chapter or operating that make and model under part 135 of this chapter and maintaining it under §135.411(a)(2) of this chapter.

(2) An approved aircraft inspection program approved under §135.419 of this chapter and currently in use by a person holding an operating certificate issued under part 135 of this chapter.

(3) A current inspection program recommended by the manufacturer.

(4) Any other inspection program established by the registered owner or operator of that airplane or turbine-powered rotorcraft and approved by the Administrator under paragraph (g) of this section. However, the Administrator may require revision of this inspection program in accordance with the provisions of §91.415.

Each operator shall include in the selected program the name and address of the person responsible for scheduling the inspections required by the program and make a copy of that program available to the person performing inspections on the aircraft and, upon request, to the Administrator.

(g) *Inspection program approved under paragraph (e) of this section.* Each operator of an airplane or turbine-powered rotorcraft desiring to establish or change an approved inspection program under paragraph (f)(4) of this section must submit the program for approval to the local FAA Flight Standards district office having jurisdiction over the area in which the aircraft is based. The program must be in writing and include at least the following information:

(1) Instructions and procedures for the conduct of inspections for the particular make and model airplane or turbine-powered rotorcraft, including necessary tests and checks. The instructions and procedures must set forth in detail the parts and areas of the airframe, engines, propellers, rotors, and appliances, including survival and emergency equipment required to be inspected.

(2) A schedule for performing the inspections that must be performed under the program expressed in terms of the time in service, calendar time, number of system operations, or any combination of these.

(h) *Changes from one inspection program to another.* When an operator changes from one inspection program under paragraph (f) of this section to another, the time in service, calendar times, or cycles of operation accumulated under the previous program must

be applied in determining inspection due times under the new program.

(Approved by the Office of Management and Budget under control number 2120-0005)

[Doc. No. 18334, 54 FR 34311, Aug. 18, 1989; Amdt. 91-211, 54 FR 41211, Oct. 5, 1989; Amdt. 91-267, 66 FR 21066, Apr. 27, 2001]

§91.410 Special maintenance program requirements.

(a) No person may operate an Airbus Model A300 (excluding the -600 series), British Aerospace Model BAC 1-11, Boeing Model, 707, 720, 727, 737 or 747, McDonnell Douglas Model DC-8, DC-9/MD-80 or DC-10, Fokker Model F28, or Lockheed Model L-1011 airplane beyond applicable flight cycle implementation time specified below, or May 25, 2001, whichever occurs later, unless repair assessment guidelines applicable to the fuselage pressure boundary (fuselage skin, door skin, and bulkhead webs) that have been approved by the FAA Aircraft Certification Office (ACO), or office of the Transport Airplane Directorate, having cognizance over the type certificate for the affected airplane are incorporated within its inspection program:

(1) For the Airbus Model A300 (excluding the -600 series), the flight cycle implementation time is:

(i) Model B2: 36,000 flights.

(ii) Model B4-100 (including Model B4-2C): 30,000 flights above the window line, and 36,000 flights below the window line.

(iii) Model B4-200: 25,500 flights above the window line, and 34,000 flights below the window line.

(2) For all models of the British Aerospace BAC 1-11, the flight cycle implementation time is 60,000 flights.

(3) For all models of the Boeing 707, the flight cycle implementation time is 15,000 flights.

(4) For all models of the Boeing 720, the flight cycle implementation time is 23,000 flights.

(5) For all models of the Boeing 727, the flight cycle implementation time is 45,000 flights.

(6) For all models of the Boeing 737, the flight cycle implementation time is 60,000 flights.

(7) For all models of the Boeing 747, the flight cycle implementation time is 15,000 flights.

(8) For all models of the McDonnell Douglas DC-8, the flight cycle implementation time is 30,000 flights.

(9) For all models of the McDonnell Douglas DC-9/MD-80, the flight cycle implementation time is 60,000 flights.

(10) For all models of the McDonnell Douglas DC-10, the flight cycle implementation time is 30,000 flights.

(11) For all models of the Lockheed L-1011, the flight cycle implementation time is 27,000 flights.

(12) For the Fokker F-28 Mark 1000, 2000, 3000, and 4000, the flight cycle implementation time is 60,000 flights.

(b) After December 6, 2004, no person may operate a turbine-powered transport category airplane with a type certificate issued after January 1, 1958, and either a maximum type certificated passenger capacity of 30 or more, or a maximum type certificated payload capacity of 7,500 pounds or more, unless instructions for maintenance and inspection of the fuel tank system are incorporated into its inspection program. These instructions must address the actual configuration of the fuel tank systems of each affected airplane, and must be approved by the FAA Aircraft Certification Office (ACO), or office of the Transport Airplane Directorate, having cognizance over the type certificate for the affected airplane. Operators must submit their request through the cognizant Flight Standards District Office, who may add comments and then send it to the manager of the appropriate office. Thereafter, the approved instructions can be revised only with the approval of the FAA Aircraft Certification Office (ACO), or office of the Transport Airplane Directorate, having cognizance over the type certificate for the affected airplane. Operators must submit their request for revisions through the cognizant Flight Standards District Office, who may add comments and then send it to the manager of the appropriate office.

[Doc. No. 29104, 65 FR 24125, Apr. 25, 2000; 65 FR 35703, June 5, 2000; 65 FR 50744, Aug. 21, 2000, as amended by Amdt. 91-266, 66 FR 23130, May 7, 2001; Amdt. 91-272, 67 FR 72834, Dec. 9, 2002]

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§91.411 Altimeter system and altitude reporting equipment tests and inspections.

(a) No person may operate an airplane, or helicopter, in controlled airspace under IFR unless—

(1) Within the preceding 24 calendar months, each static pressure system, each altimeter instrument, and each automatic pressure altitude reporting system has been tested and inspected and found to comply with appendix E of part 43 of this chapter;

(2) Except for the use of system drain and alternate static pressure valves, following any opening and closing of the static pressure system, that system has been tested and inspected and found to comply with paragraph (a), appendices E and F, of part 43 of this chapter; and

(3) Following installation or maintenance on the automatic pressure altitude reporting system of the ATC transponder where data correspondence error could be introduced, the integrated system has been tested, inspected, and found to comply with paragraph (c), appendix E, of part 43 of this chapter.

(b) The tests required by paragraph (a) of this section must be conducted by—

(1) The manufacturer of the airplane, or helicopter, on which the tests and inspections are to be performed;

(2) A certificated repair station properly equipped to perform those functions and holding—

(i) An instrument rating, Class I;

(ii) A limited instrument rating appropriate to the make and model of appliance to be tested;

(iii) A limited rating appropriate to the test to be performed;

(iv) An airframe rating appropriate to the airplane, or helicopter, to be tested; or

(v) A limited rating for a manufacturer issued for the appliance in accordance with §145.101(b)(4) of this chapter; or

(3) A certificated mechanic with an airframe rating (static pressure system tests and inspections only).

(c) Altimeter and altitude reporting equipment approved under Technical Standard Orders are considered to be

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tested and inspected as of the date of their manufacture.

(d) No person may operate an airplane, or helicopter, in controlled airspace under IFR at an altitude above the maximum altitude at which all altimeters and the automatic altitude reporting system of that airplane, or helicopter, have been tested.

EFFECTIVE DATE NOTE: At 66 FR 41116, Aug. 6, 2001, §91.411 was amended by removing paragraph (b)(2)(v), effective Apr. 6, 2003.

§91.413 ATC transponder tests and inspections.

(a) No persons may use an ATC transponder that is specified in 91.215(a), 121.345(c), or §135.143(c) of this chapter unless, within the preceding 24 calendar months, the ATC transponder has been tested and inspected and found to comply with appendix F of part 43 of this chapter; and

(b) Following any installation or maintenance on an ATC transponder where data correspondence error could be introduced, the integrated system has been tested, inspected, and found to comply with paragraph (c), appendix E, of part 43 of this chapter.

(c) The tests and inspections specified in this section must be conducted by—

(1) A certificated repair station properly equipped to perform those functions and holding—

(i) A radio rating, Class III;

(ii) A limited radio rating appropriate to the make and model transponder to be tested;

(iii) A limited rating appropriate to the test to be performed;

(iv) A limited rating for a manufacturer issued for the transponder in accordance with §145.101(b)(4) of this chapter; or

(2) A holder of a continuous airworthiness maintenance program as provided in part 121 or §135.411(a)(2) of this chapter; or

(3) The manufacturer of the aircraft on which the transponder to be tested is installed, if the transponder was installed by that manufacturer.

[Doc. No. 18334, 54 FR 34311, Aug. 18, 1989, as amended by Amdt. 91-267, 66 FR 21066, Apr. 27, 2001]

EFFECTIVE DATE NOTE: At 66 FR 41116, Aug. 6, 2001, § 91.413 was amended by removing paragraph (c)(1)(iv), effective Apr. 6, 2003.

§ 91.415 Changes to aircraft inspection programs.

(a) Whenever the Administrator finds that revisions to an approved aircraft inspection program under § 91.409(f)(4) are necessary for the continued adequacy of the program, the owner or operator shall, after notification by the Administrator, make any changes in the program found to be necessary by the Administrator.

(b) The owner or operator may petition the Administrator to reconsider the notice to make any changes in a program in accordance with paragraph (a) of this section.

(c) The petition must be filed with the FAA Flight Standards district office which requested the change to the program within 30 days after the certificate holder receives the notice.

(d) Except in the case of an emergency requiring immediate action in the interest of safety, the filing of the petition stays the notice pending a decision by the Administrator.

§ 91.417 Maintenance records.

(a) Except for work performed in accordance with §§ 91.411 and 91.413, each registered owner or operator shall keep the following records for the periods specified in paragraph (b) of this section:

(1) Records of the maintenance, preventive maintenance, and alteration and records of the 100-hour, annual, progressive, and other required or approved inspections, as appropriate, for each aircraft (including the airframe) and each engine, propeller, rotor, and appliance of an aircraft. The records must include—

(i) A description (or reference to data acceptable to the Administrator) of the work performed; and

(ii) The date of completion of the work performed; and

(iii) The signature, and certificate number of the person approving the aircraft for return to service.

(2) Records containing the following information:

(i) The total time in service of the airframe, each engine, each propeller, and each rotor.

(ii) The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance.

(iii) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis.

(iv) The current inspection status of the aircraft, including the time since the last inspection required by the inspection program under which the aircraft and its appliances are maintained.

(v) The current status of applicable airworthiness directives (AD) including, for each, the method of compliance, the AD number, and revision date. If the AD involves recurring action, the time and date when the next action is required.

(vi) Copies of the forms prescribed by § 43.9(a) of this chapter for each major alteration to the airframe and currently installed engines, rotors, propellers, and appliances.

(b) The owner or operator shall retain the following records for the periods prescribed:

(1) The records specified in paragraph (a)(1) of this section shall be retained until the work is repeated or superseded by other work or for 1 year after the work is performed.

(2) The records specified in paragraph (a)(2) of this section shall be retained and transferred with the aircraft at the time the aircraft is sold.

(3) A list of defects furnished to a registered owner or operator under § 43.11 of this chapter shall be retained until the defects are repaired and the aircraft is approved for return to service.

(c) The owner or operator shall make all maintenance records required to be kept by this section available for inspection by the Administrator or any authorized representative of the National Transportation Safety Board (NTSB). In addition, the owner or operator shall present Form 337 described in paragraph (d) of this section for inspection upon request of any law enforcement officer.

(d) When a fuel tank is installed within the passenger compartment or a baggage compartment pursuant to part 43 of this chapter, a copy of FAA Form

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337 shall be kept on board the modified aircraft by the owner or operator.

(Approved by the Office of Management and Budget under control number 2120-0005)

§91.419 Transfer of maintenance records.

Any owner or operator who sells a U.S.-registered aircraft shall transfer to the purchaser, at the time of sale, the following records of that aircraft, in plain language form or in coded form at the election of the purchaser, if the coded form provides for the preservation and retrieval of information in a manner acceptable to the Administrator:

(a) The records specified in §91.417(a)(2).

(b) The records specified in §91.417(a)(1) which are not included in the records covered by paragraph (a) of this section, except that the purchaser may permit the seller to keep physical custody of such records. However, custody of records by the seller does not relieve the purchaser of the responsibility under §91.417(c) to make the records available for inspection by the Administrator or any authorized representative of the National Transportation Safety Board (NTSB).

§91.421 Rebuilt engine maintenance records.

(a) The owner or operator may use a new maintenance record, without previous operating history, for an aircraft engine rebuilt by the manufacturer or by an agency approved by the manufacturer.

(b) Each manufacturer or agency that grants zero time to an engine rebuilt by it shall enter in the new record—

(1) A signed statement of the date the engine was rebuilt;

(2) Each change made as required by airworthiness directives; and

(3) Each change made in compliance with manufacturer's service bulletins, if the entry is specifically requested in that bulletin.

(c) For the purposes of this section, a rebuilt engine is a used engine that has been completely disassembled, inspected, repaired as necessary, reassembled, tested, and approved in the same manner and to the same toler-

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ances and limits as a new engine with either new or used parts. However, all parts used in it must conform to the production drawing tolerances and limits for new parts or be of approved oversized or undersized dimensions for a new engine.

§§ 91.423-91.499 [Reserved]

Subpart F—Large and Turbine-Powered Multiengine Airplanes

SOURCE: Docket No. 18334, 54 FR 34314, Aug. 18, 1989, unless otherwise noted.

§91.501 Applicability.

(a) This subpart prescribes operating rules, in addition to those prescribed in other subparts of this part, governing the operation of large and of turbojet-powered multiengine civil airplanes of U.S. registry. The operating rules in this subpart do not apply to those airplanes when they are required to be operated under parts 121, 125, 129, 135, and 137 of this chapter. (Section 91.409 prescribes an inspection program for large and for turbine-powered (turbojet and turboprop) multiengine airplanes of U.S. registry when they are operated under this part or part 129 or 137.)

(b) Operations that may be conducted under the rules in this subpart instead of those in parts 121, 129, 135, and 137 of this chapter when common carriage is not involved, include—

(1) Ferry or training flights;

(2) Aerial work operations such as aerial photography or survey, or pipeline patrol, but not including fire fighting operations;

(3) Flights for the demonstration of an airplane to prospective customers when no charge is made except for those specified in paragraph (d) of this section;

(4) Flights conducted by the operator of an airplane for his personal transportation, or the transportation of his guests when no charge, assessment, or fee is made for the transportation;

(5) Carriage of officials, employees, guests, and property of a company on an airplane operated by that company, or the parent or a subsidiary of the company or a subsidiary of the parent, when the carriage is within the scope of, and incidental to, the business of

the company (other than transportation by air) and no charge, assessment or fee is made for the carriage in excess of the cost of owning, operating, and maintaining the airplane, except that no charge of any kind may be made for the carriage of a guest of a company, when the carriage is not within the scope of, and incidental to, the business of that company;

(6) The carriage of company officials, employees, and guests of the company on an airplane operated under a time sharing, interchange, or joint ownership agreement as defined in paragraph (c) of this section;

(7) The carriage of property (other than mail) on an airplane operated by a person in the furtherance of a business or employment (other than transportation by air) when the carriage is within the scope of, and incidental to, that business or employment and no charge, assessment, or fee is made for the carriage other than those specified in paragraph (d) of this section;

(8) The carriage on an airplane of an athletic team, sports group, choral group, or similar group having a common purpose or objective when there is no charge, assessment, or fee of any kind made by any person for that carriage; and

(9) The carriage of persons on an airplane operated by a person in the furtherance of a business other than transportation by air for the purpose of selling them land, goods, or property, including franchises or distributorships, when the carriage is within the scope of, and incidental to, that business and no charge, assessment, or fee is made for that carriage.

(c) As used in this section—

(1) A *time sharing agreement* means an arrangement whereby a person leases his airplane with flight crew to another person, and no charge is made for the flights conducted under that arrangement other than those specified in paragraph (d) of this section;

(2) An *interchange agreement* means an arrangement whereby a person leases his airplane to another person in exchange for equal time, when needed, on the other person's airplane, and no charge, assessment, or fee is made, except that a charge may be made not to exceed the difference between the cost

of owning, operating, and maintaining the two airplanes;

(3) A *joint ownership agreement* means an arrangement whereby one of the registered joint owners of an airplane employs and furnishes the flight crew for that airplane and each of the registered joint owners pays a share of the charge specified in the agreement.

(d) The following may be charged, as expenses of a specific flight, for transportation as authorized by paragraphs (b) (3) and (7) and (c)(1) of this section:

(1) Fuel, oil, lubricants, and other additives.

(2) Travel expenses of the crew, including food, lodging, and ground transportation.

(3) Hangar and tie-down costs away from the aircraft's base of operation.

(4) Insurance obtained for the specific flight.

(5) Landing fees, airport taxes, and similar assessments.

(6) Customs, foreign permit, and similar fees directly related to the flight.

(7) In flight food and beverages.

(8) Passenger ground transportation.

(9) Flight planning and weather contract services.

(10) An additional charge equal to 100 percent of the expenses listed in paragraph (d)(1) of this section.

§ 91.503 Flying equipment and operating information.

(a) The pilot in command of an airplane shall ensure that the following flying equipment and aeronautical charts and data, in current and appropriate form, are accessible for each flight at the pilot station of the airplane:

(1) A flashlight having at least two size "D" cells, or the equivalent, that is in good working order.

(2) A cockpit checklist containing the procedures required by paragraph (b) of this section.

(3) Pertinent aeronautical charts.

(4) For IFR, VFR over-the-top, or night operations, each pertinent navigational en route, terminal area, and approach and letdown chart.

(5) In the case of multiengine airplanes, one-engine inoperative climb performance data.

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(b) Each cockpit checklist must contain the following procedures and shall be used by the flight crewmembers when operating the airplane:

- (1) Before starting engines.
- (2) Before takeoff.
- (3) Cruise.
- (4) Before landing.
- (5) After landing.
- (6) Stopping engines.
- (7) Emergencies.

(c) Each emergency cockpit checklist procedure required by paragraph (b)(7) of this section must contain the following procedures, as appropriate:

(1) Emergency operation of fuel, hydraulic, electrical, and mechanical systems.

(2) Emergency operation of instruments and controls.

(3) Engine inoperative procedures.

(4) Any other procedures necessary for safety.

(d) The equipment, charts, and data prescribed in this section shall be used by the pilot in command and other members of the flight crew, when pertinent.

§91.505 Familiarity with operating limitations and emergency equipment.

(a) Each pilot in command of an airplane shall, before beginning a flight, become familiar with the Airplane Flight Manual for that airplane, if one is required, and with any placards, listings, instrument markings, or any combination thereof, containing each operating limitation prescribed for that airplane by the Administrator, including those specified in §91.9(b).

(b) Each required member of the crew shall, before beginning a flight, become familiar with the emergency equipment installed on the airplane to which that crewmember is assigned and with the procedures to be followed for the use of that equipment in an emergency situation.

§91.507 Equipment requirements: Over-the-top or night VFR operations.

No person may operate an airplane over-the-top or at night under VFR unless that airplane is equipped with the instruments and equipment required for IFR operations under §91.205(d) and one electric landing light for night op-

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erations. Each required instrument and item of equipment must be in operable condition.

§91.509 Survival equipment for overwater operations.

(a) No person may take off an airplane for a flight over water more than 50 nautical miles from the nearest shore unless that airplane is equipped with a life preserver or an approved flotation means for each occupant of the airplane.

(b) No person may take off an airplane for a flight over water more than 30 minutes flying time or 100 nautical miles from the nearest shore unless it has on board the following survival equipment:

(1) A life preserver, equipped with an approved survivor locator light, for each occupant of the airplane.

(2) Enough liferafts (each equipped with an approved survival locator light) of a rated capacity and buoyancy to accommodate the occupants of the airplane.

(3) At least one pyrotechnic signaling device for each liferaft.

(4) One self-buoyant, water-resistant, portable emergency radio signaling device that is capable of transmission on the appropriate emergency frequency or frequencies and not dependent upon the airplane power supply.

(5) A lifeline stored in accordance with §25.1411(g) of this chapter.

(c) The required liferafts, life preservers, and signaling devices must be installed in conspicuously marked locations and easily accessible in the event of a ditching without appreciable time for preparatory procedures.

(d) A survival kit, appropriately equipped for the route to be flown, must be attached to each required liferaft.

(e) As used in this section, the term shore means that area of the land adjacent to the water which is above the high water mark and excludes land areas which are intermittently under water.

§91.511 Radio equipment for overwater operations.

(a) Except as provided in paragraphs (c), (d), and (f) of this section, no person may take off an airplane for a

flight over water more than 30 minutes flying time or 100 nautical miles from the nearest shore unless it has at least the following operable equipment:

(1) Radio communication equipment appropriate to the facilities to be used and able to transmit to, and receive from, any place on the route, at least one surface facility:

- (i) Two transmitters.
- (ii) Two microphones.
- (iii) Two headsets or one headset and one speaker.
- (iv) Two independent receivers.

(2) Appropriate electronic navigational equipment consisting of at least two independent electronic navigation units capable of providing the pilot with the information necessary to navigate the airplane within the airspace assigned by air traffic control. However, a receiver that can receive both communications and required navigational signals may be used in place of a separate communications receiver and a separate navigational signal receiver or unit.

(b) For the purposes of paragraphs (a)(1)(iv) and (a)(2) of this section, a receiver or electronic navigation unit is independent if the function of any part of it does not depend on the functioning of any part of another receiver or electronic navigation unit.

(c) Notwithstanding the provisions of paragraph (a) of this section, a person may operate an airplane on which no passengers are carried from a place where repairs or replacement cannot be made to a place where they can be made, if not more than one of each of the dual items of radio communication and navigational equipment specified in paragraphs (a)(1) (i) through (iv) and (a)(2) of this section malfunctions or becomes inoperative.

(d) Notwithstanding the provisions of paragraph (a) of this section, when both VHF and HF communications equipment are required for the route and the airplane has two VHF transmitters and two VHF receivers for communications, only one HF transmitter and one HF receiver is required for communications.

(e) As used in this section, the term *shore* means that area of the land adjacent to the water which is above the high-water mark and excludes land

areas which are intermittently under water.

(f) Notwithstanding the requirements in paragraph (a)(2) of this section, a person may operate in the Gulf of Mexico, the Caribbean Sea, and the Atlantic Ocean west of a line which extends from 44°47'00" N / 67°00'00" W to 39°00'00" N / 67°00'00" W to 38°30'00" N / 60°00'00" W south along the 60°00'00" W longitude line to the point where the line intersects with the northern coast of South America, when:

(1) A single long-range navigation system is installed, operational, and appropriate for the route; and

(2) Flight conditions and the aircraft's capabilities are such that no more than a 30-minute gap in two-way radio very high frequency communications is expected to exist.

[Doc. No. 18334, 54 FR 34314, Aug. 18, 1989, as amended by Amdt. 91-249, 61 FR 7190, Feb. 26, 1996]

§91.513 Emergency equipment.

(a) No person may operate an airplane unless it is equipped with the emergency equipment listed in this section.

(b) Each item of equipment—

(1) Must be inspected in accordance with §91.409 to ensure its continued serviceability and immediate readiness for its intended purposes;

(2) Must be readily accessible to the crew;

(3) Must clearly indicate its method of operation; and

(4) When carried in a compartment or container, must have that compartment or container marked as to contents and date of last inspection.

(c) Hand fire extinguishers must be provided for use in crew, passenger, and cargo compartments in accordance with the following:

(1) The type and quantity of extinguishing agent must be suitable for the kinds of fires likely to occur in the compartment where the extinguisher is intended to be used.

(2) At least one hand fire extinguisher must be provided and located on or near the flight deck in a place that is readily accessible to the flight crew.

(3) At least one hand fire extinguisher must be conveniently located

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in the passenger compartment of each airplane accommodating more than six but less than 31 passengers, and at least two hand fire extinguishers must be conveniently located in the passenger compartment of each airplane accommodating more than 30 passengers.

(4) Hand fire extinguishers must be installed and secured in such a manner that they will not interfere with the safe operation of the airplane or adversely affect the safety of the crew and passengers. They must be readily accessible and, unless the locations of the fire extinguishers are obvious, their stowage provisions must be properly identified.

(d) First aid kits for treatment of injuries likely to occur in flight or in minor accidents must be provided.

(e) Each airplane accommodating more than 19 passengers must be equipped with a crash axe.

(f) Each passenger-carrying airplane must have a portable battery-powered megaphone or megaphones readily accessible to the crewmembers assigned to direct emergency evacuation, installed as follows:

(1) One megaphone on each airplane with a seating capacity of more than 60 but less than 100 passengers, at the most rearward location in the passenger cabin where it would be readily accessible to a normal flight attendant seat. However, the Administrator may grant a deviation from the requirements of this subparagraph if the Administrator finds that a different location would be more useful for evacuation of persons during an emergency.

(2) On each airplane with a seating capacity of 100 or more passengers, one megaphone installed at the forward end and one installed at the most rearward location where it would be readily accessible to a normal flight attendant seat.

§91.515 Flight altitude rules.

(a) Notwithstanding §91.119, and except as provided in paragraph (b) of this section, no person may operate an airplane under VFR at less than—

(1) One thousand feet above the surface, or 1,000 feet from any mountain, hill, or other obstruction to flight, for day operations; and

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(2) The altitudes prescribed in §91.177, for night operations.

(b) This section does not apply—

(1) During takeoff or landing;

(2) When a different altitude is authorized by a waiver to this section under subpart J of this part; or

(3) When a flight is conducted under the special VFR weather minimums of §91.157 with an appropriate clearance from ATC.

§91.517 Passenger information.

(a) Except as provided in paragraph (b) of this section, no person may operate an airplane carrying passengers unless it is equipped with signs that are visible to passengers and flight attendants to notify them when smoking is prohibited and when safety belts must be fastened. The signs must be so constructed that the crew can turn them on and off. They must be turned on during airplane movement on the surface, for each takeoff, for each landing, and when otherwise considered to be necessary by the pilot in command.

(b) The pilot in command of an airplane that is not required, in accordance with applicable aircraft and equipment requirements of this chapter, to be equipped as provided in paragraph (a) of this section shall ensure that the passengers are notified orally each time that it is necessary to fasten their safety belts and when smoking is prohibited.

(c) If passenger information signs are installed, no passenger or crewmember may smoke while any “no smoking” sign is lighted nor may any passenger or crewmember smoke in any lavatory.

(d) Each passenger required by §91.107(a)(3) to occupy a seat or berth shall fasten his or her safety belt about him or her and keep it fastened while any “fasten seat belt” sign is lighted.

(e) Each passenger shall comply with instructions given him or her by crewmembers regarding compliance with paragraphs (b), (c), and (d) of this section.

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

§91.519 Passenger briefing.

(a) Before each takeoff the pilot in command of an airplane carrying passengers shall ensure that all passengers have been orally briefed on—

(1) *Smoking.* Each passenger shall be briefed on when, where, and under what conditions smoking is prohibited. This briefing shall include a statement, as appropriate, that the Federal Aviation Regulations require passenger compliance with lighted passenger information signs and no smoking placards, prohibit smoking in lavatories, and require compliance with crewmember instructions with regard to these items;

(2) *Use of safety belts and shoulder harnesses.* Each passenger shall be briefed on when, where, and under what conditions it is necessary to have his or her safety belt and, if installed, his or her shoulder harness fastened about him or her. This briefing shall include a statement, as appropriate, that Federal Aviation Regulations require passenger compliance with the lighted passenger sign and/or crewmember instructions with regard to these items;

(3) Location and means for opening the passenger entry door and emergency exits;

(4) Location of survival equipment;

(5) Ditching procedures and the use of flotation equipment required under § 91.509 for a flight over water; and

(6) The normal and emergency use of oxygen equipment installed on the airplane.

(b) The oral briefing required by paragraph (a) of this section shall be given by the pilot in command or a member of the crew, but need not be given when the pilot in command determines that the passengers are familiar with the contents of the briefing. It may be supplemented by printed cards for the use of each passenger containing—

(1) A diagram of, and methods of operating, the emergency exits; and

(2) Other instructions necessary for use of emergency equipment.

(c) Each card used under paragraph (b) must be carried in convenient locations on the airplane for the use of each passenger and must contain information that is pertinent only to the type and model airplane on which it is used.

[Doc. No. 18334, 54 FR 34314, Aug. 18, 1989, as amended by Amdt. 91-231, 57 FR 42672, Sept. 15, 1992]

§ 91.521 Shoulder harness.

(a) No person may operate a transport category airplane that was type certificated after January 1, 1958, unless it is equipped at each seat at a flight deck station with a combined safety belt and shoulder harness that meets the applicable requirements specified in § 25.785 of this chapter, except that—

(1) Shoulder harnesses and combined safety belt and shoulder harnesses that were approved and installed before March 6, 1980, may continue to be used; and

(2) Safety belt and shoulder harness restraint systems may be designed to the inertia load factors established under the certification basis of the airplane.

(b) No person may operate a transport category airplane unless it is equipped at each required flight attendant seat in the passenger compartment with a combined safety belt and shoulder harness that meets the applicable requirements specified in § 25.785 of this chapter, except that—

(1) Shoulder harnesses and combined safety belt and shoulder harnesses that were approved and installed before March 6, 1980, may continue to be used; and

(2) Safety belt and shoulder harness restraint systems may be designed to the inertia load factors established under the certification basis of the airplane.

§ 91.523 Carry-on baggage.

No pilot in command of an airplane having a seating capacity of more than 19 passengers may permit a passenger to stow baggage aboard that airplane except—

(a) In a suitable baggage or cargo storage compartment, or as provided in § 91.525; or

(b) Under a passenger seat in such a way that it will not slide forward under crash impacts severe enough to induce the ultimate inertia forces specified in § 25.561(b)(3) of this chapter, or the requirements of the regulations under which the airplane was type certificated. Restraining devices must also limit sideward motion of under-seat baggage and be designed to withstand crash impacts severe enough to induce

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sideward forces specified in §25.561(b)(3) of this chapter.

§91.525 Carriage of cargo.

(a) No pilot in command may permit cargo to be carried in any airplane unless—

(1) It is carried in an approved cargo rack, bin, or compartment installed in the airplane;

(2) It is secured by means approved by the Administrator; or

(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—

(1) Frost, snow, or ice adhering to any propeller, windshield, or powerplant installation or to an airspeed, altimeter, rate of climb, or flight attitude instrument system;

(2) Snow or ice adhering to the wings or stabilizing or control surfaces; or

(3) Any frost adhering to the wings or stabilizing or control surfaces, unless that frost has been polished to make it smooth.

(b) Except for an airplane that has ice protection provisions that meet the requirements in section 34 of Special

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Federal Aviation Regulation No. 23, or those for transport category airplane type certification, no pilot may fly—

(1) Under IFR into known or forecast moderate icing conditions; or

(2) Under VFR into known light or moderate icing conditions unless the aircraft has functioning de-icing or anti-icing equipment protecting each propeller, windshield, wing, stabilizing or control surface, and each airspeed, altimeter, rate of climb, or flight attitude instrument system.

(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.

§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 who is designated as second in command of that airplane:

(1) A large airplane, except that a person may operate an airplane certificated under SFAR 41 without a pilot who is designated as second in command if that airplane is certificated for operation with one pilot.

(2) A turbojet-powered multiengine airplane for which two pilots are required under the type certification requirements for that airplane.

(3) A commuter category airplane, except that a person may operate a commuter category airplane notwithstanding paragraph (a)(1) of this section, that has a passenger seating configuration, excluding pilot seats, of nine or less without a pilot who is designated as second in command if that airplane is type certificated for operations with one pilot.

(b) The Administrator may issue a letter of authorization for the operation of an airplane without compliance with the requirements of paragraph (a) of this section if that airplane is designed for and type certificated with only one pilot station. The authorization contains any conditions that the Administrator finds necessary for safe operation.

(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.

§ 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 turbine-engine-powered airplane certificated after September 30, 1958) unless—

(1) The takeoff weight does not exceed the authorized maximum takeoff weight for the elevation of the airport of takeoff;

(2) The elevation of the airport of takeoff is within the altitude range for which maximum takeoff weights have been determined;

(3) Normal consumption of fuel and oil in flight to the airport of intended landing will leave a weight on arrival not in excess of the authorized maximum landing weight for the elevation of that airport; and

(4) The elevations of the airport of intended landing and of all specified alternate airports are within the altitude range for which the maximum landing weights have been determined.

(b) No person may operate a turbine-engine-powered transport category airplane certificated after September 30, 1958, contrary to the Airplane Flight Manual, or take off that airplane unless—

(1) The takeoff weight does not exceed the takeoff weight specified in the Airplane Flight Manual for the elevation of the airport and for the ambient temperature existing at the time of takeoff;

(2) Normal consumption of fuel and oil in flight to the airport of intended landing and to the alternate airports will leave a weight on arrival not in excess of the landing weight specified in the Airplane Flight Manual for the elevation of each of the airports involved and for the ambient temperatures expected at the time of landing;

(3) The takeoff weight does not exceed the weight shown in the Airplane Flight Manual to correspond with the minimum distances required for takeoff, considering the elevation of the

airport, the runway to be used, 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). 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.

(4) Where the takeoff distance includes a clearway, the clearway distance is not greater than one-half of—

(i) The takeoff run, in the case of airplanes certificated after September 30, 1958, and before August 30, 1959; or

(ii) The runway length, in the case of airplanes certificated after August 29, 1959.

(c) No person may take off a turbine-engine-powered transport category airplane certificated after August 29, 1959, unless, in addition to the requirements of paragraph (b) of this section—

(1) The accelerate-stop distance is no greater than the length of the runway plus the length of the stopway (if present); and

(2) The takeoff distance is no greater than the length of the runway plus the length of the clearway (if present); and

(3) The takeoff run is no greater than the length of the runway.

[Doc. No. 18334, 54 FR 34318, Aug. 18, 1989, as amended by Amdt. 91-256, 63 FR 8321, Feb. 18, 1998]

§91.607 Emergency exits for airplanes carrying passengers for hire.

(a) Notwithstanding any other provision of this chapter, no person may operate a large airplane (type certificated under the Civil Air Regulations effective before April 9, 1957) in passenger-carrying operations for hire, with more than the number of occupants—

(1) Allowed under Civil Air Regulations §4b.362 (a), (b), and (c) as in effect on December 20, 1951; or

(2) Approved under Special Civil Air Regulations SR-387, SR-389, SR-389A,

or SR-389B, or under this section as in effect.

However, an airplane type listed in the following table may be operated with up to the listed number of occupants (including crewmembers) and the corresponding number of exits (including emergency exits and doors) approved for the emergency exit of passengers or with an occupant-exit configuration approved under paragraph (b) or (c) of this section.

Airplane type	Maximum number of occupants including all crewmembers	Corresponding number of exits authorized for passenger use
B-307	61	4
B-377	96	9
C-46	67	4
CV-240	53	6
CV-340 and CV-440	53	6
DC-3	35	4
DC-3 (Super)	39	5
DC-4	86	5
DC-6	87	7
DC-6B	112	11
L-18	17	3
L-049, L-649, L-749	87	7
L-1049 series	96	9
M-202	53	6
M-404	53	7
Viscount 700 series	53	7

(b) Occupants in addition to those authorized under paragraph (a) of this section may be carried as follows:

(1) For each additional floor-level exit at least 24 inches wide by 48 inches high, with an unobstructed 20-inch-wide access aisleway between the exit and the main passenger aisle, 12 additional occupants.

(2) For each additional window exit located over a wing that meets the requirements of the airworthiness standards under which the airplane was type certificated or that is large enough to inscribe an ellipse 19x26 inches, eight additional occupants.

(3) For each additional window exit that is not located over a wing but that otherwise complies with paragraph (b)(2) of this section, five additional occupants.

(4) For each airplane having a ratio (as computed from the table in paragraph (a) of this section) of maximum number of occupants to number of exits greater than 14:1, and for each airplane that does not have at least one full-size, door-type exit in the side of the fuselage in the rear part of the

cabin, the first additional exit must be a floor-level exit that complies with paragraph (b)(1) of this section and must be located in the rear part of the cabin on the opposite side of the fuselage from the main entrance door. However, no person may operate an airplane under this section carrying more than 115 occupants unless there is such an exit on each side of the fuselage in the rear part of the cabin.

(c) No person may eliminate any approved exit except in accordance with the following:

(1) The previously authorized maximum number of occupants must be reduced by the same number of additional occupants authorized for that exit under this section.

(2) Exits must be eliminated in accordance with the following priority schedule: First, non-over-wing window exits; second, over-wing window exits; third, floor-level exits located in the forward part of the cabin; and fourth, floor-level exits located in the rear of the cabin.

(3) At least one exit must be retained on each side of the fuselage regardless of the number of occupants.

(4) No person may remove any exit that would result in a ratio of maximum number of occupants to approved exits greater than 14:1.

(d) This section does not relieve any person operating under part 121 of this chapter from complying with § 121.291.

§ 91.609 Flight recorders and cockpit voice recorders.

(a) No holder of an air carrier operating certificate or an operating certificate may conduct any operation under this part with an aircraft listed in the holder's operations specifications or current list of aircraft used in air transportation unless that aircraft complies with any applicable flight recorder and cockpit voice recorder requirements of the part under which its certificate is issued except that the operator may—

(1) Ferry an aircraft with an inoperative flight recorder or cockpit voice recorder from a place where repair or replacement cannot be made to a place where they can be made;

(2) Continue a flight as originally planned, if the flight recorder or cockpit voice recorder becomes inoperative after the aircraft has taken off;

(3) Conduct an airworthiness flight test during which the flight recorder or cockpit voice recorder is turned off to test it or to test any communications or electrical equipment installed in the aircraft; or

(4) Ferry a newly acquired aircraft from the place where possession of it is taken to a place where the flight recorder or cockpit voice recorder is to be installed.

(b) Notwithstanding paragraphs (c) and (e) of this section, an operator other than the holder of an air carrier or a commercial operator certificate may—

(1) Ferry an aircraft with an inoperative flight recorder or cockpit voice recorder from a place where repair or replacement cannot be made to a place where they can be made;

(2) Continue a flight as originally planned if the flight recorder or cockpit voice recorder becomes inoperative after the aircraft has taken off;

(3) Conduct an airworthiness flight test during which the flight recorder or cockpit voice recorder is turned off to test it or to test any communications or electrical equipment installed in the aircraft;

(4) Ferry a newly acquired aircraft from a place where possession of it was taken to a place where the flight recorder or cockpit voice recorder is to be installed; or

(5) Operate an aircraft:

(i) For not more than 15 days while the flight recorder and/or cockpit voice recorder is inoperative and/or removed for repair provided that the aircraft maintenance records contain an entry that indicates the date of failure, and a placard is located in view of the pilot to show that the flight recorder or cockpit voice recorder is inoperative.

(ii) For not more than an additional 15 days, provided that the requirements in paragraph (b)(5)(i) are met and that a certificated pilot, or a certificated person authorized to return an aircraft to service under §43.7 of this chapter, certifies in the aircraft maintenance records that additional time is required

to complete repairs or obtain a replacement unit.

(c) No person may operate a U.S. civil registered, multiengine, turbine-powered airplane or rotorcraft having a passenger seating configuration, excluding any pilot seats of 10 or more that has been manufactured after October 11, 1991, unless it is equipped with one or more approved flight recorders that utilize a digital method of recording and storing data and a method of readily retrieving that data from the storage medium, that are capable of recording the data specified in appendix E to this part, for an airplane, or appendix F to this part, for a rotorcraft, of this part within the range, accuracy, and recording interval specified, and that are capable of retaining no less than 8 hours of aircraft operation.

(d) Whenever a flight recorder, required by this section, is installed, it must be operated continuously from the instant the airplane begins the takeoff roll or the rotorcraft begins lift-off until the airplane has completed the landing roll or the rotorcraft has landed at its destination.

(e) Unless otherwise authorized by the Administrator, after October 11, 1991, no person may operate a U.S. civil registered multiengine, turbine-powered airplane or rotorcraft having a passenger seating configuration of six passengers or more and for which two pilots are required by type certification or operating rule unless it is equipped with an approved cockpit voice recorder that:

(1) Is installed in compliance with §23.1457(a) (1) and (2), (b), (c), (d), (e), (f), and (g); §25.1457(a) (1) and (2), (b), (c), (d), (e), (f), and (g); §27.1457(a) (1) and (2), (b), (c), (d), (e), (f), and (g); or §29.1457(a) (1) and (2), (b), (c), (d), (e), (f), and (g) of this chapter, as applicable; and

(2) Is operated continuously from the use of the checklist before the flight to completion of the final checklist at the end of the flight.

(f) In complying with this section, an approved cockpit voice recorder having an erasure feature may be used, so that at any time during the operation of the recorder, information recorded more than 15 minutes earlier may be erased or otherwise obliterated.

(g) In the event of an accident or occurrence requiring immediate notification to the National Transportation Safety Board under part 830 of its regulations that results in the termination of the flight, any operator who has installed approved flight recorders and approved cockpit voice recorders shall keep the recorded information for at least 60 days or, if requested by the Administrator or the Board, for a longer period. Information obtained from the record is used to assist in determining the cause of accidents or occurrences in connection with the investigation under part 830. The Administrator does not use the cockpit voice recorder record in any civil penalty or certificate action.

[Doc. No. 18334, 54 FR 34318, Aug. 18, 1989, as amended by Amdt. 91-226, 56 FR 51621, Oct. 11, 1991; Amdt. 91-228, 57 FR 19353, May 5, 1992]

§91.611 Authorization for ferry flight with one engine inoperative.

(a) *General.* The holder of an air carrier operating certificate or an operating certificate issued under part 125 may conduct a ferry flight of a four-engine airplane or a turbine-engine-powered airplane equipped with three engines, with one engine inoperative, to a base for the purpose of repairing that engine subject to the following:

(1) The airplane model has been test flown and found satisfactory for safe flight in accordance with paragraph (b) or (c) of this section, as appropriate. However, each operator who before November 19, 1966, has shown that a model of airplane with an engine inoperative is satisfactory for safe flight by a test flight conducted in accordance with performance data contained in the applicable Airplane Flight Manual under paragraph (a)(2) of this section need not repeat the test flight for that model.

(2) The approved Airplane Flight Manual contains the following performance data and the flight is conducted in accordance with that data:

- (i) Maximum weight.
- (ii) Center of gravity limits.
- (iii) Configuration of the inoperative propeller (if applicable).
- (iv) Runway length for takeoff (including temperature accountability).

(v) Altitude range.

(vi) Certificate limitations.

(vii) Ranges of operational limits.

(viii) Performance information.

(ix) Operating procedures.

(3) The operator has FAA approved procedures for the safe operation of the airplane, including specific requirements for—

(i) Limiting the operating weight on any ferry flight to the minimum necessary for the flight plus the necessary reserve fuel load;

(ii) A limitation that takeoffs must be made from dry runways unless, based on a showing of actual operating takeoff techniques on wet runways with one engine inoperative, takeoffs with full controllability from wet runways have been approved for the specific model aircraft and included in the Airplane Flight Manual:

(iii) Operations from airports where the runways may require a takeoff or approach over populated areas; and

(iv) Inspection procedures for determining the operating condition of the operative engines.

(4) No person may take off an airplane under this section if—

(i) The initial climb is over thickly populated areas; or

(ii) Weather conditions at the takeoff or destination airport are less than those required for VFR flight.

(5) Persons other than required flight crewmembers shall not be carried during the flight.

(6) No person may use a flight crewmember for flight under this section unless that crewmember is thoroughly familiar with the operating procedures for one-engine inoperative ferry flight contained in the certificate holder's manual and the limitations and performance information in the Airplane Flight Manual.

(b) *Flight tests: reciprocating-engine-powered airplanes.* The airplane performance of a reciprocating-engine-powered airplane with one engine inoperative must be determined by flight test as follows:

(1) A speed not less than 1.3 V_{S1} must be chosen at which the airplane may be controlled satisfactorily in a climb with the critical engine inoperative (with its propeller removed or in a configuration desired by the operator and

with all other engines operating at the maximum power determined in paragraph (b)(3) of this section.

(2) The distance required to accelerate to the speed listed in paragraph (b)(1) of this section and to climb to 50 feet must be determined with—

- (i) The landing gear extended;
- (ii) The critical engine inoperative and its propeller removed or in a configuration desired by the operator; and
- (iii) The other engines operating at not more than maximum power established under paragraph (b)(3) of this section.

(3) The takeoff, flight and landing procedures, such as the approximate trim settings, method of power application, maximum power, and speed must be established.

(4) The performance must be determined at a maximum weight not greater than the weight that allows a rate of climb of at least 400 feet per minute in the en route configuration set forth in §25.67(d) of this chapter in effect on January 31, 1977, at an altitude of 5,000 feet.

(5) The performance must be determined using temperature accountability for the takeoff field length, computed in accordance with §25.61 of this chapter in effect on January 31, 1977.

(c) *Flight tests: Turbine-engine-powered airplanes.* The airplane performance of a turbine-engine-powered airplane with one engine inoperative must be determined by flight tests, including at least three takeoff tests, in accordance with the following:

(1) Takeoff speeds V_R and V_2 , not less than the corresponding speeds under which the airplane was type certificated under §25.107 of this chapter, must be chosen at which the airplane may be controlled satisfactorily with the critical engine inoperative (with its propeller removed or in a configuration desired by the operator, if applicable) and with all other engines operating at not more than the power selected for type certification as set forth in §25.101 of this chapter.

(2) The minimum takeoff field length must be the horizontal distance required to accelerate and climb to the

35-foot height at V_2 speed (including any additional speed increment obtained in the tests) multiplied by 115 percent and determined with—

- (i) The landing gear extended;
- (ii) The critical engine inoperative and its propeller removed or in a configuration desired by the operator (if applicable); and
- (iii) The other engine operating at not more than the power selected for type certification as set forth in §25.101 of this chapter.

(3) The takeoff, flight, and landing procedures such as the approximate trim setting, method of power application, maximum power, and speed must be established. The airplane must be satisfactorily controllable during the entire takeoff run when operated according to these procedures.

(4) The performance must be determined at a maximum weight not greater than the weight determined under §25.121(c) of this chapter but with—

- (i) The actual steady gradient of the final takeoff climb requirement not less than 1.2 percent at the end of the takeoff path with two critical engines inoperative; and
- (ii) The climb speed not less than the two-engine inoperative trim speed for the actual steady gradient of the final takeoff climb prescribed by paragraph (c)(4)(i) of this section.

(5) The airplane must be satisfactorily controllable in a climb with two critical engines inoperative. Climb performance may be shown by calculations based on, and equal in accuracy to, the results of testing.

(6) The performance must be determined using temperature accountability for takeoff distance and final takeoff climb computed in accordance with §25.101 of this chapter.

For the purpose of paragraphs (c)(4) and (5) of this section, *two critical engines* means two adjacent engines on one side of an airplane with four engines, and the center engine and one outboard engine on an airplane with three engines.

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§ 91.613 Materials for compartment interiors.

No person may operate an airplane that conforms to an amended or supplemental type certificate issued in accordance with SFAR No. 41 for a maximum certificated takeoff weight in excess of 12,500 pounds unless within 1 year after issuance of the initial airworthiness certificate under that SFAR the airplane meets the compartment interior requirements set forth in § 25.853 (a), (b), (b-1), (b-2), and (b-3) of this chapter in effect on September 26, 1978.

§§ 91.615-91.699 [Reserved]

Subpart H—Foreign Aircraft Operations and Operations of U.S.-Registered Civil Aircraft Outside of the United States; and Rules Governing Persons on Board Such Aircraft

SOURCE: Docket No. 18334, 54 FR 34320, Aug. 18, 1989, unless otherwise noted.

§ 91.701 Applicability.

(a) This subpart applies to the operations of civil aircraft of U.S. registry outside of the United States and the operations of foreign civil aircraft within the United States.

(b) Section 91.702 of this subpart also applies to each person on board an aircraft operated as follows:

(1) A U.S. registered civil aircraft operated outside the United States;

(2) Any aircraft operated outside the United States—

(i) That has its next scheduled destination or last place of departure in the United States if the aircraft next lands in the United States; or

(ii) If the aircraft lands in the United States with the individual still on the aircraft regardless of whether it was a scheduled or otherwise planned landing site.

[Doc. No. FAA-1998-4954, 64 FR 1079, Jan. 7, 1999]

§ 91.702 Persons on board.

Section 91.11 of this part (Prohibitions on interference with crew-

members) applies to each person on board an aircraft.

[Doc. No. FAA-1998-4954, 64 FR 1079, Jan. 7, 1999]

§ 91.703 Operations of civil aircraft of U.S. registry outside of the United States.

(a) Each person operating a civil aircraft of U.S. registry outside of the United States shall—

(1) When over the high seas, comply with annex 2 (Rules of the Air) to the Convention on International Civil Aviation and with §§ 91.117(c), 91.127, 91.129, and 91.131;

(2) When within a foreign country, comply with the regulations relating to the flight and maneuver of aircraft there in force;

(3) Except for §§ 91.307(b), 91.309, 91.323, and 91.711, comply with this part so far as it is not inconsistent with applicable regulations of the foreign country where the aircraft is operated or annex 2 of the Convention on International Civil Aviation; and

(4) When operating within airspace designated as Minimum Navigation Performance Specifications (MNPS) airspace, comply with § 91.705. When operating within airspace designated as Reduced Vertical Separation Minimum (RVSM) airspace, comply with § 91.706.

(b) Annex 2 to the Convention on International Civil Aviation, Ninth Edition—July 1990, with Amendments through Amendment 32 effective February 19, 1996, to which reference is made in this part, is incorporated into this part and made a part hereof as provided in 5 U.S.C. § 552 and pursuant to 1 CFR part 51. Annex 2 (including a complete historic file of changes thereto) is available for public inspection at the Rules Docket, AGC-200, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. In addition, Annex 2 may be purchased from the International Civil Aviation Organization (Attention: Distribution Officer), P.O. Box 400, Succursale, Place de L'Aviation Internationale, 1000

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Sherbrooke Street West, Montreal, Quebec, Canada H3A 2R2.

[Doc. No. 18834, 54 FR 34320, Aug. 18, 1989, as amended by Amdt. 91-227, 56 FR 65661, Dec. 17, 1991; Amdt. 91-254, 62 FR 17487, Apr. 9, 1997]

§91.705 Operations within airspace designated as Minimum Navigation Performance Specification Airspace.

(a) Except as provided in paragraph (b) of this section, no person may operate a civil aircraft of U.S. registry in airspace designated as Minimum Navigation Performance Specifications airspace unless—

(1) The aircraft has approved navigation performance capability that complies with the requirements of appendix C of this part; and

(2) The operator is authorized by the Administrator to perform such operations.

(b) The Administrator may authorize a deviation from the requirements of this section in accordance with Section 3 of appendix C to this part.

[Doc. No. 28870, 62 FR 17487, Apr. 9, 1997]

§91.706 Operations within airspace designated as Reduced Vertical Separation Minimum Airspace.

(a) Except as provided in paragraph (b) of this section, no person may operate a civil aircraft of U.S. registry in airspace designated as Reduced Vertical Separation Minimum (RVSM) airspace unless:

(1) The operator and the operator's aircraft comply with the requirements of appendix G of this part; and

(2) The operator is authorized by the Administrator to conduct such operations.

(b) The Administrator may authorize a deviation from the requirements of this section in accordance with Section 5 of appendix G to this part.

[Doc. No. 28870, 62 FR 17487, Apr. 9, 1997]

§91.707 Flights between Mexico or Canada and the United States.

Unless otherwise authorized by ATC, no person may operate a civil aircraft between Mexico or Canada and the United States without filing an IFR or VFR flight plan, as appropriate.

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§91.709 Operations to Cuba.

No person may operate a civil aircraft from the United States to Cuba unless—

(a) Departure is from an international airport of entry designated in §6.13 of the Air Commerce Regulations of the Bureau of Customs (19 CFR 6.13); and

(b) In the case of departure from any of the 48 contiguous States or the District of Columbia, the pilot in command of the aircraft has filed—

(1) A DVFR or IFR flight plan as prescribed in §99.11 or §99.13 of this chapter; and

(2) A written statement, within 1 hour before departure, with the Office of Immigration and Naturalization Service at the airport of departure, containing—

(i) All information in the flight plan;

(ii) The name of each occupant of the aircraft;

(iii) The number of occupants of the aircraft; and

(iv) A description of the cargo, if any.

This section does not apply to the operation of aircraft by a scheduled air carrier over routes authorized in operations specifications issued by the Administrator.

(Approved by the Office of Management and Budget under control number 2120-0005)

§91.711 Special rules for foreign civil aircraft.

(a) *General.* In addition to the other applicable regulations of this part, each person operating a foreign civil aircraft within the United States shall comply with this section.

(b) *VFR.* No person may conduct VFR operations which require two-way radio communications under this part unless at least one crewmember of that aircraft is able to conduct two-way radio communications in the English language and is on duty during that operation.

(c) *IFR.* No person may operate a foreign civil aircraft under IFR unless—

(1) That aircraft is equipped with—

(i) Radio equipment allowing two-way radio communication with ATC when it is operated in controlled airspace; and

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(ii) Radio navigational equipment appropriate to the navigational facilities to be used;

(2) Each person piloting the aircraft—

(i) Holds a current United States instrument rating or is authorized by his foreign airman certificate to pilot under IFR; and

(ii) Is thoroughly familiar with the United States en route, holding, and letdown procedures; and

(3) At least one crewmember of that aircraft is able to conduct two-way radiotelephone communications in the English language and that crewmember is on duty while the aircraft is approaching, operating within, or leaving the United States.

(d) *Over water.* Each person operating a foreign civil aircraft over water off the shores of the United States shall give flight notification or file a flight plan in accordance with the Supplementary Procedures for the ICAO region concerned.

(e) *Flight at and above FL 240.* If VOR navigational equipment is required under paragraph (c)(1)(ii) of this section, no person may operate a foreign civil aircraft within the 50 States and the District of Columbia at or above FL 240, unless the aircraft is equipped with distance measuring equipment (DME) capable of receiving and indicating distance information from the VORTAC facilities to be used. When DME required by this paragraph fails at and above FL 240, the pilot in command of the aircraft shall notify ATC immediately and may then continue operations at and above FL 240 to the next airport of intended landing at which repairs or replacement of the equipment can be made. However, paragraph (e) of this section does not apply to foreign civil aircraft that are not equipped with DME when operated for the following purposes and if ATC is notified prior to each takeoff:

(1) Ferry flights to and from a place in the United States where repairs or alterations are to be made.

(2) Ferry flights to a new country of registry.

(3) Flight of a new aircraft of U.S. manufacture for the purpose of—

(i) Flight testing the aircraft;

(ii) Training foreign flight crews in the operation of the aircraft; or

(iii) Ferrying the aircraft for export delivery outside the United States.

(4) Ferry, demonstration, and test flight of an aircraft brought to the United States for the purpose of demonstration or testing the whole or any part thereof.

[Doc. No. 18834, 54 FR 34320, Aug. 18, 1989, as amended by Amdt. 91-227, 56 FR 65661, Dec. 17, 1991]

§91.713 Operation of civil aircraft of Cuban registry.

No person may operate a civil aircraft of Cuban registry except in controlled airspace and in accordance with air traffic clearance or air traffic control instructions that may require use of specific airways or routes and landings at specific airports.

§91.715 Special flight authorizations for foreign civil aircraft.

(a) Foreign civil aircraft may be operated without airworthiness certificates required under §91.203 if a special flight authorization for that operation is issued under this section. Application for a special flight authorization must be made to the Flight Standards Division Manager or Aircraft Certification Directorate Manager of the FAA region in which the applicant is located or to the region within which the U.S. point of entry is located. However, in the case of an aircraft to be operated in the U.S. for the purpose of demonstration at an airshow, the application may be made to the Flight Standards Division Manager or Aircraft Certification Directorate Manager of the FAA region in which the airshow is located.

(b) The Administrator may issue a special flight authorization for a foreign civil aircraft subject to any conditions and limitations that the Administrator considers necessary for safe operation in the U.S. airspace.

(c) No person may operate a foreign civil aircraft under a special flight authorization unless that operation also complies with part 375 of the Special

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Regulations of the Department of Transportation (14 CFR part 375).

(Approved by the Office of Management and Budget under control number 2120–0005)

[Doc. No. 18334, 54 FR 34320, Aug. 18, 1989, as amended by Amdt. 91–212, 54 FR 39293, Sept. 25, 1989]

§§ 91.717–91.799 [Reserved]

Subpart I—Operating Noise Limits

SOURCE: Docket No. 18334, 54 FR 34321, Aug. 18, 1989, unless otherwise noted.

§ 91.801 Applicability: Relation to part 36.

(a) This subpart prescribes operating noise limits and related requirements that apply, as follows, to the operation of civil aircraft in the United States.

(1) Sections 91.803, 91.805, 91.807, 91.809, and 91.811 apply to civil subsonic jet (turbojet) airplanes with maximum weights of more than 75,000 pounds and—

(i) If U.S. registered, that have standard airworthiness certificates; or

(ii) If foreign registered, that would be required by this chapter to have a U.S. standard airworthiness certificate in order to conduct the operations intended for the airplane were it registered in the United States. Those sections apply to operations to or from airports in the United States under this part and parts 121, 125, 129, and 135 of this chapter.

(2) Section 91.813 applies to U.S. operators of civil subsonic jet (turbojet) airplanes covered by this subpart. This section applies to operators operating to or from airports in the United States under this part and parts 121, 125, and 135, but not to those operating under part 129 of this chapter.

(3) Sections 91.803, 91.819, and 91.821 apply to U.S.-registered civil supersonic airplanes having standard airworthiness certificates and to foreign-registered civil supersonic airplanes that, if registered in the United States, would be required by this chapter to have U.S. standard airworthiness certificates in order to conduct the operations intended for the airplane. Those sections apply to operations under this

part and under parts 121, 125, 129, and 135 of this chapter.

(b) Unless otherwise specified, as used in this subpart “part 36” refers to 14 CFR part 36, including the noise levels under appendix C of that part, notwithstanding the provisions of that part excepting certain airplanes from the specified noise requirements. For purposes of this subpart, the various stages of noise levels, the terms used to describe airplanes with respect to those levels, and the terms “subsonic airplane” and “supersonic airplane” have the meanings specified under part 36 of this chapter. For purposes of this subpart, for subsonic airplanes operated in foreign air commerce in the United States, the Administrator may accept compliance with the noise requirements under annex 16 of the International Civil Aviation Organization when those requirements have been shown to be substantially compatible with, and achieve results equivalent to those achievable under, part 36 for that airplane. Determinations made under these provisions are subject to the limitations of § 36.5 of this chapter as if those noise levels were part 36 noise levels.

(c) Sections 91.851 through 91.877 of this subpart prescribe operating noise limits and related requirements that apply to any civil subsonic jet (turbojet) airplane (for which an airworthiness certificate other than an experimental certificate has been issued by the Administrator) with a maximum certificated takeoff weight of more than 75,000 pounds operating to or from an airport in the 48 contiguous United States and the District of Columbia under this part, parts 121, 125, 129, or 135 of this chapter on and after September 25, 1991.

(d) Section 91.877 prescribes reporting requirements that apply to any civil subsonic jet (turbojet) airplane with a maximum weight of more than 75,000 pounds operated by an air carrier or foreign air carrier between the contiguous United States and the State of Hawaii, between the State of Hawaii and any point outside of the 48 contiguous United States, or between the islands of Hawaii in turnaround service,

under part 121 or 129 of this chapter on or after November 5, 1990.

[Doc. No. 18334, 54 FR 34321, Aug. 18, 1989; Amdt. 91-211, 54 FR 41211, Oct. 5, 1989, as amended by Amdt. 91-225, 56 FR 48658, Sept. 25, 1991; Amdt. 91-252, 61 FR 66185, Dec. 16, 1996; Amdt. 91-275, 67 FR 45237, July 8, 2002; Amdt. 91-276, 67 FR 46571, July 15, 2002]

§91.803 Part 125 operators: Designation of applicable regulations.

For airplanes covered by this subpart and operated under part 125 of this chapter, the following regulations apply as specified:

(a) For each airplane operation to which requirements prescribed under this subpart applied before November 29, 1980, those requirements of this subpart continue to apply.

(b) For each subsonic airplane operation to which requirements prescribed under this subpart did not apply before November 29, 1980, because the airplane was not operated in the United States under this part or part 121, 129, or 135 of this chapter, the requirements prescribed under §91.805 of this subpart apply.

(c) For each supersonic airplane operation to which requirements prescribed under this subpart did not apply before November 29, 1980, because the airplane was not operated in the United States under this part or part 121, 129, or 135 of this chapter, the requirements of §§91.819 and 91.821 of this subpart apply.

(d) For each airplane required to operate under part 125 for which a deviation under that part is approved to operate, in whole or in part, under this part or part 121, 129, or 135 of this chapter, notwithstanding the approval, the requirements prescribed under paragraphs (a), (b), and (c) of this section continue to apply.

[Docket No. 18334, 54 FR 34321, Aug. 18, 1989, as amended by Amdt. 91-276, 67 FR 46571, July 15, 2002]

§91.805 Final compliance: Subsonic airplanes.

Except as provided in §§91.809 and 91.811, on and after January 1, 1985, no person may operate to or from an airport in the United States any subsonic airplane covered by this subpart unless that airplane has been shown to com-

ply with Stage 2 or Stage 3 noise levels under part 36 of this chapter.

§§91.807—91.813 [Reserved]

§91.815 Agricultural and fire fighting airplanes: Noise operating limitations.

(a) This section applies to propeller-driven, small airplanes having standard airworthiness certificates that are designed for “agricultural aircraft operations” (as defined in §137.3 of this chapter, as effective on January 1, 1966) or for dispensing fire fighting materials.

(b) If the Airplane Flight Manual, or other approved manual material information, markings, or placards for the airplane indicate that the airplane has not been shown to comply with the noise limits under part 36 of this chapter, no person may operate that airplane, except—

(1) To the extent necessary to accomplish the work activity directly associated with the purpose for which it is designed;

(2) To provide flight crewmember training in the special purpose operation for which the airplane is designed; and

(3) To conduct “nondispensing aerial work operations” in accordance with the requirements under §137.29(c) of this chapter.

§91.817 Civil aircraft sonic boom.

(a) No person may operate a civil aircraft in the United States at a true flight Mach number greater than 1 except in compliance with conditions and limitations in an authorization to exceed Mach 1 issued to the operator under appendix B of this part.

(b) In addition, no person may operate a civil aircraft for which the maximum operating limit speed M_{MO} exceeds a Mach number of 1, to or from an airport in the United States, unless—

(1) Information available to the flight crew includes flight limitations that ensure that flights entering or leaving the United States will not cause a sonic boom to reach the surface within the United States; and

(2) The operator complies with the flight limitations prescribed in paragraph (b)(1) of this section or complies with conditions and limitations in an authorization to exceed Mach 1 issued under appendix B of this part.

(Approved by the Office of Management and Budget under control number 2120-0005)

§91.819 Civil supersonic airplanes that do not comply with part 36.

(a) *Applicability.* This section applies to civil supersonic airplanes that have not been shown to comply with the Stage 2 noise limits of part 36 in effect on October 13, 1977, using applicable trade-off provisions, and that are operated in the United States, after July 31, 1978.

(b) *Airport use.* Except in an emergency, the following apply to each person who operates a civil supersonic airplane to or from an airport in the United States:

(1) Regardless of whether a type design change approval is applied for under part 21 of this chapter, no person may land or take off an airplane covered by this section for which the type design is changed, after July 31, 1978, in a manner constituting an "acoustical change" under §21.93 unless the acoustical change requirements of part 36 are complied with.

(2) No flight may be scheduled, or otherwise planned, for takeoff or landing after 10 p.m. and before 7 a.m. local time.

§91.821 Civil supersonic airplanes: Noise limits.

Except for Concorde airplanes having flight time before January 1, 1980, no person may operate in the United States, a civil supersonic airplane that does not comply with Stage 2 noise limits of part 36 in effect on October 13, 1977, using applicable trade-off provisions.

§§ 91.823-91.849 [Reserved]

§91.851 Definitions.

For the purposes of §91.851 through 91.877 of this subpart:

Contiguous United States means the area encompassed by the 48 contiguous United States and the District of Columbia.

Fleet means those civil subsonic jet (turbojet) airplanes with a maximum certificated weight of more than 75,000 pounds that are listed on an operator's operations specifications as eligible for operation in the contiguous United States.

Import means a change in ownership of an airplane from a non-U.S. person to a U.S. person when the airplane is brought into the United States for operation.

Operations specifications means an enumeration of airplanes by type, model, series, and serial number operated by the operator or foreign air carrier on a given day, regardless of how or whether such airplanes are formally listed or designated by the operator.

Owner means any person that has indicia of ownership sufficient to register the airplane in the United States pursuant to part 47 of this chapter.

New entrant means an air carrier or foreign air carrier that, on or before November 5, 1990, did not conduct operations under part 121 or 129 of this chapter using an airplane covered by this subpart to or from any airport in the contiguous United States, but that initiates such operation after that date.

Stage 2 noise levels mean the requirements for Stage 2 noise levels as defined in part 36 of this chapter in effect on November 5, 1990.

Stage 3 noise levels mean the requirements for Stage 3 noise levels as defined in part 36 of this chapter in effect on November 5, 1990.

Stage 2 airplane means a civil subsonic jet (turbojet) airplane with a maximum certificated weight of 75,000 pounds or more that complies with Stage 2 noise levels as defined in part 36 of this chapter.

Stage 3 airplane means a civil subsonic jet (turbojet) airplane with a maximum certificated weight of 75,000 pounds or more that complies with Stage 3 noise levels as defined in part 36 of this chapter.

[Doc. No. 26433, 56 FR 48658, Sept. 25, 1991, as amended by Amdt. 91-252, 61 FR 66185, Dec. 16, 1996; Amdt. 91-275, 67 FR 45237, July 8, 2002]

§ 91.853 Final compliance: Civil subsonic airplanes.

Except as provided in § 91.873, after December 31, 1999, no person shall operate to or from any airport in the contiguous United States any airplane subject to § 91.801(c) of this subpart, unless that airplane has been shown to comply with Stage 3 noise levels.

[Doc. No. 26433, 56 FR 48658, Sept. 25, 1991]

§ 91.855 Entry and nonaddition rule.

No person may operate any airplane subject to § 91.801(c) of this subpart to or from an airport in the contiguous United States unless one or more of the following apply:

(a) The airplane complies with Stage 3 noise levels.

(b) The airplane complies with Stage 2 noise levels and was owned by a U.S. person on and since November 5, 1990. Stage 2 airplanes that meet these criteria and are leased to foreign airlines are also subject to the return provisions of paragraph (e) of this section.

(c) The airplane complies with Stage 2 noise levels, is owned by a non-U.S. person, and is the subject of a binding lease to a U.S. person effective before and on September 25, 1991. Any such airplane may be operated for the term of the lease in effect on that date, and any extensions thereof provided for in that lease.

(d) The airplane complies with Stage 2 noise levels and is operated by a foreign air carrier.

(e) The airplane complies with Stage 2 noise levels and is operated by a foreign operator other than for the purpose of foreign air commerce.

(f) The airplane complies with Stage 2 noise levels and—

(1) On November 5, 1990, was owned by:

(i) A corporation, trust, or partnership organized under the laws of the United States or any State (including individual States, territories, possessions, and the District of Columbia);

(ii) An individual who is a citizen of the United States; or

(iii) An entity owned or controlled by a corporation, trust, partnership, or individual described in paragraph (f)(1) (i) or (ii) of this section; and

(2) Enters into the United States not later than 6 months after the expiration of a lease agreement (including any extensions thereof) between an owner described in paragraph (f)(1) of this section and a foreign airline.

(g) The airplane complies with Stage 2 noise levels and was purchased by the importer under a written contract executed before November 5, 1990.

(h) Any Stage 2 airplane described in this section is eligible for operation in the contiguous United States only as provided under § 91.865 or 91.867.

[Doc. No. 26433, 56 FR 48658, Sept. 25, 1991; 56 FR 51167, Oct. 10, 1991]

§ 91.857 Stage 2 operations outside of the 48 contiguous United States.

An operator of a Stage 2 airplane that is operating only between points outside the contiguous United States on or after November 5, 1990, must include in its operations specifications a statement that such airplane may not be used to provide air transportation to or from any airport in the contiguous United States.

[Doc. No. FAA-2002-12771, 67 FR 46571, July 15, 2002]

§ 91.858 Special flight authorizations for non-revenue Stage 2 operations.

(a) After December 31, 1999, any operator of a Stage 2 airplane over 75,000 pounds may operate that airplane in nonrevenue service in the contiguous United States only for the following purposes:

(1) Sell, lease, or scrap the airplane;

(2) Obtain modifications to meet Stage 3 noise levels;

(3) Obtain scheduled heavy maintenance or significant modifications;

(4) Deliver the airplane to a lessee or return it to a lessor;

(5) Park or store the airplane; and

(6) Prepare the airplane for any of the purposes listed in paragraph (a)(1) thru (a)(5) of this section.

(b) An operator of a Stage 2 airplane that needs to operate in the contiguous United States for any of the purposes listed above may apply to FAA's Office of Environment and Energy for a special flight authorization. The applicant must file in advance. Applications are due 30 days in advance of the planned

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flight and must provide the information necessary for the FAA to determine that the planned flight is within the limits prescribed in the law.

[Doc. No. FAA-2002-12771, 67 FR 46571, July 15, 2002]

§91.859 [Reserved]

§91.861 Base level.

(a) *U.S. Operators.* The base level of a U.S. operator is equal to the number of owned or leased Stage 2 airplanes subject to §91.801(c) of this subpart that were listed on that operator's operations specifications for operations to or from airports in the contiguous United States on any one day selected by the operator during the period January 1, 1990, through July 1, 1991, plus or minus adjustments made pursuant to paragraphs (a) (1) and (2).

(1) The base level of a U.S. operator shall be increased by a number equal to the total of the following—

(i) The number of Stage 2 airplanes returned to service in the United States pursuant to §91.855(f);

(ii) The number of Stage 2 airplanes purchased pursuant to §91.855(g); and

(iii) Any U.S. operator base level acquired with a Stage 2 airplane transferred from another person under §91.863.

(2) The base level of a U.S. operator shall be decreased by the amount of U.S. operator base level transferred with the corresponding number of Stage 2 airplanes to another person under §91.863.

(b) *Foreign air carriers.* The base level of a foreign air carrier is equal to the number of owned or leased Stage 2 airplanes that were listed on that carrier's U.S. operations specifications on any one day during the period January 1, 1990, through July 1, 1991, plus or minus any adjustments to the base levels made pursuant to paragraphs (b) (1) and (2).

(1) The base level of a foreign air carrier shall be increased by the amount of foreign air carrier base level acquired with a Stage 2 airplane from another person under §91.863.

(2) The base level of a foreign air carrier shall be decreased by the amount of foreign air carrier base level trans-

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ferred with a Stage 2 airplane to another person under §91.863.

(c) New entrants do not have a base level.

[Doc. No. 26433, 56 FR 48659, Sept. 25, 1991; 56 FR 51167, Oct. 10, 1991]

§91.863 Transfers of Stage 2 airplanes with base level.

(a) Stage 2 airplanes may be transferred with or without the corresponding amount of base level. Base level may not be transferred without the corresponding number of Stage 2 airplanes.

(b) No portion of a U.S. operator's base level established under §91.861(a) may be used for operations by a foreign air carrier. No portion of a foreign air carrier's base level established under §91.861(b) may be used for operations by a U.S. operator.

(c) Whenever a transfer of Stage 2 airplanes with base level occurs, the transferring and acquiring parties shall, within 10 days, jointly submit written notification of the transfer to the FAA, Office of Environment and Energy. Such notification shall state:

(1) The names of the transferring and acquiring parties;

(2) The name, address, and telephone number of the individual responsible for submitting the notification on behalf of the transferring and acquiring parties;

(3) The total number of Stage 2 airplanes transferred, listed by airplane type, model, series, and serial number;

(4) The corresponding amount of base level transferred and whether it is U.S. operator or foreign air carrier base level; and

(5) The effective date of the transaction.

(d) If, taken as a whole, a transaction or series of transactions made pursuant to this section does not produce an increase or decrease in the number of Stage 2 airplanes for either the acquiring or transferring operator, such transaction or series of transactions may not be used to establish compliance with the requirements of §91.865.

[Doc. No. 26433, 56 FR 48659, Sept. 25, 1991]

§ 91.865 Phased compliance for operators with base level.

Except as provided in paragraph (a) of this section, each operator that operates an airplane under part 91, 121, 125, 129, or 135 of this chapter, regardless of the national registry of the airplane, shall comply with paragraph (b) or (d) of this section at each interim compliance date with regard to its subsonic airplane fleet covered by § 91.801(c) of this subpart.

(a) This section does not apply to new entrants covered by § 91.867 or to foreign operators not engaged in foreign air commerce.

(b) Each operator that chooses to comply with this paragraph pursuant to any interim compliance requirement shall reduce the number of Stage 2 airplanes it operates that are eligible for operation in the contiguous United States to a maximum of:

- (1) After December 31, 1994, 75 percent of the base level held by the operator;
- (2) After December 31, 1996, 50 percent of the base level held by the operator;
- (3) After December 31, 1998, 25 percent of the base level held by the operator.

(c) Except as provided under § 91.871, the number of Stage 2 airplanes that must be reduced at each compliance date contained in paragraph (b) of this section shall be determined by reference to the amount of base level held by the operator on that compliance date, as calculated under § 91.861.

(d) Each operator that chooses to comply with this paragraph pursuant to any interim compliance requirement shall operate a fleet that consists of:

- (1) After December 31, 1994, not less than 55 percent Stage 3 airplanes;
- (2) After December 31, 1996, not less than 65 percent Stage 3 airplanes;
- (3) After December 31, 1998, not less than 75 percent Stage 3 airplanes.

(e) Calculations resulting in fractions may be rounded to permit the continued operation of the next whole number of Stage 2 airplanes.

[Doc. No. 26433, 56 FR 48659, Sept. 25, 1991]

§ 91.867 Phased compliance for new entrants.

(a) New entrant U.S. air carriers.

(1) A new entrant initiating operations under part 121 of this chapter on or before December 31, 1994, may ini-

tiate service without regard to the percentage of its fleet composed of Stage 3 airplanes.

(2) After December 31, 1994, at least 25 percent of the fleet of a new entrant must comply with Stage 3 noise levels.

(3) After December 31, 1996, at least 50 percent of the fleet of a new entrant must comply with Stage 3 noise levels.

(4) After December 31, 1998, at least 75 percent of the fleet of a new entrant must comply with Stage 3 noise levels.

(b) New entrant foreign air carriers.

(1) A new entrant foreign air carrier initiating part 129 operations on or before December 31, 1994, may initiate service without regard to the percentage of its fleet composed of Stage 3 airplanes.

(2) After December 31, 1994, at least 25 percent of the fleet on U.S. operations specifications of a new entrant foreign air carrier must comply with Stage 3 noise levels.

(3) After December 31, 1996, at least 50 percent of the fleet on U.S. operations specifications of a new entrant foreign air carrier must comply with Stage 3 noise levels.

(4) After December 31, 1998, at least 75 percent of the fleet on U.S. operations specifications of a new entrant foreign air carrier must comply with Stage 3 noise levels.

(c) Calculations resulting in fractions may be rounded to permit the continued operation of the next whole number of Stage 2 airplanes.

[Doc. No. 26433, 56 FR 48659, Sept. 25, 1991, as amended by Amdt. 91-252, 61 FR 66185, Dec. 16, 1996]

§ 91.869 Carry-forward compliance.

(a) Any operator that exceeds the requirements of paragraph (b) of § 91.865 of this part on or before December 31, 1994, or on or before December 31, 1996, may claim a credit that may be applied at a subsequent interim compliance date.

(b) Any operator that eliminates or modifies more Stage 2 airplanes pursuant to § 91.865(b) than required as of December 31, 1994, or December 31, 1996, may count the number of additional Stage 2 airplanes reduced as a credit toward—

(1) The number of Stage 2 airplanes it would otherwise be required to reduce

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following a subsequent interim compliance date specified in §91.865(b); or

(2) The number of Stage 3 airplanes it would otherwise be required to operate in its fleet following a subsequent interim compliance date to meet the percentage requirements specified in §91.865(d).

[Doc. No. 26433, 56 FR 48659, Sept. 25, 1991; 56 FR 65783, Dec. 18, 1991]

§91.871 Waivers from interim compliance requirements.

(a) Any U.S. operator or foreign air carrier subject to the requirements of §91.865 or 91.867 of this subpart may request a waiver from any individual compliance requirement.

(b) Applications must be filed with the Secretary of Transportation at least 120 days prior to the compliance date from which the waiver is requested.

(c) Applicants must show that a grant of waiver would be in the public interest, and must include in its application its plans and activities for modifying its fleet, including evidence of good faith efforts to comply with the requirements of §91.865 or §91.867. The application should contain all information the applicant considers relevant, including, as appropriate, the following:

(1) The applicant's balance sheet and cash flow positions;

(2) The composition of the applicant's current fleet; and

(3) The applicant's delivery position with respect to new airplanes or noise-abatement equipment.

(d) Waivers will be granted only upon a showing by the applicant that compliance with the requirements of §91.865 or 91.867 at a particular interim compliance date is financially onerous, physically impossible, or technologically infeasible, or that it would have an adverse effect on competition or on service to small communities.

(e) The conditions of any waiver granted under this section shall be determined by the circumstances presented in the application, but in no case may the term extend beyond the next interim compliance date.

(f) A summary of any request for a waiver under this section will be published in the FEDERAL REGISTER, and

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public comment will be invited. Unless the Secretary finds that circumstances require otherwise, the public comment period will be at least 14 days.

[Doc. No. 26433, 56 FR 48660, Sept. 25, 1991]

§91.873 Waivers from final compliance.

(a) A U.S. air carrier or a foreign air carrier may apply for a waiver from the prohibition contained in §91.853 of this part for its remaining Stage 2 airplanes, provided that, by July 1, 1999, at least 85 percent of the airplanes used by the carrier to provide service to or from an airport in the contiguous United States will comply with the Stage 3 noise levels.

(b) An application for the waiver described in paragraph (a) of this section must be filed with the Secretary of Transportation no later than January 1, 1999, or, in the case of a foreign air carrier, no later than April 20, 2000. Such application must include a plan with firm orders for replacing or modifying all airplanes to comply with Stage 3 noise levels at the earliest practicable time.

(c) To be eligible to apply for the waiver under this section, a new entrant U.S. air carrier must initiate service no later than January 1, 1999, and must comply fully with all provisions of this section.

(d) The Secretary may grant a waiver under this section if the Secretary finds that granting such waiver is in the public interest. In making such a finding, the Secretary shall include consideration of the effect of granting such waiver on competition in the air carrier industry and the effect on small community air service, and any other information submitted by the applicant that the Secretary considers relevant.

(e) The term of any waiver granted under this section shall be determined by the circumstances presented in the application, but in no case will the waiver permit the operation of any Stage 2 airplane covered by this subchapter in the contiguous United States after December 31, 2003.

(f) A summary of any request for a waiver under this section will be published in the FEDERAL REGISTER, and public comment will be invited. Unless

the secretary finds that circumstances require otherwise, the public comment period will be at least 14 days.

[Doc. No. 26433, 56 FR 48660, Sept. 25, 1991; 56 FR 51167 Oct. 10, 1991; Amdt. 91-276, 67 FR 46571, July 15, 2002]

§ 91.875 Annual progress reports.

(a) Each operator subject to § 91.865 or § 91.867 of this chapter shall submit an annual report to the FAA, Office of Environment and Energy, on the progress it has made toward complying with the requirements of that section. Such reports shall be submitted no later than 45 days after the end of a calendar year. All progress reports must provide the information through the end of the calendar year, be certified by the operator as true and complete (under penalty of 18 U.S.C. 1001), and include the following information:

(1) The name and address of the operator;

(2) The name, title, and telephone number of the person designated by the operator to be responsible for ensuring the accuracy of the information in the report;

(3) The operator's progress during the reporting period toward compliance with the requirements of § 91.853, § 91.865 or § 91.867. For airplanes on U.S. operations specifications, each operator shall identify the airplanes by type, model, series, and serial number.

(i) Each Stage 2 airplane added or removed from operation or U.S. operations specifications (grouped separately by those airplanes acquired with and without base level);

(ii) Each Stage 2 airplane modified to Stage 3 noise levels (identifying the manufacturer and model of noise abatement retrofit equipment;

(iii) Each Stage 3 airplane on U.S. operations specifications as of the last day of the reporting period; and

(iv) For each Stage 2 airplane transferred or acquired, the name and address of the recipient or transferor; and, if base level was transferred, the person to or from whom base level was transferred or acquired pursuant to Section 91.863 along with the effective date of each base level transaction, and the type of base level transferred or acquired.

(b) Each operator subject to § 91.865 or § 91.867 of this chapter shall submit an initial progress report covering the period from January 1, 1990, through December 31, 1991, and provide:

(1) For each operator subject to § 91.865:

(i) The date used to establish its base level pursuant to § 91.861(a); and

(ii) A list of those Stage 2 airplanes (by type, model, series and serial number) in its base level, including adjustments made pursuant to § 91.861 after the date its base level was established.

(2) For each U.S. operator:

(i) A plan to meet the compliance schedules in § 91.865 or § 91.867 and the final compliance date of § 91.853, including the schedule for delivery of replacement Stage 3 airplanes or the installation of noise abatement retrofit equipment; and

(ii) A separate list (by type, model, series, and serial number) of those airplanes included in the operator's base level, pursuant to § 91.861(a)(1) (i) and (ii), under the categories "returned" or "purchased," along with the date each was added to its operations specifications.

(c) Each operator subject to § 91.865 or § 91.867 of this chapter shall submit subsequent annual progress reports covering the calendar year preceding the report and including any changes in the information provided in paragraphs (a) and (b) of this section; including the use of any carry-forward credits pursuant to § 91.869.

(d) An operator may request, in any report, that specific planning data be considered proprietary.

(e) If an operator's actions during any reporting period cause it to achieve compliance with § 91.853, the report should include a statement to that effect. Further progress reports are not required unless there is any change in the information reported pursuant to paragraph (a) of this section.

(f) For each U.S. operator subject to § 91.865, progress reports submitted for calendar years 1994, 1996, and 1998, shall also state how the operator achieved compliance with the requirements of that section, i.e.—

(1) By reducing the number of Stage 2 airplanes in its fleet to no more than

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the maximum permitted percentage of its base level under §91.865(b), or

(2) By operating a fleet that consists of at least the minimum required percentage of Stage 3 airplanes under §91.865(d).

(Approved by the Office of Management and Budget under control number 2120-0553)

[Doc. No. 26433, 56 FR 48660, Sept. 25, 1991; 56 FR 51168, Oct. 10, 1991, as amended by 57 FR 5977, Feb. 19, 1992]

§91.877 Annual reporting of Hawaiian operations.

(a) Each air carrier or foreign air carrier subject to §91.865 or §91.867 of this part that conducts operations between the contiguous United States and the State of Hawaii, between the State of Hawaii and any point outside of the contiguous United States, or between the islands of Hawaii in turnaround service, on or since November 5, 1990, shall include in its annual report the information described in paragraph (c) of this section.

(b) Each air carrier or foreign air carrier not subject to §91.865 or §91.867 of this part that conducts operations between the contiguous U.S. and the State of Hawaii, between the State of Hawaii and any point outside of the contiguous United States, or between the islands of Hawaii in turnaround service, on or since November 5, 1990, shall submit an annual report to the FAA, Office of Environment and Energy, on its compliance with the Hawaiian operations provisions of 49 U.S.C. 47528. Such reports shall be submitted no later than 45 days after the end of a calendar year. All progress reports must provide the information through the end of the calendar year, be certified by the operator as true and complete (under penalty of 18 U.S.C. 1001), and include the following information—

- (1) The name and address of the air carrier or foreign air carrier;
- (2) The name, title, and telephone number of the person designated by the air carrier or foreign air carrier to be responsible for ensuring the accuracy of the information in the report; and
- (3) The information specified in paragraph (c) of this section.

(c) The following information must be included in reports filed pursuant to this section—

(1) For operations conducted between the contiguous United States and the State of Hawaii—

(i) The number of Stage 2 airplanes used to conduct such operations as of November 5, 1990;

(ii) Any change to that number during the calendar year being reported, including the date of such change;

(2) For air carriers that conduct inter-island turnaround service in the State of Hawaii—

(i) The number of Stage 2 airplanes used to conduct such operations as of November 5, 1990;

(ii) Any change to that number during the calendar year being reported, including the date of such change;

(iii) For an air carrier that provided inter-island turnaround service within the state of Hawaii on November 5, 1990, the number reported under paragraph (c)(2)(i) of this section may include all Stage 2 airplanes with a maximum certificated takeoff weight of more than 75,000 pounds that were owned or leased by the air carrier on November 5, 1990, regardless of whether such airplanes were operated by that air carrier or foreign air carrier on that date.

(3) For operations conducted between the State of Hawaii and a point outside the contiguous United States—

(i) The number of Stage 2 airplanes used to conduct such operations as of November 5, 1990; and

(ii) Any change to that number during the calendar year being reported, including the date of such change.

(d) Reports or amended reports for years predating this regulation are required to be filed concurrently with the next annual report.

[Doc. No. 28213, 61 FR 66185, Dec. 16, 1996]

§§ 91.879—91.899 [Reserved]

Subpart J—Waivers

§ 91.901 [Reserved]

§ 91.903 Policy and procedures.

(a) The Administrator may issue a certificate of waiver authorizing the operation of aircraft in deviation from

any rule listed in this subpart if the Administrator finds that the proposed operation can be safely conducted under the terms of that certificate of waiver.

(b) An application for a certificate of waiver under this part is made on a form and in a manner prescribed by the Administrator and may be submitted to any FAA office.

(c) A certificate of waiver is effective as specified in that certificate of waiver.

[Doc. No. 18334, 54 FR 34325, Aug. 18, 1989]

§ 91.905 List of rules subject to waivers.

Sec.

- 91.107 Use of safety belts.
- 91.111 Operating near other aircraft.
- 91.113 Right-of-way rules: Except water operations.
- 91.115 Right-of-way rules: Water operations.
- 91.117 Aircraft speed.
- 91.119 Minimum safe altitudes: General.
- 91.121 Altimeter settings.
- 91.123 Compliance with ATC clearances and instructions.
- 91.125 ATC light signals.
- 91.126 Operating on or in the vicinity of an airport in Class G airspace.
- 91.127 Operating on or in the vicinity of an airport in Class E airspace.
- 91.129 Operations in Class D airspace.
- 91.130 Operations in Class C airspace.
- 91.131 Operations in Class B airspace.
- 91.133 Restricted and prohibited areas.
- 91.135 Operations in Class A airspace.
- 91.137 Temporary flight restrictions.
- 91.141 Flight restrictions in the proximity of the Presidential and other parties.
- 91.143 Flight limitation in the proximity of space flight operations.
- 91.153 VFR flight plan: Information required.
- 91.155 Basic VFR weather minimums.
- 91.157 Special VFR weather minimums.
- 91.159 VFR cruising altitude or flight level.
- 91.169 IFR flight plan: Information required.
- 91.173 ATC clearance and flight plan required.
- 91.175 Takeoff and landing under IFR.
- 91.177 Minimum altitudes for IFR operations.
- 91.179 IFR cruising altitude or flight level.
- 91.181 Course to be flown.
- 91.183 IFR radio communications.
- 91.185 IFR operations: Two-way radio communications failure.
- 91.187 Operation under IFR in controlled airspace: Malfunction reports.
- 91.209 Aircraft lights.
- 91.303 Aerobatic flights.
- 91.305 Flight test areas.

- 91.311 Towing: Other than under § 91.309.
- 91.313(e) Restricted category civil aircraft: Operating limitations.
- 91.515 Flight altitude rules.
- 91.705 Operations within the North Atlantic Minimum Navigation Performance Specifications Airspace.
- 91.707 Flights between Mexico or Canada and the United States.
- 91.713 Operation of civil aircraft of Cuban registry.

[Doc. No. 18334, 54 FR 34325, Aug. 18, 1989, as amended by Amdt. 91-227, 56 FR 65661, Dec. 17, 1991]

§§ 91.907-91.999 [Reserved]

APPENDIX A TO PART 91—CATEGORY II OPERATIONS: MANUAL, INSTRUMENTS, EQUIPMENT, AND MAINTENANCE

1. Category II Manual

(a) *Application for approval.* An applicant for approval of a Category II manual or an amendment to an approved Category II manual must submit the proposed manual or amendment to the Flight Standards District Office having jurisdiction of the area in which the applicant is located. If the application requests an evaluation program, it must include the following:

(1) The location of the aircraft and the place where the demonstrations are to be conducted; and

(2) The date the demonstrations are to commence (at least 10 days after filing the application).

(b) *Contents.* Each Category II manual must contain:

(1) The registration number, make, and model of the aircraft to which it applies;

(2) A maintenance program as specified in section 4 of this appendix; and

(3) The procedures and instructions related to recognition of decision height, use of runway visual range information, approach monitoring, the decision region (the region between the middle marker and the decision height), the maximum permissible deviations of the basic ILS indicator within the decision region, a missed approach, use of airborne low approach equipment, minimum altitude for the use of the autopilot, instrument and equipment failure warning systems, instrument failure, and other procedures, instructions, and limitations that may be found necessary by the Administrator.

2. Required Instruments and Equipment

The instruments and equipment listed in this section must be installed in each aircraft operated in a Category II operation. This section does not require duplication of

instruments and equipment required by §91.205 or any other provisions of this chapter.

(a) *Group I.* (1) Two localizer and glide slope receiving systems. Each system must provide a basic ILS display and each side of the instrument panel must have a basic ILS display. However, a single localizer antenna and a single glide slope antenna may be used.

(2) A communications system that does not affect the operation of at least one of the ILS systems.

(3) A marker beacon receiver that provides distinctive aural and visual indications of the outer and the middle markers.

(4) Two gyroscopic pitch and bank indicating systems.

(5) Two gyroscopic direction indicating systems.

(6) Two airspeed indicators.

(7) Two sensitive altimeters adjustable for barometric pressure, each having a placarded correction for altimeter scale error and for the wheel height of the aircraft. After June 26, 1979, two sensitive altimeters adjustable for barometric pressure, having markings at 20-foot intervals and each having a placarded correction for altimeter scale error and for the wheel height of the aircraft.

(8) Two vertical speed indicators.

(9) A flight control guidance system that consists of either an automatic approach coupler or a flight director system. A flight director system must display computed information as steering command in relation to an ILS localizer and, on the same instrument, either computed information as pitch command in relation to an ILS glide slope or basic ILS glide slope information. An automatic approach coupler must provide at least automatic steering in relation to an ILS localizer. The flight control guidance system may be operated from one of the receiving systems required by subparagraph (1) of this paragraph.

(10) For Category II operations with decision heights below 150 feet either a marker beacon receiver providing aural and visual indications of the inner marker or a radio altimeter.

(b) *Group II.* (1) Warning systems for immediate detection by the pilot of system faults in items (1), (4), (5), and (9) of Group I and, if installed for use in Category III operations, the radio altimeter and autothrottle system.

(2) Dual controls.

(3) An externally vented static pressure system with an alternate static pressure source.

(4) A windshield wiper or equivalent means of providing adequate cockpit visibility for a safe visual transition by either pilot to touchdown and rollout.

(5) A heat source for each airspeed system pitot tube installed or an equivalent means of preventing malfunctioning due to icing of the pitot system.

3. Instruments and Equipment Approval

(a) *General.* The instruments and equipment required by section 2 of this appendix must be approved as provided in this section before being used in Category II operations. Before presenting an aircraft for approval of the instruments and equipment, it must be shown that since the beginning of the 12th calendar month before the date of submission—

(1) The ILS localizer and glide slope equipment were bench checked according to the manufacturer's instructions and found to meet those standards specified in RTCA Paper 23-63/DO-117 dated March 14, 1963, "Standard Adjustment Criteria for Airborne Localizer and Glide Slope Receivers," which may be obtained from the RTCA Secretariat, 1425 K St., NW., Washington, DC 20005.

(2) The altimeters and the static pressure systems were tested and inspected in accordance with appendix E to part 43 of this chapter; and

(3) All other instruments and items of equipment specified in section 2(a) of this appendix that are listed in the proposed maintenance program were bench checked and found to meet the manufacturer's specifications.

(b) *Flight control guidance system.* All components of the flight control guidance system must be approved as installed by the evaluation program specified in paragraph (e) of this section if they have not been approved for Category III operations under applicable type or supplemental type certification procedures. In addition, subsequent changes to make, model, or design of the components must be approved under this paragraph. Related systems or devices, such as the autothrottle and computed missed approach guidance system, must be approved in the same manner if they are to be used for Category II operations.

(c) *Radio altimeter.* A radio altimeter must meet the performance criteria of this paragraph for original approval and after each subsequent alteration.

(1) It must display to the flight crew clearly and positively the wheel height of the main landing gear above the terrain.

(2) It must display wheel height above the terrain to an accuracy of plus or minus 5 feet or 5 percent, whichever is greater, under the following conditions:

(i) Pitch angles of zero to plus or minus 5 degrees about the mean approach attitude.

(ii) Roll angles of zero to 20 degrees in either direction.

(iii) Forward velocities from minimum approach speed up to 200 knots.

(iv) Sink rates from zero to 15 feet per second at altitudes from 100 to 200 feet.

(3) Over level ground, it must track the actual altitude of the aircraft without significant lag or oscillation.

(4) With the aircraft at an altitude of 200 feet or less, any abrupt change in terrain representing no more than 10 percent of the aircraft's altitude must not cause the altimeter to unlock, and indicator response to such changes must not exceed 0.1 seconds and, in addition, if the system unlocks for greater changes, it must reacquire the signal in less than 1 second.

(5) Systems that contain a push-to-test feature must test the entire system (with or without an antenna) at a simulated altitude of less than 500 feet.

(6) The system must provide to the flight crew a positive failure warning display any time there is a loss of power or an absence of ground return signals within the designed range of operating altitudes.

(d) *Other instruments and equipment.* All other instruments and items of equipment required by §2 of this appendix must be capable of performing as necessary for Category II operations. Approval is also required after each subsequent alteration to these instruments and items of equipment.

(e) *Evaluation program—(1) Application.* Approval by evaluation is requested as a part of the application for approval of the Category II manual.

(2) *Demonstrations.* Unless otherwise authorized by the Administrator, the evaluation program for each aircraft requires the demonstrations specified in this paragraph. At least 50 ILS approaches must be flown with at least five approaches on each of three different ILS facilities and no more than one half of the total approaches on any one ILS facility. All approaches shall be flown under simulated instrument conditions to a 100-foot decision height and 90 percent of the total approaches made must be successful. A successful approach is one in which—

(i) At the 100-foot decision height, the indicated airspeed and heading are satisfactory for a normal flare and landing (speed must be plus or minus 5 knots of programmed airspeed, but may not be less than computed threshold speed if autothrottles are used);

(ii) The aircraft at the 100-foot decision height, is positioned so that the cockpit is within, and tracking so as to remain within, the lateral confines of the runway extended;

(iii) Deviation from glide slope after leaving the outer marker does not exceed 50 percent of full-scale deflection as displayed on the ILS indicator;

(iv) No unusual roughness or excessive attitude changes occur after leaving the middle marker; and

(v) In the case of an aircraft equipped with an approach coupler, the aircraft is sufficiently in trim when the approach coupler is disconnected at the decision height to allow for the continuation of a normal approach and landing.

(3) *Records.* During the evaluation program the following information must be main-

tained by the applicant for the aircraft with respect to each approach and made available to the Administrator upon request:

(i) Each deficiency in airborne instruments and equipment that prevented the initiation of an approach.

(ii) The reasons for discontinuing an approach, including the altitude above the runway at which it was discontinued.

(iii) Speed control at the 100-foot decision height if auto throttles are used.

(iv) Trim condition of the aircraft upon disconnecting the auto coupler with respect to continuation to flare and landing.

(v) Position of the aircraft at the middle marker and at the decision height indicated both on a diagram of the basic ILS display and a diagram of the runway extended to the middle marker. Estimated touchdown point must be indicated on the runway diagram.

(vi) Compatibility of flight director with the auto coupler, if applicable.

(vii) Quality of overall system performance.

(4) *Evaluation.* A final evaluation of the flight control guidance system is made upon successful completion of the demonstrations. If no hazardous tendencies have been displayed or are otherwise known to exist, the system is approved as installed.

4. Maintenance program

(a) Each maintenance program must contain the following:

(1) A list of each instrument and item of equipment specified in §2 of this appendix that is installed in the aircraft and approved for Category II operations, including the make and model of those specified in §2(a).

(2) A schedule that provides for the performance of inspections under subparagraph (5) of this paragraph within 3 calendar months after the date of the previous inspection. The inspection must be performed by a person authorized by part 43 of this chapter, except that each alternate inspection may be replaced by a functional flight check. This functional flight check must be performed by a pilot holding a Category II pilot authorization for the type aircraft checked.

(3) A schedule that provides for the performance of bench checks for each listed instrument and item of equipment that is specified in section 2(a) within 12 calendar months after the date of the previous bench check.

(4) A schedule that provides for the performance of a test and inspection of each static pressure system in accordance with appendix E to part 43 of this chapter within 12 calendar months after the date of the previous test and inspection.

(5) The procedures for the performance of the periodic inspections and functional flight

checks to determine the ability of each listed instrument and item of equipment specified in section 2(a) of this appendix to perform as approved for Category II operations including a procedure for recording functional flight checks.

(6) A procedure for assuring that the pilot is informed of all defects in listed instruments and items of equipment.

(7) A procedure for assuring that the condition of each listed instrument and item of equipment upon which maintenance is performed is at least equal to its Category II approval condition before it is returned to service for Category II operations.

(8) A procedure for an entry in the maintenance records required by §43.9 of this chapter that shows the date, airport, and reasons for each discontinued Category II operation because of a malfunction of a listed instrument or item of equipment.

(b) *Bench check.* A bench check required by this section must comply with this paragraph.

(1) It must be performed by a certificated repair station holding one of the following ratings as appropriate to the equipment checked:

- (i) An instrument rating.
- (ii) A radio rating.
- (iii) A rating issued under subpart D of part 145 of this chapter.

(2) It must consist of removal of an instrument or item of equipment and performance of the following:

- (i) A visual inspection for cleanliness, impending failure, and the need for lubrication, repair, or replacement of parts;
- (ii) Correction of items found by that visual inspection; and
- (iii) Calibration to at least the manufacturer's specifications unless otherwise specified in the approved Category II manual for the aircraft in which the instrument or item of equipment is installed.

(c) *Extensions.* After the completion of one maintenance cycle of 12 calendar months, a request to extend the period for checks, tests, and inspections is approved if it is shown that the performance of particular equipment justifies the requested extension.

[Doc. No. 18334, 54 FR 34325, Aug. 18, 1989]

EFFECTIVE DATE NOTE: At 66 FR 41116, Aug. 6, 2001, appendix A to part 91 was amended by removing paragraph 4(b)(1)(iii), effective Apr. 6, 2003.

APPENDIX B TO PART 91—AUTHORIZATIONS TO EXCEED MACH 1 (§91.817)

Section 1. Application

(a) An applicant for an authorization to exceed Mach 1 must apply in a form and manner prescribed by the Administrator and must comply with this appendix.

(b) In addition, each application for an authorization to exceed Mach 1 covered by section 2(a) of this appendix must contain all information requested by the Administrator necessary to assist him in determining whether the designation of a particular test area or issuance of a particular authorization is a "major Federal action significantly affecting the quality of the human environment" within the meaning of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), and to assist him in complying with that act and with related Executive Orders, guidelines, and orders prior to such action.

(c) In addition, each application for an authorization to exceed Mach 1 covered by section 2(a) of this appendix must contain—

(1) Information showing that operation at a speed greater than Mach 1 is necessary to accomplish one or more of the purposes specified in section 2(a) of this appendix, including a showing that the purpose of the test cannot be safely or properly accomplished by overocean testing;

(2) A description of the test area proposed by the applicant, including an environmental analysis of that area meeting the requirements of paragraph (b) of this section; and

(3) Conditions and limitations that will ensure that no measurable sonic boom overpressure will reach the surface outside of the designated test area.

(d) An application is denied if the Administrator finds that such action is necessary to protect or enhance the environment.

Section 2. Issuance

(a) For a flight in a designated test area, an authorization to exceed Mach 1 may be issued when the Administrator has taken the environmental protective actions specified in section 1(b) of this appendix and the applicant shows one or more of the following:

(1) The flight is necessary to show compliance with airworthiness requirements.

(2) The flight is necessary to determine the sonic boom characteristics of the airplane or to establish means of reducing or eliminating the effects of sonic boom.

(3) The flight is necessary to demonstrate the conditions and limitations under which speeds greater than a true flight Mach number of 1 will not cause a measurable sonic boom overpressure to reach the surface.

(b) For a flight outside of a designated test area, an authorization to exceed Mach 1 may be issued if the applicant shows conservatively under paragraph (a)(3) of this section that—

(1) The flight will not cause a measurable sonic boom overpressure to reach the surface when the aircraft is operated under conditions and limitations demonstrated under paragraph (a)(3) of this section; and

(2) Those conditions and limitations represent all foreseeable operating conditions.

Section 3. Duration

(a) An authorization to exceed Mach 1 is effective until it expires or is surrendered, or until it is suspended or terminated by the Administrator. Such an authorization may be amended or suspended by the Administrator at any time if the Administrator finds that such action is necessary to protect the environment. Within 30 days of notification of amendment, the holder of the authorization must request reconsideration or the amendment becomes final. Within 30 days of notification of suspension, the holder of the authorization must request reconsideration or the authorization is automatically terminated. If reconsideration is requested within the 30-day period, the amendment or suspension continues until the holder shows why the authorization should not be amended or terminated. Upon such showing, the Administrator may terminate or amend the authorization if the Administrator finds that such action is necessary to protect the environment, or he may reinstate the authorization without amendment if he finds that termination or amendment is not necessary to protect the environment.

(b) Findings and actions by the Administrator under this section do not affect any certificate issued under title VI of the Federal Aviation Act of 1958.

[Doc. No. 18334, 54 FR 34327, Aug. 18, 1989]

APPENDIX C TO PART 91—OPERATIONS IN THE NORTH ATLANTIC (NAT) MINIMUM NAVIGATION PERFORMANCE SPECIFICATIONS (MNPS) AIRSPACE

Section 1

NAT MNPS airspace is that volume of airspace between FL 285 and FL 420 extending between latitude 27 degrees north and the North Pole, bounded in the east by the eastern boundaries of control areas Santa Maria Oceanic, Shanwick Oceanic, and Reykjavik Oceanic and in the west by the western boundary of Reykjavik Oceanic Control Area, the western boundary of Gander Oceanic Control Area, and the western boundary of New York Oceanic Control Area, excluding the areas west of 60 degrees west and south of 38 degrees 30 minutes north.

Section 2

The navigation performance capability required for aircraft to be operated in the airspace defined in section 1 of this appendix is as follows:

(a) The standard deviation of lateral track errors shall be less than 6.3 NM (11.7 Km). Standard deviation is a statistical measure of data about a mean value. The mean is zero nautical miles. The overall form of data is such that the plus and minus 1 standard deviation about the mean encompasses ap-

proximately 68 percent of the data and plus or minus 2 deviations encompasses approximately 95 percent.

(b) The proportion of the total flight time spent by aircraft 30 NM (55.6 Km) or more off the cleared track shall be less than 5.3×10^{-4} (less than 1 hour in 1,887 flight hours).

(c) The proportion of the total flight time spent by aircraft between 50 NM and 70 NM (92.6 Km and 129.6 Km) off the cleared track shall be less than 13×10^{-5} (less than 1 hour in 7,693 flight hours.)

Section 3

Air traffic control (ATC) may authorize an aircraft operator to deviate from the requirements of §91.705 for a specific flight if, at the time of flight plan filing for that flight, ATC determines that the aircraft may be provided appropriate separation and that the flight will not interfere with, or impose a burden upon, the operations of other aircraft which meet the requirements of §91.705.

[Doc. No. 18334, 54 FR 34327, Aug. 18, 1989, as amended by Amdt. 91-254, 62 FR 17487, Apr. 9, 1997]

APPENDIX D TO PART 91—AIRPORTS/LOCATIONS: SPECIAL OPERATING RESTRICTIONS

Section 1. Locations at which the requirements of §91.215(b)(2) apply.

The requirements of §91.215(b)(2) apply below 10,000 feet above the surface within a 30-nautical-mile radius of each location in the following list:

Atlanta, GA (The William B. Hartsfield Atlanta International Airport)
 Baltimore, MD (Baltimore Washington International Airport)
 Boston, MA (General Edward Lawrence Logan International Airport)
 Chantilly, VA (Washington Dulles International Airport)
 Charlotte, NC (Charlotte/Douglas International Airport)
 Chicago, IL (Chicago-O'Hare International Airport)
 Cleveland, OH (Cleveland-Hopkins International Airport)
 Covington, KY (Cincinnati Northern Kentucky International Airport)
 Dallas, TX (Dallas/Fort Worth Regional Airport)
 Denver, CO (Denver International Airport)
 Detroit, MI (Metropolitan Wayne County Airport)
 Honolulu, HI (Honolulu International Airport)
 Houston, TX (George Bush Intercontinental Airport/Houston)
 Kansas City, KS (Mid-Continent International Airport)
 Las Vegas, NV (McCarran International Airport)

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Los Angeles, CA (Los Angeles International Airport)
Memphis, TN (Memphis International Airport)
Miami, FL (Miami International Airport)
Minneapolis, MN (Minneapolis-St. Paul International Airport)
Newark, NJ (Newark International Airport)
New Orleans, LA (New Orleans International Airport-Moisant Field)
New York, NY (John F. Kennedy International Airport)
New York, NY (LaGuardia Airport)
Orlando, FL (Orlando International Airport)
Philadelphia, PA (Philadelphia International Airport)
Phoenix, AZ (Phoenix Sky Harbor International Airport)
Pittsburgh, PA (Greater Pittsburgh International Airport)
St. Louis, MO (Lambert-St. Louis International Airport)
Salt Lake City, UT (Salt Lake City International Airport)
San Diego, CA (San Diego International Airport)
San Francisco, CA (San Francisco International Airport)
Seattle, WA (Seattle-Tacoma International Airport)
Tampa, FL (Tampa International Airport)
Washington, DC (Ronald Reagan Washington National Airport and Andrews Air Force Base, MD)

Section 2. Airports at which the requirements of §91.215(b)(5)(ii) apply. [Reserved]

Section 3. Locations at which fixed-wing Special VFR operations are prohibited.

The Special VFR weather minimums of §91.157 do not apply to the following airports:

Atlanta, GA (The William B. Hartsfield Atlanta International Airport)
Baltimore, MD (Baltimore/Washington International Airport)
Boston, MA (General Edward Lawrence Logan International Airport)
Buffalo, NY (Greater Buffalo International Airport)
Chicago, IL (Chicago-O'Hare International Airport)
Cleveland, OH (Cleveland-Hopkins International Airport)
Columbus, OH (Port Columbus International Airport)
Covington, KY (Cincinnati Northern Kentucky International Airport)
Dallas, TX (Dallas/Fort Worth Regional Airport)
Dallas, TX (Love Field)
Denver, CO (Denver International Airport)
Detroit, MI (Metropolitan Wayne County Airport)
Honolulu, HI (Honolulu International Airport)

Houston, TX (George Bush Intercontinental Airport/Houston)
Indianapolis, IN (Indianapolis International Airport)
Los Angeles, CA (Los Angeles International Airport)
Louisville, KY (Standiford Field)
Memphis, TN (Memphis International Airport)
Miami, FL (Miami International Airport)
Minneapolis, MN (Minneapolis-St. Paul International Airport)
Newark, NJ (Newark International Airport)
New York, NY (John F. Kennedy International Airport)
New York, NY (LaGuardia Airport)
New Orleans, LA (New Orleans International Airport-Moisant Field)
Philadelphia, PA (Philadelphia International Airport)
Pittsburgh, PA (Greater Pittsburgh International Airport)
Portland, OR (Portland International Airport)
San Francisco, CA (San Francisco International Airport)
Seattle, WA (Seattle-Tacoma International Airport)
St. Louis, MO (Lambert-St. Louis International Airport)
Tampa, FL (Tampa International Airport)
Washington, DC (Ronald Reagan Washington National Airport and Andrews Air Force Base, MD)

Section 4. Locations at which solo student pilot activity is not permitted.

Pursuant to §91.131(b)(2), solo student pilot operations are not permitted at any of the following airports.

Atlanta, GA (The William B. Hartsfield Atlanta International Airport)
Boston, MA (General Edward Lawrence Logan International Airport)
Chicago, IL (Chicago-O'Hare International Airport)
Dallas, TX (Dallas/Fort Worth Regional Airport)
Los Angeles, CA (Los Angeles International Airport)
Miami, FL (Miami International Airport)
Newark, NJ (Newark International Airport)
New York, NY (John F. Kennedy International Airport)
New York, NY (LaGuardia Airport)
San Francisco, CA (San Francisco International Airport)
Washington, DC (Washington National Airport)
Andrews Air Force Base, MD

[Amdt. 91-227, 56 FR 65661, Dec. 17, 1991, as amended by Amdt. 91-235, 58 FR 51968, Oct. 5, 1993; Amdt. 91-236, 59 FR 2918, Jan. 19, 1994; Amdt. 91-237, 59 FR 6547, Feb. 11, 1994; 59 FR 37667, July 25, 1994; Amdt. 91-258, 64 FR 66769, Nov. 30, 1999]

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EFFECTIVE DATE NOTE: By Amdt. 91-236, 59 FR 2918, Jan. 19, 1994, as corrected by Amdt. 91-237, 59 FR 6547, Feb. 11, 1994, appendix D to part 91 was amended in sections 1 and 3 in the Denver, CO entry by revising "Stapleton" to read "Denver" effective

March 9, 1994. By Amdt. 91-238, 59 FR 10958, Mar. 9, 1994, the effective date was delayed to May 15, 1994. By Amdt. 91-241, 59 FR 24916, May 13, 1994, the effective date was suspended indefinitely.

APPENDIX E TO PART 91—AIRPLANE FLIGHT RECORDER SPECIFICATIONS

Parameters	Range	Installed system ¹ minimum accuracy (to recovered data)	Sampling interval (per second)	Resolution ⁴ read out
Relative Time (From Recorded on Prior to Takeoff).	8 hr minimum	±0.125% per hour	1	1 sec.
Indicated Airspeed	V _{so} to VD (KIAS)	±5% or ±10 kts., whichever is greater. Resolution 2 kts. below 175 KIAS.	1	1% ³
Altitude	−1,000 ft. to max cert. alt. of A/C.	±100 to ±700 ft. (see Table 1, TSO C51-a).	11	25 to 150 ft.
Magnetic Heading	360°	±5°	1	1°
Vertical Acceleration	−3g to +6g	±0.2g in addition to ±0.3g maximum datum.	4 (or 1 per second where peaks, ref. to 1g are recorded).	0.03g.
Longitudinal Acceleration.	±1.0g	±1.5% max. range excluding datum error of ±5%.	2	0.01g.
Pitch Attitude	100% of usable	±2°	1	0.8°
Roll Attitude	±60° or 100% of usable range, whichever is greater.	±2°	1	0.8°
Stabilizer Trim Position, or, Pitch Control Position.	Full Range	±3% unless higher uniquely required.	1	1% ³
Engine Power, Each Engine:	Full Range	±3% unless higher uniquely required.	1	1% ³
Fan or N ¹ Speed or EPR or Cockpit indications Used for Aircraft Certification OR.	Maximum Range	±5%	1	1% ³
Prop. speed and Torque (Sample Once/Sec as Close together as Practicable).			1 (prop Speed) 1 (torque)	1% ³ 1% ³
Altitude Rate ² (need depends on altitude resolution).	±8,000 fpm	±10%. Resolution 250 fpm below 12,000 ft. indicated.	1	250 fpm. below 12,000
Angle of Attack ² (need depends on altitude resolution).	−20° to 40° or 100% of usable range.	±2°	1	0.8% ³
Radio Transmitter Keying (Discrete).	On/Off		1	
TE Flaps (Discrete or Analog).	Each discrete position (U, D, T/O, AAP) OR.		1	
LE Flaps (Discrete or Analog).	Analog 0–100% range	±3%	1	1% ³
Thrust Reverser, Each Engine (Discrete).	Each discrete position (U, D, T/O, AAP) OR. Analog 0–100% range	±3°	1	1% ³
Spoiler/Speedbrake (Discrete).	Stowed or full reverse Stowed or out		1	

Parameters	Range	Installed system ¹ minimum accuracy (to recovered data)	Sampling interval (per second)	Resolution ⁴ read out
Autopilot Engaged (Discrete).	Engaged or Disengaged	.....	1	

¹ When data sources are aircraft instruments (except altimeters) of acceptable quality to fly the aircraft the recording system excluding these sensors (but including all other characteristics of the recording system) shall contribute no more than half of the values in this column.

² If data from the altitude encoding altimeter (100 ft. resolution) is used, then either one of these parameters should also be recorded. If however, altitude is recorded at a minimum resolution of 25 feet, then these two parameters can be omitted.

³ Per cent of full range.

⁴ This column applies to aircraft manufactured after October 11, 1991.

[Doc. No. 18334, 54 FR 34327, Aug. 18, 1989]

APPENDIX F TO PART 91—HELICOPTER FLIGHT RECORDER SPECIFICATIONS

Parameters	Range	Installed system ¹ minimum accuracy (to recovered data)	Sampling interval (per second)	Resolution ³ read out
Relative Time (From Recorded on Prior to Takeoff).	4 hr minimum	±0.125% per hour	1	1 sec.
Indicated Airspeed	VM in to VD (KIAS) (minimum airspeed signal attainable with installed pilot-static system).	±5% or ±10 kts., whichever is greater.	1	1 kt.
Altitude	− 1,000 ft. to 20,000 ft. pressure altitude.	±100 to ±700 ft. (see Table 1, TSO C51-a).	1	25 to 150 ft.
Magnetic Heading	360°	±5°	1	1°
Vertical Acceleration ..	−3g to +6g	±0.2g in addition to ±0.3g maximum datum.	4 (or 1 per second where peaks, ref. to 1g are recorded).	0.05g.
Longitudinal Acceleration.	±1.0g	±1.5% max. range excluding datum error of ±5%.	2	0.03g.
Pitch Attitude	100% of usable range	±2°	1	0.8°
Roll Attitude	±60 or 100% of usable range, whichever is greater.	±2°	1	0.8°
Altitude Rate	±8,000 fpm	±10% Resolution 250 fpm below 12,000 ft. indicated.	1	250 fpm below 12,000.
<i>Engine Power, Each Engine</i>				
Main Rotor Speed	Maximum Range	±5%	1	1%2.
Free or Power Turbine.	Maximum Range	±5%	1	1%2.
Engine Torque	Maximum Range	±5%	1	1%2.
<i>Flight Control Hydraulic Pressure</i>				
Primary (Discrete)	High/Low .....	.....	1	
Secondary—if applicable (Discrete).	High/Low .....	.....	1	
Radio Transmitter Keying (Discrete).	On/Off .....	.....	1	
Autopilot Engaged (Discrete).	Engaged or Disengaged	.....	1	
SAS Status—Engaged (Discrete).	Engaged or Disengaged	.....	1	
SAS Fault Status (Discrete).	Fault/OK .....	.....	1	
<i>Flight Controls</i>				
Collective	Full range	±3%	2	1%2.
Pedal Position	Full range	±3%	2	1%2.
Lat. Cyclic	Full range	±3%	2	1%2.
Long. Cyclic	Full range	±3%	2	1%2.
Controllable Stabilator Position.	Full range	±3%	2	1%2.

¹ When data sources are aircraft instruments (except altimeters) of acceptable quality to fly the aircraft the recording system excluding these sensors (but including all other characteristics of the recording system) shall contribute no more than half of the values in this column.

²Per cent of full range.

³This column applies to aircraft manufactured after October 11, 1991.

[Doc. No. 18334, 54 FR 34328, Aug. 18, 1989; 54 FR 41211, Oct. 5, 1989; 54 FR 53036, Dec. 26, 1989]

APPENDIX G TO PART 91—OPERATIONS IN
REDUCED VERTICAL SEPARATION
MINIMUM (RVSM) AIRSPACE

Section 1. Definitions

Reduced Vertical Separation Minimum (RVSM) Airspace. Within RVSM airspace, air traffic control (ATC) separates aircraft by a minimum of 1,000 feet vertically between flight level (FL) 290 and FL 410 inclusive. RVSM airspace is special qualification airspace; the operator and the aircraft used by the operator must be approved by the Administrator. Air-traffic control notifies operators of RVSM by providing route planning information. Section 8 of this appendix identifies airspace where RVSM may be applied.

RVSM Group Aircraft. Aircraft within a group of aircraft, approved as a group by the Administrator, in which each of the aircraft satisfy each of the following:

(a) The aircraft have been manufactured to the same design, and have been approved under the same type certificate, amended type certificate, or supplemental type certificate.

(b) The static system of each aircraft is installed in a manner and position that is the same as those of the other aircraft in the group. The same static source error correction is incorporated in each aircraft of the group.

(c) The avionics units installed in each aircraft to meet the minimum RVSM equipment requirements of this appendix are:

(1) Manufactured to the same manufacturer specification and have the same part number; or

(2) Of a different manufacturer or part number, if the applicant demonstrates that the equipment provides equivalent system performance.

RVSM Nongroup Aircraft. An aircraft that is approved for RVSM operations as an individual aircraft.

RVSM Flight envelope. An RVSM flight envelope includes the range of Mach number, weight divided by atmospheric pressure ratio, and altitudes over which an aircraft is approved to be operated in cruising flight within RVSM airspace. RVSM flight envelopes are defined as follows:

(a) The *full RVSM flight envelope* is bounded as follows:

(1) The altitude flight envelope extends from FL 290 upward to the lowest altitude of the following:

(i) FL 410 (the RVSM altitude limit);

(ii) The maximum certificated altitude for the aircraft; or

(iii) The altitude limited by cruise thrust, buffet, or other flight limitations.

(2) The airspeed flight envelope extends:

(i) From the airspeed of the slats/flaps-up maximum endurance (holding) airspeed, or the maneuvering airspeed, whichever is lower;

(ii) To the maximum operating airspeed (V_{mo}/M_{mo}), or airspeed limited by cruise thrust buffet, or other flight limitations, whichever is lower.

(3) All permissible gross weights within the flight envelopes defined in paragraphs (1) and (2) of this definition.

(b) The *basic RVSM flight envelope* is the same as the full RVSM flight envelope except that the airspeed flight envelope extends:

(1) From the airspeed of the slats/flaps-up maximum endurance (holding) airspeed, or the maneuver airspeed, whichever is lower;

(2) To the upper Mach/airspeed boundary defined for the full RVSM flight envelope, or a specified lower value not less than the long-range cruise Mach number plus .04 Mach, unless further limited by available cruise thrust, buffet, or other flight limitations.

Section 2. Aircraft Approval

(a) An operator may be authorized to conduct RVSM operations if the Administrator finds that its aircraft comply with this section.

(b) The applicant for authorization shall submit the appropriate data package for aircraft approval. The package must consist of at least the following:

(1) An identification of the RVSM aircraft group or the nongroup aircraft;

(2) A definition of the RVSM flight envelopes applicable to the subject aircraft;

(3) Documentation that establishes compliance with the applicable RVSM aircraft requirements of this section; and

(4) The conformity tests used to ensure that aircraft approved with the data package meet the RVSM aircraft requirements.

(c) *Altitude-keeping equipment: All aircraft.* To approve an aircraft group or a nongroup aircraft, the Administrator must find that the aircraft meets the following requirements:

(1) The aircraft must be equipped with two operational independent altitude measurement systems.

(2) The aircraft must be equipped with at least one automatic altitude control system that controls the aircraft altitude—

(i) Within a tolerance band of ± 65 feet about an acquired altitude when the aircraft

is operated in straight and level flight under nonturbulent, nongust conditions; or

(i) Within a tolerance band of ± 130 feet under nonturbulent, nongust conditions for aircraft for which application for type certification occurred on or before April 9, 1997 that are equipped with an automatic altitude control system with flight management/performance system inputs.

(3) The aircraft must be equipped with an altitude alert system that signals an alert when the altitude displayed to the flight crew deviates from the selected altitude by more than:

(i) ± 300 feet for aircraft for which application for type certification was made on or before April 9, 1997; or

(ii) ± 200 feet for aircraft for which application for type certification is made after April 9, 1997.

(d) *Altimetry system error containment: Group aircraft for which application for type certification was made on or before April 9, 1997.* To approve group aircraft for which application for type certification was made on or before April 9, 1997, the Administrator must find that the altimetry system error (ASE) is contained as follows:

(1) At the point in the basic RVSM flight envelope where mean ASE reaches its largest absolute value, the absolute value may not exceed 80 feet.

(2) At the point in the basic RVSM flight envelope where mean ASE plus three standard deviations reaches its largest absolute value, the absolute value may not exceed 200 feet.

(3) At the point in the full RVSM flight envelope where mean ASE reaches its largest absolute value, the absolute value may not exceed 120 feet.

(4) At the point in the full RVSM flight envelope where mean ASE plus three standard deviations reaches its largest absolute value, the absolute value may not exceed 245 feet.

(5) *Necessary operating restrictions.* If the applicant demonstrates that its aircraft otherwise comply with the ASE containment requirements, the Administrator may establish an operating restriction on that applicant's aircraft to restrict the aircraft from operating in areas of the basic RVSM flight envelope where the absolute value of mean ASE exceeds 80 feet, and/or the absolute value of mean ASE plus three standard deviations exceeds 200 feet; or from operating in areas of the full RVSM flight envelope where the absolute value of the mean ASE exceeds 120 feet and/or the absolute value of the mean ASE plus three standard deviations exceeds 245 feet.

(e) *Altimetry system error containment: Group aircraft for which application for type certification is made after April 9, 1997.* To approve group aircraft for which application for type certification is made after April 9, 1997, the

Administrator must find that the altimetry system error (ASE) is contained as follows:

(1) At the point in the full RVSM flight envelope where mean ASE reaches its largest absolute value, the absolute value may not exceed 80 feet.

(2) At the point in the full RVSM flight envelope where mean ASE plus three standard deviations reaches its largest absolute value, the absolute value may not exceed 200 feet.

(f) *Altimetry system error containment: Nongroup aircraft.* To approve a nongroup aircraft, the Administrator must find that the altimetry system error (ASE) is contained as follows:

(1) For each condition in the basic RVSM flight envelope, the largest combined absolute value for residual static source error plus the avionics error may not exceed 160 feet.

(2) For each condition in the full RVSM flight envelope, the largest combined absolute value for residual static source error plus the avionics error may not exceed 200 feet.

(g) *Traffic Alert and Collision Avoidance System (TCAS) Compatibility With RVSM Operations: All aircraft.* After March 31, 2002, unless otherwise authorized by the Administrator, if you operate an aircraft that is equipped with TCAS II in RVSM airspace, it must be a TCAS II that meets TSO C-119b (Version 7.0), or a later version.

(h) If the Administrator finds that the applicant's aircraft comply with this section, the Administrator notifies the applicant in writing.

Section 3. Operator Authorization

(a) Authority for an operator to conduct flight in airspace where RVSM is applied is issued in operations specifications or a Letter of Authorization, as appropriate. To issue an RVSM authorization, the Administrator must find that the operator's aircraft have been approved in accordance with Section 2 of this appendix and that the operator complies with this section.

(b) An applicant for authorization to operate within RVSM airspace shall apply in a form and manner prescribed by the Administrator. The application must include the following:

(1) An approved RVSM maintenance program outlining procedures to maintain RVSM aircraft in accordance with the requirements of this appendix. Each program must contain the following:

(i) Periodic inspections, functional flight tests, and maintenance and inspection procedures, with acceptable maintenance practices, for ensuring continued compliance with the RVSM aircraft requirements.

(ii) A quality assurance program for ensuring continuing accuracy and reliability of test equipment used for testing aircraft to

determine compliance with the RVSM aircraft requirements.

(iii) Procedures for returning noncompliant aircraft to service.

(2) For an applicant who operates under part 121 or 135, initial and recurring pilot training requirements.

(3) Policies and Procedures. An applicant who operates under part 121 or 135 shall submit RVSM policies and procedures that will enable it to conduct RVSM operations safely.

(c) Validation and Demonstration. In a manner prescribed by the Administrator, the operator must provide evidence that:

(1) It is capable to operate and maintain each aircraft or aircraft group for which it applies for approval to operate in RVSM airspace; and

(2) Each pilot has an adequate knowledge of RVSM requirements, policies, and procedures.

Section 4. RVSM Operations

(a) Each person requesting a clearance to operate within RVSM airspace shall correctly annotate the flight plan filed with air traffic control with the status of the operator and aircraft with regard to RVSM approval. Each operator shall verify RVSM applicability for the flight planned route through the appropriate flight planning information sources.

(b) No person may show, on the flight plan filed with air traffic control, an operator or aircraft as approved for RVSM operations, or operate on a route or in an area where RVSM approval is required, unless:

(1) The operator is authorized by the Administrator to perform such operations; and

(2) The aircraft has been approved and complies with the requirements of Section 2 of this appendix.

Section 5. Deviation Authority Approval

The Administrator may authorize an aircraft operator to deviate from the requirements of §91.706 for a specific flight in RVSM airspace if that operator has not been approved in accordance with Section 3 of this appendix, and if:

(2) The operator submits an appropriate request with the air traffic control center controlling the airspace, (request should be made at least 48 hours in advance of the operation unless prevented by exceptional circumstances); and

(b) At the time of filing the flight plan for that flight, ATC determines that the aircraft may be provided appropriate separation and that the flight will not interfere with, or impose a burden on, the operations of operators who have been approved for RVSM operations in accordance with Section 3 of this appendix.

Section 6. Reporting Altitude-Keeping Errors

Each operator shall report to the Administrator each event in which the operator's aircraft has exhibited the following altitude-keeping performance:

(a) Total vertical error of 300 feet or more;

(b) Altimetry system error of 245 feet or more; or

(c) Assigned altitude deviation of 300 feet or more.

Section 7. Removal or Amendment of Authority

The Administrator may amend operations specifications to revoke or restrict an RVSM authorization, or may revoke or restrict an RVSM letter of authorization, if the Administrator determines that the operator is not complying, or is unable to comply, with this appendix or subpart H of this part. Examples of reasons for amendment, revocation, or restriction include, but are not limited to, an operator's:

(a) Committing one or more altitude-keeping errors in RVSM airspace;

(b) Failing to make an effective and timely response to identify and correct an altitude-keeping error; or

(c) Failing to report an altitude-keeping error.

Section 8. Airspace Designation

(a) *RVSM in the North Atlantic.* (1) RVSM may be applied in the NAT in the following ICAO Flight Information Regions (FIRs): New York Oceanic, Gander Oceanic, Sondrestrom FIR, Reykjavik Oceanic, Shanwick Oceanic, and Santa Maria Oceanic.

(2) RVSM may be effective in the Minimum Navigation Performance Specification (MNPS) airspace within the NAT. The MNPS airspace within the NAT is defined by the volume of airspace between FL 285 and FL 420 (inclusive) extending between latitude 27 degrees north and the North Pole, bounded in the east by the eastern boundaries of control areas Santa Maria Oceanic, Shanwick Oceanic, and Reykjavik Oceanic and in the west by the western boundaries of control areas Reykjavik Oceanic, Gander Oceanic, and New York Oceanic, excluding the areas west of 60 degrees west and south of 38 degrees 30 minutes north.

(b) *RVSM in the Pacific.* (1) RVSM may be applied in the Pacific in the following ICAO Flight Information Regions (FIRs): Anchorage Arctic, Anchorage Continental, Anchorage Oceanic, Auckland Oceanic, Brisbane, Edmonton, Honiara, Los Angeles, Melbourne, Nadi, Naha, Nauru, New Zealand, Oakland, Oakland Oceanic, Port Moresby, Seattle, Tahiti, Tokyo, Ujung Pandang and Vancouver.

(c) *RVSM in the West Atlantic Route System (WATRS).* RVSM may be applied in the New York FIR portion of the West Atlantic Route System (WATRS). The area is defined as beginning at a point 38°30' N/60°00' W direct to

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38°30'N/69°15' W direct to 38°20' N/69°57' W direct to 37°31' N/71°41' W direct to 37°13' N/72°40' W direct to 35°05' N/72°40' W direct to 34°54' N/72°57' W direct to 34°29' N/73°34' W direct to 34°33' N/73°41' W direct to 34°19' N/74°02' W direct to 34°14' N/73°57' W direct to 32°12' N/76°49' W direct to 32°20' N/77°00' W direct to 28°08' N/77°00' W direct to 27°50' N/76°32' W direct to 27°50' N/74°50' W direct to 25°00' N/73°21' W direct to 25°00'05' N/69°13'06' W direct to 25°00' N/69°07' W direct to 23°30' N/68°40' W direct to 23°30' N/60°00' W to the point of beginning.

[Doc. No. 28870, 62 FR 17487, Apr. 9, 1997, as amended by Amdt. 91-261, 65 FR 5942, Feb. 7, 2000; Amdt. 91-271, 66 FR 63895, Dec. 10, 2001]

PART 93—SPECIAL AIR TRAFFIC RULES AND AIRPORT TRAFFIC PATTERNS

SPECIAL FEDERAL AVIATION REGULATION
SFAR No. 60 [NOTE]

Subpart A—General

Sec.

93.1 Applicability.

Subparts B–C [Reserved]

Subpart D—Anchorage, Alaska, Terminal Area

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- 93.53 Description of area.
- 93.55 Subdivision of Terminal Area.
- 93.57 General rules: All segments.
- 93.59 General rules: International segment.
- 93.61 General rules: Lake Hood segment.
- 93.63 General rules: Merrill segment.
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- 93.67 General rules: Bryant segment.
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- 93.69 Special requirements, Lake Campbell and Sixmile Lake Airports.

Subpart E [Reserved]

Subpart F—Valparaiso, Florida, Terminal Area

- 93.81 Applicability and description of area.
- 93.83 Aircraft operations.

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- 93.215 Initial allocation of slots.
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- 93.218 Slots for transborder service to and from Canada.
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- 93.221 Transfer of slots.
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- 93.303 Definitions.
- 93.305 Flight-free zones and flight corridors.
- 93.307 Minimum flight altitudes.
- 93.309 General operating procedures.
- 93.311 Minimum terrain clearance.
- 93.313 Communications.
- 93.315 Requirements for commercial Special Flight Rules Area operations.
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- 93.321 Transfer and termination of allocations.
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APPENDIX TO SUBPART U—SPECIAL FLIGHT RULES IN THE VICINITY OF THE GRAND CANYON NATIONAL PARK, AZ

AUTHORITY: 49 U.S.C. 106(g), 40103, 40106, 40109, 40113, 44502, 44514, 44701, 44719, 46301.

SPECIAL FEDERAL AVIATION REGULATION No. 60

EDITORIAL NOTE: For the text of SFAR No. 60, see part 91 of this chapter.

Subpart A—General

§ 93.1 Applicability.

(a) This part prescribes special airport traffic patterns and airport traffic areas. It also prescribes special air traffic rules for operating aircraft in those traffic patterns and traffic areas and in the vicinity of airports described in this part.

(b) Unless otherwise authorized by ATC, each person operating an aircraft shall do so in accordance with the special air traffic rules in this part in addition to other applicable rules in part 91 of this chapter.

[Doc. No. 1580, 28 FR 6715, June 29, 1963, as amended by Amdt. 93-10, 33 FR 4096, Mar. 2, 1968; Amdt. 93-15, 34 FR 2603, Feb. 26, 1969; Amdt. 93-33, 41 FR 14879, Apr. 8, 1976; Amdt. 93-64, 56 FR 65662, Dec. 17, 1991]

Subparts B–C [Reserved]

Subpart D—Anchorage, Alaska, Terminal Area

SOURCE: Docket No. 29029, 64 FR 14976, Mar. 29, 1999, unless otherwise noted.

§ 93.51 Applicability.

This subpart prescribes special air traffic rules and traffic patterns for aircraft operating in the Anchorage, Alaska, Terminal Area.

§ 93.53 Description of area.

The Anchorage, Alaska, Terminal Area is designated as that airspace extending upward from the surface to the upper limit of each of the segments described in § 93.55. It is bounded by a line beginning at Point MacKenzie, extending westerly along the bank of Knik Arm to a point intersecting the 350° bearing from the Anchorage Inter-

national ATCT; thence north to intercept the 5.2-mile arc centered on the geographical center of Anchorage, Alaska, ATCT; thence counterclockwise along that arc to its intersection with a line bearing 180° from the intersection of the new Seward Highway and International Airport Road; thence due north to O'Malley Road; thence east along O'Malley Road to its intersection with Lake Otis Parkway; thence northerly along Lake Otis Parkway to its intersection with Abbott Road; thence east along Abbott Road to its intersection with Abbott Loop Road; thence north to its intersection with Tudor Road; thence easterly along Tudor Road to its intersection with Muldoon Road; thence northerly along Muldoon Road to the intersection of the Glenn Highway; thence north and east along the Glenn Highway to Ski Bowl Road; thence southeast along the Ski Bowl Road to a point one-half mile south of the Glenn Highway; thence north and east one-half mile south of and parallel to the Glenn Highway to its intersection with a line one-half mile east of and parallel to the Bryant Airport Runway 16/34 extended centerline; thence northeast along a line one-half mile east of and parallel to Bryant Airport Runway 16/34 extended centerline to lat. 61°17'13"N., long. 149°37'35"W.; thence west along lat. 61°17'13"N., to long. 149°43'08"W.; thence north along long. 149°43'08"W., to lat. 61°17'30"N.; thence to lat. 61°17'58"N., long. 149°44'08"W.; thence to lat. 61°19'10"N., long. 149°46'44"W.; thence north along long. 149°46'44"W., to intercept the 4.7-mile radius arc centered on Elmendorf Air Force Base (AFB), Alaska; thence counterclockwise along the 4.7-mile radius arc to its intersection with the west bank of Knik Arm; thence southerly along the west bank of Knik Arm to the point of beginning.

[Doc. No. 29029, 64 FR 14976, Mar. 29, 1999; Amdt. 93-77, 64 FR 17439, Apr. 9, 1999]

§ 93.55 Subdivision of Terminal Area.

The Anchorage, Alaska, Terminal Area is subdivided as follows:

(a) *International segment.* That area from the surface to and including 4,100 feet MSL, within a 5.2-mile radius of

the Anchorage International ATCT; excluding that airspace east of the 350° bearing from the Anchorage International ATCT and north of the 090° bearing from the Anchorage International ATCT and east of a line bearing 180° and 360° from the intersection of the new Seward Highway and International Airport Road and the airspace extending upward from the surface to but not including 600 feet MSL, south of lat. 61°08'28"N.

(b) *Merrill segment.* That area from the surface to and including 2,500 feet MSL, within a line beginning at Point Noname; thence direct to the mouth of Ship Creek; thence direct to the intersection of the Glenn Highway and Muldoon Road; thence south along Muldoon Road to Tudor Road; thence west along Tudor Road to the new Seward Highway; thence direct to West Anchorage High School; thence direct to Point MacKenzie; thence via the north bank of Knik Arm to the point of beginning.

(c) *Lake Hood segment.* That area from the surface to and including 2,500 feet MSL, within a line beginning at Point MacKenzie; thence direct to West Anchorage High School; thence direct to the intersection of Tudor Road and the new Seward Highway; thence south along the new Seward Highway to the 090° bearing from the Anchorage International ATCT; thence west direct to the Anchorage International ATCT; thence north along the 350° bearing from the Anchorage International ATCT to the north bank of Knik arm; thence via the north bank of Knik Arm to the point of beginning.

(d) *Elmendorf segment.* That area from the surface to and including 3,000 feet MSL, within a line beginning at Point Noname; thence via the north bank of Knik Arm to the intersection of the 4.7-mile radius of Elmendorf AFB; thence clockwise along the 4.7-mile radius of Elmendorf AFB to long. 149°46'44"W.; thence south along long. 149°46'44"W. to lat. 61°19'10"N.; thence to lat. 61°17'58"N., long. 149°44'08"W.; thence to lat. 61°17'30"N., long. 149°43'08"W.; thence south along long. 149°43'08"W. to the Glenn Highway; thence south and west along the Glenn Highway to Muldoon Road; thence di-

rect to the mouth of Ship Creek; thence direct to the point of beginning.

(e) *Bryant segment.* That area from the surface to and including 2,000 feet MSL, within a line beginning at lat. 61°17'13"N., long. 149°37'35"W.; thence west along lat. 61°17'13"N., to long. 149°43'08"W.; thence south along long. 149°43'08"W., to the Glenn Highway; thence north and east along the Glenn Highway to Ski Bowl Road; thence southeast along the Ski Bowl Road to a point one-half mile south of the Glenn Highway; thence north and east one-half mile south of and parallel to the Glenn Highway to its intersection with a line one-half mile east of and parallel to the Bryant Airport Runway 16/34 extended centerline; thence northeast along a line one-half mile east of and parallel to Bryant Airport runway 16/34 extended centerline to the point of beginning.

(f) *Seward Highway segment.* That area from the surface to and including 4,100 feet MSL, within a line beginning at the intersection of a line bearing 180° from the intersection of the new Seward Highway and International Airport Road, and O'Malley Road; thence east along O'Malley Road to its intersection with Lake Otis Park Way, lat. 61°07'23"N., long. 149°50'03"W.; thence northerly along Lake Otis Park Way to its intersection with Abbott Road, lat. 61°08'14"N., long. 149°50'03"W.; thence east along Abbott Road to its intersection with Abbott Loop Road, lat. 61°08'14"N., long. 149°48'16"W.; thence due north to intersect with Tudor Road, lat. 61°10'51"N., long. 149°48'16"W.; thence west along Tudor Road to its intersection with the new Seward Highway, lat. 61°10'51"N., long. 149°51'38"W.; thence south along the new Seward Highway to its intersection with a line bearing 180° and 360° from the intersection of the new Seward Highway and International Airport Road; thence south to the point of beginning.

[Doc. No. 29029, 64 FR 14976, Mar. 29, 1999; Amdt. 93-77, 64 FR 17439, Apr. 9, 1999]

§ 93.57 General rules: All segments.

(a) Each person operating an aircraft to, from, or on an airport within the Anchorage, Alaska, Terminal Area shall operate that aircraft according to

the rules set forth in this section and §§ 93.59, 93.61, 93.63, 93.65, 93.67, or 93.68 as applicable, unless otherwise authorized or required by ATC.

(b) Each person operating an airplane within the Anchorage, Alaska Terminal Area shall conform to the flow of traffic depicted on the appropriate aeronautical charts.

(c) Each person operating a helicopter shall operate it in a manner so as to avoid the flow of airplanes.

(d) Except as provided in § 93.65 (d) and (e), and § 93.67(b), each person operating an aircraft in the Anchorage, Alaska, Terminal Area shall operate that aircraft only within the designated segment containing the arrival or departure airport.

(e) Except as provided in §§ 93.63(d) and 93.67(b), each person operating an aircraft in the Anchorage, Alaska, Terminal Area shall maintain two-way radio communications with the ATCT serving the segment containing the arrival or departure airport.

§ 93.59 General rules: International segment.

(a) No person may operate an aircraft at an altitude between 1,200 feet MSL and 2,000 feet MSL in that portion of this segment lying north of the midchannel of Knik Arm.

(b) Each person operating an airplane at a speed of more than 105 knots within this segment (except that part described in paragraph (a) of this section) shall operate that airplane at an altitude of at least 1,600 feet MSL until maneuvering for a safe landing requires further descent.

(c) Each person operating an airplane at a speed of 105 knots or less within this segment (except that part described in paragraph (a) of this section) shall operate that airplane at an altitude of at least 900 feet MSL until maneuvering for a safe landing requires further descent.

§ 93.61 General rules: Lake Hood segment.

(a) No person may operate an aircraft at an altitude between 1,200 feet MSL and 2,000 feet MSL in that portion of this segment lying north of the midchannel of Knik Arm.

(b) Each person operating an airplane within this segment (except that part described in paragraph (a) of this section) shall operate that airplane at an altitude of at least 600 feet MSL until maneuvering for a safe landing requires further descent.

§ 93.63 General rules: Merrill segment.

(a) No person may operate an aircraft at an altitude between 600 feet MSL and 2,000 feet MSL in that portion of this segment lying north of the midchannel of Knik Arm.

(b) Each person operating an airplane at a speed of more than 105 knots within this segment (except for that part described in paragraph (a) of this section) shall operate that airplane at an altitude of at least 1,200 feet MSL until maneuvering for a safe landing requires further descent.

(c) Each person operating an airplane at a speed of 105 knots or less within this segment (except for that part described in paragraph (a) of this section) shall operate that airplane at an altitude of at least 900 feet MSL until maneuvering for a safe landing requires further descent.

(d) Whenever the Merrill ATCT is not operating, each person operating an aircraft either in that portion of the Merrill segment north of midchannel of Knik Arm, or in the Seward Highway segment at or below 1200 feet MSL, shall contact Anchorage Approach Control for wake turbulence and other advisories. Aircraft operating within the remainder of the segment should self-announce intentions on the Merrill Field CTAF.

§ 93.65 General rules: Elmendorf segment.

(a) Each person operating a turbine-powered aircraft within this segment shall operate that aircraft at an altitude of at least 1,700 feet MSL until maneuvering for a safe landing requires further descent.

(b) Each person operating an airplane (other than turbine-powered aircraft) at a speed of more than 105 knots within this segment shall operate that airplane at an altitude of at least 1,200 feet MSL until maneuvering for a safe landing requires further descent.

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(c) Each person operating an airplane (other than turbine-powered aircraft) at a speed of 105 knots or less within the segment shall operate that airplane at an altitude of at least 800 feet MSL until maneuvering for a safe landing requires further descent.

(d) A person landing or departing from Elmendorf AFB, may operate that aircraft at an altitude between 1,500 feet MSL and 1,700 feet MSL within that portion of the International and Lake Hood segments lying north of the midchannel of Knik Arm.

(e) A person landing or departing from Elmendorf AFB, may operate that aircraft at an altitude between 900 feet MSL and 1,700 feet MSL within that portion of the Merrill segment lying north of the midchannel of Knik Arm.

(f) A person operating in VFR conditions, at or below 600 feet MSL, north of a line beginning at the intersection of Farrell Road and the long, 149°43'08"W.; thence west along Farrell Road to the east end of Sixmile Lake; thence west along a line bearing on the middle of Lake Lorraine to the northwest bank of Knik Arm; is not required to establish two-way radio communications with ATC.

[Doc. No. 29029, 64 FR 14977, Mar. 29, 1999; Amdt. 93-77, 64 FR 17439, Apr. 9, 1999]

§ 93.67 General rules: Bryant segment.

(a) Each person operating an airplane to or from the Bryant Airport shall conform to the flow of traffic shown on the appropriate aeronautical charts, and while in the traffic pattern, shall operate that airplane at an altitude of at least 1,000 feet MSL until maneuvering for a safe landing requires further descent.

(b) Each person operating an aircraft within the Bryant segment should self-announce intentions on the Bryant Airport CTAF.

§ 93.68 General rules: Seward Highway segment.

(a) Each person operating an airplane in the Seward Highway segment shall operate that airplane at an altitude of at least 1,000 feet MSL unless maneuvering for a safe landing requires further descent.

(b) Each person operating an aircraft at or below 1,200 feet MSL that will

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transition to or from the Lake Hood or Merrill segment shall contact the appropriate ATCT prior to entering the Seward Highway segment. All other persons operating an airplane at or below 1,200 feet MSL in this segment shall contact Anchorage Approach Control.

(c) At all times, each person operating an aircraft above 1,200 feet MSL shall contact Anchorage Approach Control prior to entering the Seward Highway segment.

§ 93.69 Special requirements, Lake Campbell and Sixmile Lake Airports.

Each person operating an aircraft to or from Lake Campbell or Sixmile Lake Airport shall conform to the flow of traffic for the Lake operations that are depicted on the appropriate aeronautical charts.

Subpart E [Reserved]

Subpart F—Valparaiso, Florida, Terminal Area

§ 93.81 Applicability and description of area.

(a) This subpart prescribes the Valparaiso, Florida Terminal Area, and the special air traffic rules for operating aircraft within that Area.

(b) The Valparaiso, Florida Terminal Area is designated as follows:

(1) North-South Corridor. The North-South Corridor includes the airspace extending upward from the surface up to, but not including, 18,000 feet MSL, bounded by a line beginning at:

- Latitude 30°42'51" N., Longitude 86°38'02" W.;
- to
- Latitude 30°43'18" N., Longitude 86°27'37" W.;
- to
- Latitude 30°37'01" N., Longitude 86°27'37" W.;
- to
- Latitude 30°37'01" N., Longitude 86°25'30" W.;
- to
- Latitude 30°33'01" N., Longitude 86°25'30" W.;
- to
- Latitude 30°33'01" N., Longitude 86°25'00" W.;
- to
- Latitude 30°25'01" N., Longitude 86°25'00" W.;
- to
- Latitude 30°25'01" N., Longitude 86°38'12" W.;
- to
- Latitude 30°29'02" N., Longitude 86°38'02" W.;
- to point of beginning.

(2) East-West Corridor—The East-West Corridor is divided into three sections to accommodate the different altitudes as portions of the corridor underlie restricted areas R-2915C, R-2919B, and R-2914B.

(i) The west section would include that airspace extending upward from the surface to but not including 8,500 feet MSL, bounded by a line beginning at: Latitude 30°22'47" N., Longitude 86°51'30" W.; then along the shoreline to Latitude 30°23'46" N., Longitude 86°38'15" W.; to Latitude 30°20'51" N., Longitude 86°38'50" W.; then 3 NM from and parallel to the shoreline to Latitude 30°19'31" N., Longitude 86°51'30" W.; to the beginning.

(ii) The center section would include that airspace extending upward from the surface to but not including 18,000 feet MSL, bounded by a line beginning at:

Latitude 30°25'01" N., Longitude 86°38'12" W.;
to
Latitude 30°25'01" N., Longitude 86°25'00" W.;
to
Latitude 30°25'01" N., Longitude 86°22'26" W.;
to
Latitude 30°19'46" N., Longitude 86°23'45" W.;
then 3 NM from and parallel to the shoreline to Latitude 30°20'51" N.,
Longitude 86°38'50" W.; to Latitude 30°23'46"
N.,
Longitude 86°38'15" W.; to the beginning.

(iii) The east section would include that airspace extending upward from the surface to but not including 8,500 feet MSL, bounded by a line beginning at:

Latitude 30°25'01" N., Longitude 86°22'26" W.;
to
Latitude 30°22'01" N., Longitude 86°08'00" W.;
to
Latitude 30°19'16" N., Longitude 85°56'00" W.;
to
Latitude 30°11'01" N., Longitude 85°56'00" W.;
then 3 NM from and parallel to the shoreline to Latitude 30°19'46" N., Longitude 86°23'45" W.; to the beginning.

[Amdt. 93-70, 59 FR 46154, Sept. 6, 1994]

§ 93.83 Aircraft operations.

(a) *North-South Corridor.* Unless otherwise authorized by ATC (including the Eglin Radar Control Facility), no person may operate an aircraft in flight within the North-South Corridor designated in § 93.81(b)(1) unless—

(1) Before operating within the corridor, that person obtains a clearance from the Eglin Radar Control Facility or an appropriate FAA ATC facility; and

(2) That person maintains two-way radio communication with the Eglin Radar Control Facility or an appropriate FAA ATC facility while within the corridor.

(b) *East-West Corridor.* Unless otherwise authorized by ATC (including the Eglin Radar Control Facility), no person may operate an aircraft in flight within the East-West Corridor designated in § 93.81(b)(2) unless—

(1) Before operating within the corridor, that person establishes two-way radio communications with Eglin Radar Control Facility or an appropriate FAA ATC facility and receives an ATC advisory concerning operations being conducted therein; and

(2) That person maintains two-way radio communications with the Eglin Radar Control Facility or an appropriate FAA ATC facility while within the corridor.

[Amdt. 93-70, 59 FR 46155, Sept. 6, 1994]

Subparts G-I [Reserved]

Subpart J—Lorain County Regional Airport Traffic Rule

§ 93.117 Applicability.

This subpart prescribes a special air traffic rule for the Lorain County Regional Airport, Lorain County, OH.

[Doc. No. 8669, 33 FR 11749, Aug. 20, 1968]

§ 93.119 Aircraft operations.

Each person piloting an airplane landing at the Lorain County Regional Airport shall enter the traffic pattern north of the airport and shall execute a right traffic pattern for a landing to the southwest or a left traffic pattern for a landing to the northeast. Each person taking off from the airport shall execute a departure turn to the north as soon as practicable after takeoff.

[Doc. No. 8669, 33 FR 11749, Aug. 20, 1968]

Subpart K—High Density Traffic Airports

§ 93.121 Applicability.

This subpart designates high density traffic airports and prescribes air traffic rules for operating aircraft, other than helicopters, to or from those airports.

[Doc. No. 9974, 35 FR 16592, Oct. 24, 1970, as amended by Amdt. 93-27, 38 FR 29464, Oct. 25, 1973]

§ 93.123 High density traffic airports.

(a) Each of the following airports is designated as a high density traffic airport and, except as provided in § 93.129 and paragraph (b) of this section, or unless otherwise authorized by ATC, is limited to the hourly number of allocated IFR operations (takeoffs and landings) that may be reserved for the specified classes of users for that airport:

IFR OPERATIONS PER HOUR

Class of user	AIRPORT			
	LaGuardia ⁴ , 5	Newark	O'Hare ² , 3, 5	Ronald Reagan National ¹
Air carriers ..	48	40	120	37
Commuters	14	10	25	11
Other	6	10	10	12

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	Air carriers	Commuters	Other
1500	69	15	2
1600	74	12	2
1700	80	13	0
1800	75	10	2
1900	63	12	2

¹Washington National Airport operations are subject to modifications per Section 93.124.

²The hour period in effect at O'Hare begins at 6:45 a.m. and continues in 30-minute increments until 9:15 p.m.

³Operations at O'Hare International Airport shall not—

(a) Except as provided in paragraph (c) of the note, exceed 62 for air carriers and 13 for commuters and 5 for "other" during any 30-minute period beginning at 6:45 a.m. and continuing every 30 minutes thereafter.

(b) Except as provided in paragraph (c) of the note, exceed more than 120 for air carriers, 25 for commuters, and 10 for "other" in any two consecutive 30-minute periods.

(c) For the hours beginning at 6:45 a.m., 7:45 a.m., 11:45 a.m., 7:45 p.m. and 8:45 p.m., the hourly limitations shall be 105 for air carriers, 40 for commuters and 10 for "other," and the 30-minute limitations shall be 55 for air carriers, 20 for commuters and 5 for "other." For the hour beginning at 3:45 p.m., the hourly limitations shall be 115 for air carriers, 30 for commuters and 10 for "others," and the 30-minute limitations shall be 60 for air carriers, 15 for commuters and 5 for "other."

⁴Operations at LaGuardia Airport shall not—

(a) Exceed 26 for air carriers, 7 for commuters and 3 for "other" during any 30-minute period.

(b) Exceed 48 for air carriers, 14 for commuters, and 6 for "other" in any two consecutive 30-minute periods.

⁵Pursuant to bilateral agreement, 14 slots at LaGuardia and 24 slots at O'Hare are allocated to the Canadian carriers. These slots are excluded from the hourly quotas set forth in § 93.123 above.

(b) The following exceptions apply to the allocations of reservations prescribed in paragraph (a) of this section.

(1) The allocations of reservations among the several classes of users do not apply from 12 midnight to 6 a.m. local time, but the totala hourly limitation remains applicable.

(2) [Reserved]

(3) The allocation of 37 IFR reservations per hour for air carriers except commuters at Washington National Airport does not include charter flights, or other nonscheduled flights of scheduled or supplemental air carriers. These flights may be conducted without regard to the limitation of 37 IFR reservations per hour.

(4) The allocation of IFR reservations for air carriers except commuters at LaGuardia, Newark, O'Hare, and Washington National Airports does not include extra sections of scheduled flights. The allocation of IFR reservations for scheduled commuters at Washington National Airport does not include extra sections of scheduled flights. These flights may be conducted without regard to the limitation upon the hourly IFR reservations at those airports.

(5) Any reservation allocated to, but not taken by, air carrier operations (except commuters) is available for a scheduled commuter operation.

(6) Any reservation allocated to, but not taken by, air carrier operations (except commuters) or scheduled commuter operations is available for other operations.

(c) For purposes of this subpart—

(1) The number of operations allocated to *air carriers except commuters*, as used in paragraph (a) of this section refers to the number of operations conducted by air carriers with turboprop and reciprocating engine aircraft having a certificated maximum passenger seating capacity of 75 or more or with turbojet powered aircraft having a certificated maximum passenger seating capacity of 56 or more, or, if used for cargo service in air transportation,

with any aircraft having a maximum payload capacity of 18,000 pounds or more.

(2) The number of operations allocated to *scheduled commuters*, as used in paragraph (a) of this section, refers to the number of operations conducted by air carriers with turboprop and reciprocating engine aircraft having a certificated maximum passenger seating capacity of less than 75 or by turbojet aircraft having a certificated maximum passenger seating capacity of less than 56, or, if used for cargo service in air transportation, with any aircraft having a maximum payload capacity of less than 18,000 pounds.

(3) Notwithstanding the provisions of paragraph (c)(2) of this section, a limited number of operations allocated for "scheduled commuters" under paragraph (a) of this section may be conducted with aircraft described in § 93.221(e) of this part pursuant to the requirements of § 93.221(e).

[Doc. No. 9113, 34 FR 2603, Feb. 26, 1969, as amended by Amdt. 93-37, 45 FR 62408, Sept. 18, 1980; Amdt. 93-44, 46 FR 58048, Nov. 27, 1981; Amdt. 93-46, 49 FR 8244, Mar. 6, 1984; Amdt. 93-57, 54 FR 34906, Aug. 22, 1989; 54 FR 37303, Sept. 8, 1989; Amdt. 93-59, 54 FR 39843, Sept. 28, 1989; Amdt. 93-62, 56 FR 41207, Aug. 19, 1991; Amdt. 93-78, 64 FR 53564, Oct. 1, 1999]

§ 93.125 Arrival or departure reservation.

Except between 12 Midnight and 6 a.m. local time, no person may operate an aircraft to or from an airport designated as a high density traffic airport unless he has received, for that operation, an arrival or departure reservation from ATC.

[Doc. No. 9974, 37 FR 22794, Oct. 25, 1972]

§ 93.129 Additional operations.

(a) *IFR*. The operator of an aircraft may take off or land the aircraft under IFR at a designated high density traffic airport without regard to the maximum number of operations allocated for that airport if the operation is not a scheduled operation to or from a high density airport and he obtains a departure or arrival reservation, as appropriate, from ATC. The reservation is granted by ATC whenever the aircraft may be accommodated without significant additional delay to the operations

allocated for the airport for which the reservations is requested.

(b) *VFR*. The operator of an aircraft may take off and land the aircraft under VFR at a designated high density traffic airport without regard to the maximum number of operations allocated for that airport if the operation is not a scheduled operation to or from a high density airport and he obtains a departure or arrival reservation, as appropriate, from ATC. The reservation is granted by ATC whenever the aircraft may be accommodated without significant additional delay to the operations allocated for the airport for which the reservation is requested and the ceiling reported at the airport is at least 1,000 feet and the ground visibility reported at the airport is at least 3 miles.

(c) For the purpose of this section a *scheduled operation to or from the high density airport* is any operation regularly conducted by an air carrier or commuter between a high density airport and another point regularly served by that operator unless the service is conducted pursuant to irregular charter or hiring of aircraft or is a nonpassenger flight.

(d) An aircraft operator must obtain an IFR reservation in accordance with procedures established by the Administrator. For IFR flights to or from a high density airport, reservations for takeoff and arrival shall be obtained prior to takeoff.

[Doc. No. 9113, 34 FR 2603, Feb. 26, 1969, as amended by Amdt. 93-25, 37 FR 22794, Oct. 25, 1972; Amdt. 93-44, 46 FR 58049, Nov. 27, 1981; Amdt. 93-46, 49 FR 8244, Mar. 6, 1984]

§ 93.130 Suspension of allocations.

The Administrator may suspend the effectiveness of any allocation prescribed in § 93.123 and the reservation requirements prescribed in § 93.125 if he finds such action to be consistent with the efficient use of the airspace. Such suspension may be terminated whenever the Administrator determines that such action is necessary for the efficient use of the airspace.

[Doc. No. 9974, 35 FR 16592, Oct. 24, 1970, as amended by Amdt. 93-21, 35 FR 16636, Oct. 27, 1970; Amdt. 93-27, 38 FR 29464, Oct. 25, 1973]

§ 93.133

§ 93.133 Exceptions.

Except as provided in § 93.130, the provisions of §§ 93.123 and 93.125 do not apply to—

- (a) The Newark Airport, Newark, NJ;
- (b) The Kennedy International Airport, New York, NY, except during the hours from 3 p.m. through 7:59 p.m., local time; and
- (c) O'Hare International Airport from 9:15 p.m. to 6:44 a.m., local time.

[Doc. No. 24471, 49 FR 8244, Mar. 6, 1984]

Subpart L [Reserved]

Subpart M—Ketchikan International Airport Traffic Rule

SOURCE: Docket No. 14687, 41 FR 14879, Apr. 8, 1976, unless otherwise noted.

§ 93.151 Applicability.

This subpart prescribes special air traffic rules and communications requirements for persons operating aircraft, under VFR—

(a) To, from, or in the vicinity of the Ketchikan International Airport or Ketchikan Harbor.

(b) Within that airspace below 3,000 feet MSL within the lateral boundary of the surface area of the Ketchikan Class E airspace regardless of whether that airspace is in effect.

[Doc. No. 26653, 56 FR 48094, Sept. 23, 1991, as amended by Amdt. 93-64, 58 FR 32839, June 14, 1993]

§ 93.153 Communications.

(a) When the Ketchikan Flight Service Station is in operation, no person may operate an aircraft within the airspace specified in § 93.151, or taxi onto the runway at Ketchikan International Airport, unless that person has established two-way radio communications with the Ketchikan Flight Service Station for the purpose of receiving traffic advisories and continues to monitor the advisory frequency at all times while operating within the specified airspace.

(b) When the Ketchikan Flight Service Station is not in operation, no person may operate an aircraft within the airspace specified in § 93.151, or taxi onto the runway at Ketchikan Inter-

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national Airport, unless that person continuously monitors and communicates, as appropriate, on the designated common traffic advisory frequency as follows:

(1) *For inbound flights.* Announces position and intentions when no less than 10 miles from Ketchikan International Airport, and monitors the designated frequency until clear of the movement area on the airport or Ketchikan Harbor.

(2) *For departing flights.* Announces position and intentions prior to taxiing onto the active runway on the airport or onto the movement area of Ketchikan Harbor and monitors the designated frequency until outside the airspace described in § 93.151 and announces position and intentions upon departing that airspace.

(c) Notwithstanding the provisions of paragraphs (a) and (b) of this section, if two-way radio communications failure occurs in flight, a person may operate an aircraft within the airspace specified in § 93.151, and land, if weather conditions are at or above basic VFR weather minimums.

[Doc. No. 26653, 56 FR 48094, Sept. 23, 1991]

§ 93.155 Aircraft operations.

(a) When an advisory is received from the Ketchikan Flight Service Station stating that an aircraft is on final approach to the Ketchikan International Airport, no person may taxi onto the runway of that airport until the approaching aircraft has landed and has cleared the runway.

(b) Unless otherwise authorized by ATC, each person operating a large airplane or a turbine engine powered airplane shall—

(1) When approaching to land at the Ketchikan International Airport, maintain an altitude of at least 900 feet MSL until within three miles of the airport; and

(2) After takeoff from the Ketchikan International Airport, maintain runway heading until reaching an altitude of 900 feet MSL.

Subparts N-R [Reserved]

Subpart S—Allocation of Commuter and Air Carrier IFR Operations at High Density Traffic Airports

SOURCE: Docket No. 24105, 50 FR 52195, Dec. 20, 1985, unless otherwise noted.

§ 93.211 Applicability.

(a) This subpart prescribes rules applicable to the allocation and withdrawal of IFR operational authority (takeoffs and landings) to individual air carriers and commuter operators at the High Density Traffic Airports identified in subpart K of this part except for Newark Airport.

(b) This subpart also prescribes rules concerning the transfer of allocated IFR operational authority and the use of that authority once allocated.

§ 93.213 Definitions and general provisions.

(a) For purposes of this subpart—

(1) *New entrant carrier* means a commuter operator or air carrier which does not hold a slot at a particular airport and has never sold or given up a slot at that airport after December 16, 1985.

(2) *Slot* means the operational authority to conduct one IFR landing or take-off operation each day during a specific hour or 30 minute period at one of the High Density Traffic Airports, as specified in subpart K of this part.

(3) *Summer season* means the period of time from the first Sunday in April until the last Sunday in October.

(4) *Winter season* means the period of time from the last Sunday in October until the first Sunday in April.

(5) *Limited incumbent carrier* means an air carrier or commuter operator that holds or operates fewer than 12 air carrier or commuter slots, in any combination, at a particular airport, not including international slots, Essential Air Service Program slots, or slots between the hours of 2200 and 0659 at Washington National Airport or LaGuardia Airport. However, for the purposes of this paragraph (a)(5), the carrier is considered to hold the number of slots at that airport that the carrier has, since December 16, 1985:

(i) Returned to the FAA;

(ii) Had recalled by the FAA under § 93.227(a); or

(iii) Transferred to another party other than by trade for one or more slots at the same airport.

(b) The definitions specified in subpart K of this part also apply to this subpart.

(c) For purposes of this subpart, if an air carrier, commuter operator, or other person has more than a 50-percent ownership or control of one or more other air carriers, commuter operators, or other persons, they shall be considered to be a single air carrier, commuter operator, or person. In addition, if a single company has more than a 50-percent ownership or control of two or more air carriers and/or commuter operators or any combination thereof, those air carriers and/or commuter operators shall be considered to be a single operator. A single operator may be considered to be both an air carrier and commuter operator for purposes of this subpart.

[Doc. No. 24105, 50 FR 52195, Dec. 20, 1985, as amended by Amdt. 93-52, 51 FR 21717, June 13, 1986; Amdt. 93-57, 54 FR 34906, Aug. 22, 1989; 54 FR 37303, Sept. 8, 1989; Amdt. 93-65, 57 FR 37314, Aug. 18, 1992]

§ 93.215 Initial allocation of slots.

(a) Each air carrier and commuter operator holding a permanent slot on December 16, 1985, as evidenced by the records of the air carrier and commuter operator scheduling committees, shall be allocated those slots subject to withdrawal under the provisions of this subpart. The Chief Counsel of the FAA shall be the final decisionmaker for initial allocation determinations.

(b) Any permanent slot whose use on December 16, 1985 is divided among different operators, by day of the week, or otherwise, as evidenced by records of the scheduling committees, shall be allocated in conformity with those records. The Chief Counsel of the FAA shall be the final decisionmaker for these determinations.

(c) A carrier may permanently designate a slot it holds at Kennedy International Airport as a seasonal slot, to be held by the carrier only during the corresponding season in future years, if it notifies the FAA (at the address specified in § 93.225(e)), in writing, the

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preceding winter seasons or by October 15 of the preceding year for summer seasons.

(d) Within 30 days after December 16, 1985, each U.S. air carrier and commuter operator must notify the office specified in §93.221(a)(1), in writing, of those slots used for operations described in §93.217(a)(1) on December 16, 1985.

(e) Any slot not held by an operator on December 16, 1985 shall be allocated in accordance with the provisions of §93.217, 93.219 or 93.225 of this subpart.

[Doc. No. 24105, 50 FR 52195, Dec. 20, 1985, as amended by Amdt. 93-52, 51 FR 21717, June 13, 1986]

§93.217 Allocation of slots for international operations and applicable limitations.

(a) Any air carrier of commuter operator having the authority to conduct international operations shall be provided slots for those operations, excluding transborder service solely between HDR airports and Canada, subject to the following conditions and the other provisions of this section:

(1) The slot may be used only for a flight segment in which either the takeoff or landing is at a foreign point or, for foreign operators, the flight segment is a continuation of a flight that begins or ends at a foreign point. Slots may be obtained and used under this section only for operations at Kennedy and O'Hare airports unless otherwise required by bilateral agreement and only for scheduled service unless the requesting carrier qualifies for the slot on the basis of historic seasonal operations, under §93.217(a)(5).

(2) Slots used for an operation described in paragraph (a)(1) of this section may not be bought, sold, leased, or otherwise transferred, except that such a slot may be traded to another slot-holder on a one-for-one basis for a slot at the same airport in a different hour or half-hour period if the trade is for the purpose of conducting such an operation in a different hour or half-hour period.

(3) Slots used for operations described in paragraph (a)(1) of this section must be returned to the FAA if the slot will not be used for such operations for more than a 2-week period.

(4) Each air carrier or commuter operator having a slot that is used for operations described in paragraph (a)(1) of this section but is not used every day of the week shall notify the office specified in §93.221(a)(1) in writing of those days on which the slots will not be used.

(5) Except as provided in paragraph (a)(10) of this section, at Kennedy and O'Hare Airports, a slot shall be allocated, upon request, for seasonal international operations, including charter operations, if the Chief Counsel of the FAA determines that the slot had been permanently allocated to and used by the requesting carrier in the same hour and for the same time period during the corresponding season of the preceding year. Requests for such slots must be submitted to the office specified in §93.221(a)(1), by the deadline published in a FEDERAL REGISTER notice for each season. For operations during the 1986 summer season, requests under this paragraph must have been submitted to the FAA on or before February 1, 1986. Each carrier requesting a slot under this paragraph must submit its entire international schedule at the relevant airport for the particular season, noting which requests are in addition to or changes from the previous year.

(6) Except as provided in paragraph (a)(10) of this section, additional slots shall be allocated at O'Hare Airport for international scheduled air carrier and commuter operations (beyond those slots allocated under §§93.215 and 93.217(a)(5) if a request is submitted to the office specified in §93.221(a)(1) and filed by the deadline published in a FEDERAL REGISTER notice for each season. These slots will be allocated at the time requested unless a slot is available within one hour of the requested time, in which case the unallocated slots will be used to satisfy the request.

(7) If required by bilateral agreement, additional slots shall be allocated at LaGuardia Airport for international scheduled passenger operations within the hour requested.

(8) To the extent vacant slots are available, additional slots during the high density hours shall be allocated at Kennedy Airport for new international

scheduled air carrier and commuter operations (beyond those operations for which slots have been allocated under §§ 93.215 and 93.217(a)(5)), if a request is submitted to the office specified in § 93.221(a)(1) by the deadline published in a FEDERAL REGISTER notice for each season. In addition, slots may be withdrawn from domestic operations for operations at Kennedy Airport under this paragraph if required by international obligations.

(9) In determining the hour in which a slot request under §§ 93.217(a)(6) and 93.217(a)(8) will be granted, the following will be taken into consideration, among other things:

- (i) The availability of vacant slot times;
- (ii) International obligations;
- (iii) Airport terminal capacity, including facilities and personnel of the U.S. Customs Service and the U.S. Immigration and Naturalization Service;
- (iv) The extent and regularity of intended use of a slot; and
- (v) Schedule constraints of carriers requesting slots.

(10) At O'Hare Airport, a slot will not be allocated under this section to a carrier holding or operating 100 or more permanent slots on the previous May 15 for a winter season or October 15 for a summer season unless:

- (i) Allocation of the slot does not result in a total allocation to that carrier under this section that exceeds the number of slots allocated to and scheduled by that carrier under this section on February 23, 1990, and as reduced by the number of slots reclassified under § 93.218, and does not exceed by more than 2 the number of slots allocated to and scheduled by that carrier during any half hour of that day, or
- (ii) Notwithstanding the number of slots allocated under paragraph (a)(10)(i) of this section, a slot is available for allocation without withdrawal of a permanent slot from any carrier.

(b) If a slot allocated under § 93.215 was scheduled for an operation described in paragraph (a)(1) of this section on December 16, 1985, its use shall be subject to the requirements of paragraphs (a)(1) through (a)(4) of this section. The requirements also apply to slots used for international operations at LaGuardia Airport.

(c) If a slot is offered to a carrier in other than the hour requested, the carrier shall have 14 days after the date of the offer to accept the newly offered slot. Acceptance must be in writing and sent to the office specified in § 93.221(a)(1) and must repeat the certified statements required by paragraph (e) of this section.

(d) The Office of the Secretary of Transportation reserves the right not to apply the provisions of this section, concerning the allocation of slots, to any foreign air carrier or commuter operator of a country that provides slots to U.S. air carriers and commuter operators on a basis more restrictive than provided by this subpart. Decisions not to apply the provisions of this section will be made by the Office of the Secretary of Transportation.

(e) Each request for slots under this section shall state the airport, days of the week and time of the day of the desired slots and the period of time the slots are to be used. Each request shall identify whether the slot is requested under paragraph (a)(5), (6), or (8) and identify any changes from the previous year if requested under both paragraphs. The request must be accompanied by a certified statement signed by an officer of the operator indicating that the operator has or has contracted for aircraft capable of being utilized in using the slots requested and that the operator has bona fide plans to use the requested slots for operations described in paragraph (a).

[Doc. No. 24105, 51 FR 21717, June 13, 1986, as amended by Amdt. 93-61, 55 FR 53243, Dec. 27, 1990; 56 FR 1059, Jan. 10, 1991; Amdt. 93-78, 64 FR 53565, Oct. 1, 1999]

§ 93.218 Slots for transborder service to and from Canada.

(a) Except as otherwise provided in this subpart, international slots identified by U.S. carriers for international operations in December 1985 and the equivalent number of international slots held as of February 24, 1998, will be domestic slots. The Chief Counsel of the FAA shall be the final decision-maker for these determinations.

(b) Canadian carriers shall have a guaranteed base level of slots of 42 slots at LaGuardia, 36 slots at O'Hare

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for the Summer season, and 32 slots at O'Hare in the Winter season.

(c) Any modification to the slot base by the Government of Canada or the Canadian carriers that results in a decrease of the guaranteed base in paragraph (b) of this section shall permanently modify the base number of slots.

[Doc. No. FAA-1999-4971, 64 FR 53565, Oct. 1, 1999]

§93.219 Allocation of slots for essential air service operations and applicable limitations.

Whenever the Office of the Secretary of Transportation determines that slots are needed for operations to or from a High Density Traffic Airport under the Department of Transportation's Essential Air Service (EAS) Program, those slots shall be provided to the designated air carrier or commuter operator subject to the following limitations:

(a) Slots obtained under this section may not be bought, sold, leased or otherwise transferred, except that such slots may be traded for other slots on a one-for-one basis at the same airport.

(b) Any slot obtained under this section must be returned to the FAA if it will not be used for EAS purposes for more than a 2-week period. A slot returned under this paragraph may be reallocated to the operator which returned it upon request to the FAA office specified in §93.221(a)(1) if that slot has not been reallocated to an operator to provide substitute essential air service.

(c) Slots shall be allocated for EAS purposes in a time period within 90 minutes of the time period requested.

(d) The Department will not honor requests for slots for EAS purposes to a point if the requesting carrier has previously traded away or sold slots it had used or obtained for use in providing essential air service to that point.

(e) Slots obtained under Civil Aeronautics Board Order No. 84-11-40 shall be considered to have been obtained under this section.

§93.221 Transfer of slots.

(a) Except as otherwise provided in this subpart, effective April 1, 1986, slots may be bought, sold or leased for

any consideration and any time period and they may be traded in any combination for slots at the same airport or any other high density traffic airport. Transfers, including leases, shall comply with the following conditions:

(1) Requests for confirmation must be submitted in writing to Slot Administration Office, AGC-230, Office of the Chief Counsel, Federal Aviation Administration, 800 Independence Ave., SW., Washington, DC 20591, in a format to be prescribed by the Administrator. Requests will provide the names of the transferor and recipient; business address and telephone number of the persons representing the transferor and recipient; whether the slot is to be used for an arrival or departure; the date the slot was acquired by the transferor; the section of this subpart under which the slot was allocated to the transferor; whether the slot has been used by the transferor for international or essential air service operations; and whether the slot will be used by the recipient for international or essential air service operations. After withdrawal priorities have been established under §93.223 of this part, the requests must include the slot designations of the transferred slots as described in §93.223(b)(5).

(2) The slot transferred must come from the transferor's then-current FAA-approved base.

(3) Written evidence of each transferor's consent to the transfer must be provided to the FAA.

(4) The recipient of a transferred slot may not use the slot until written confirmation has been received from the FAA.

(5)(i) Until a slot obtained by a new entrant or limited incumbent carrier in a lottery held under §93.225 after June 1, 1991, has been used by the carrier that obtained it for a continuous 24-month period after the lottery in accordance with §93.227(a), that slot may be transferred only by trade for one or more slots at the same airport or to other new entrant or limited incumbent carriers under §93.221(a)(5)(iii). This transfer restriction shall apply to the same extent to any slot or slots acquired by trading the slot obtained in a

lottery. To remove the transfer restriction, documentation of 24 months' continuous use must be submitted to the FAA Office of the Chief Counsel.

(ii) Failure to use a slot acquired by trading a slot obtained in a lottery for a continuous 24-month period after the lottery, shall void all trades involving the lottery slot, which shall be returned to the FAA. All use of the lottery slot shall be counted toward fulfilling the minimum use requirements under §93.227(a) applicable to the slot or slots for which the lottery slot was traded, including subsequent trades.

(iii) Slots obtained by new entrant or limited incumbent carriers in a lottery may be sold, leased, or otherwise transferred to another entrant or limited incumbent carrier after a minimum of 60 days of use by the obtaining carrier. The transfer restrictions of §93.221(a)(5)(i) shall continue to apply to the slot until documentation of 24 months' continuous use has been submitted and the transfer restriction removed.

(6) The Office of the Secretary of Transportation must determine that the transfer will not be injurious to the essential air service program.

(b) A record of each slot transfer shall be kept on file by the office specified in paragraph (a)(1) of this section and will be made available to the public upon request.

(c) Any person may buy or sell slots and any air carrier or commuter may use them. Notwithstanding §93.123, air carrier slots may be used with aircraft of the kind described in §93.123 (c)(1) or (c)(2) but commuter slots may only be used with aircraft of the kind described in §93.0123(c)(2).

(d) Air carriers and commuter operators considered to be a single operator under the provisions of §93.213(c) of this subpart but operating under separate names shall report transfers of slots between them.

(e) Notwithstanding §93.123(c)(2) of this part, a commuter slot at O'Hare International Airport may be used with an aircraft described in §93.123(c)(1) of this part on the following conditions:

(1) Air carrier aircraft that may be operated under this paragraph are limited to aircraft:

(i) Having an actual seating configuration of 110 or fewer passengers; and

(ii) Having a maximum certificated takeoff weight of less than 126,000 pounds.

(2) No more than 50 percent of the total number of commuter slots held by a slot holder at O'Hare International Airport may be used with aircraft described in paragraph (e)(1) of this section.

(3) An air carrier or commuter operator planning to operate an aircraft described in paragraph (e)(1) of this section in a commuter slot shall notify ATC at least 75 days in advance of the planned start date of such operation. The notice shall include the slot number, proposed time of operation, aircraft type, aircraft series, actual aircraft seating configuration, and planned start date. ATC will approve or disapprove the proposed operation no later than 45 days prior to the planned start date. If an operator does not initiate operation of a commuter slot under this section within 30 days of the planned start date first submitted to the FAA, the ATC approval for that operation will expire. That operator may file a new or revised notice for the same half-hour slot time.

(4) An operation may not be conducted under paragraph (e)(1) of this section unless a gate is available for that operation without planned waiting time.

(5) For the purposes of this paragraph (e), notice to ATC shall be submitted in writing to: Director, Air Traffic System Management, ATM-1, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591.

[Doc. No. 24105, 50 FR 52195, Dec. 20, 1985, as amended by Amdt. 93-52, 51 FR 21717, June 13, 1986; Amdt. 93-58, 54 FR 39293, Sept. 25, 1989; Amdt. 93-62, 56 FR 41208, Aug. 19, 1991; Amdt. 93-65, 57 FR 37314, Aug. 18, 1992; Amdt. 93-68, 58 FR 39616, July 23, 1993]

§ 93.223 Slot withdrawal.

(a) Slots do not represent a property right but represent an operating privilege subject to absolute FAA control. Slots may be withdrawn at any time to fulfill the Department's operational

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needs, such as providing slots for international or essential air service operations or eliminating slots. Before withdrawing any slots under this section to provide them for international operations, essential air services or other operational needs, those slots returned under § 93.224 of this part and those recalled by the agency under § 93.227 will be allocated.

(b) Separate slot pools shall be established for air carriers and commuter operators at each airport. The FAA shall assign, by random lottery, withdrawal priority numbers for the recall priority of slots at each airport. Each additional permanent slot, if any, will be assigned the next higher number for air carrier or commuter slots, as appropriate, at each airport. Each slot shall be assigned a designation consisting of the applicable withdrawal priority number; the airport code; a code indicating whether the slot is an air carrier or commuter operator slot; and the time period of the slot. The designation shall also indicate, as appropriate, if the slot is daily or for certain days of the week only; is limited to arrivals or departures; is allocated for international operations or for EAS purposes; and, at Kennedy International Airport, is a summer or winter slot.

(c) Whenever slots must be withdrawn, they will be withdrawn in accordance with the priority list established under paragraph (b) of this section, except:

(1) Slots obtained in a lottery held pursuant to § 93.225 of this part shall be subject to withdrawal pursuant to paragraph (i) of that section, and

(2) Slots necessary for international and essential air service operations shall be exempt from withdrawal for use for other international or essential air service operations.

(3) Except as provided in § 93.227(a), the FAA shall not withdraw slots held at an airport by an air carrier or commuter operator holding and operating 12 or fewer slots at that airport (excluding slots used for operations described in § 93.212(a)(1)), if withdrawal would reduce the number of slots held below the number of slots operated.

(4) No slot comprising the guaranteed base of slots, as defined in section 93.318(b), shall be withdrawn for use for

international operations or for new entrants.

(d) The following withdrawal priority rule shall be used to permit application of the one-for-one trade provisions for international and essential air service slots and the slot withdrawal provisions where the slots are needed for other than international or essential air service operations. If an operator has more than one slot in a specific time period in which it also has a slot being used for international or essential air service operations, the international and essential air service slots will be considered to be those with the lowest withdrawal priority.

(e) The operator(s) using each slot to be withdrawn shall be notified by the FAA of the withdrawal and shall cease operations using that slot on the date indicated in the notice. Generally, the FAA will provide at least 30 days after notification for the operator to cease operations unless exigencies require a shorter time period.

(f) For 24 months following a lottery held after June 1, 1991, a slot acquired in that lottery shall be withdrawn by the FAA upon the sale, merger, or acquisition of more than 50 percent ownership or control of the carrier using that slot or one acquired by trade of that slot, if the resulting total of slots held or operated at the airport by the surviving entity would exceed 12 slots.

[Doc. No. 24105, 50 FR 52195, Dec. 20, 1985, as amended by Amdt. 93-52, 51 FR 21718, June 13, 1986; Amdt. 93-57, 54 FR 34906, Aug. 22, 1989; Amdt. 93-65, 57 FR 37314, Aug. 18, 1992; Amdt. 93-78, 64 FR 53565, Oct. 1, 1999]

§ 93.224 Return of slots.

(a) Whenever a slot is required to be returned under this subpart, the holder must notify the office specified in § 93.221(a)(1) in writing of the date after which the slot will not be used.

(b) Slots may be voluntarily returned for use by other operators by notifying the office specified in § 93.221(a)(1) in writing.

§ 93.225 Lottery of available slots.

(a) Whenever the FAA determines that sufficient slots have become available for distribution for purposes other than international or essential air service operations, but generally not

more than twice a year, they shall be allocated in accordance with the provisions of this section.

(b) A random lottery shall be held to determine the order of slot selection.

(c) Slot allocation lotteries shall be held on an airport-by-airport basis with separate lotteries for air carrier and commuter operator slots. The slots to be allocated in each lottery will be each unallocated slot not necessary for international or Essential Air Service Program operations, including any slot created by an increase in the operating limits set forth in §93.123(a).

(d) The FAA shall publish a notice in the FEDERAL REGISTER announcing any lottery dates. The notice may include special procedures to be in effect for the lotteries.

(e) Participation in a lottery is open to each U.S. air carrier or commuter operator operating at the airport and providing scheduled passenger service at the airport, as well as where provided for by bilateral agreement. Any U.S. carrier, or foreign air carrier where provided for by bilateral agreement, that is not operating scheduled service at the airport and has not failed to operate slots obtained in the previous lottery, or slots traded for those obtained by lottery, but wishes to initiate scheduled passenger service at the airport, shall be included in the lottery if that operator notifies, in writing, the Slot Administration Office, AGC-230, Office of the Chief Counsel, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591. The notification must be received 15 days prior to the lottery date and state whether there is any common ownership or control of, by, or with any other air carrier or commuter operator as defined in §93.213(c). New entrant and limited incumbent carriers will be permitted to complete their selections before participation by other incumbent carriers is initiated.

(f) At the lottery, each operator must make its selection within 5 minutes after being called or it shall lose its turn. If capacity still remains after each operator has had an opportunity to select slots, the allocation sequence will be repeated in the same order. An operator may select any two slots available at the airport during each se-

quence, except that new entrant carriers may select four slots, if available, in the first sequence.

(g) To select slots during a slot lottery session, a carrier must have appropriate economic authority for scheduled passenger service under Title IV of the Federal Aviation Act of 1958, as amended (49 U.S.C. App. 1371 et seq.), and must hold FAA operating authority under part 121 or part 135 of this chapter as appropriate for the slots the operator seeks to select.

(h) During the first selection sequence, 25 percent of the slots available but no less than two slots shall be reserved for selection by new entrant carriers. If new entrant carriers do not select all of the slots set aside for new entrant carriers, limited incumbent carriers may select the remaining slots. If every participating new entrant carrier and limited incumbent carrier has ceased selection of available slots or has obtained 12 slots at that airport, other incumbent carriers may participate in selecting the remaining slots; however, slots selected by non-limited incumbent carriers will be allocated only until the date of the next lottery.

(i) Slots obtained under this section shall retain their withdrawal priority as established under §93.223. If the slot is newly created, a withdrawal priority shall be assigned. That priority number shall be higher than any other slot assigned a withdrawal number previously.

[Doc. No. 24105, 50 FR 52195, Dec. 20, 1985, as amended by Amdt. 93-52, 51 FR 21718, June 13, 1986; Amdt. 93-58, 54 FR 39293, Sept. 25, 1989; Amdt. 93-65, 57 FR 37314, Aug. 18, 1992; 57 FR 47993, Oct. 21, 1992; Amdt. 93-78, 64 FR 53565, Oct. 1, 1999]

§93.226 Allocation of slots in low-demand periods.

(a) If there are available slots in the following time periods and there are no pending requests for international or EAS operations at these times, FAA will allocate slots upon request on a first-come, first-served basis, as set forth in this section:

- (1) Any period for which a slot is available less than 5 days per week.
- (2) Any time period for which a slot is available for less than a full season.

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(3) For LaGuardia and Washington National Airports:

- (i) 6:00 a.m.–6:59 a.m.
- (ii) 10:00 p.m.–midnight.

(b) Slots will be allocated only to operators with the economic and operating authority and aircraft required to use the slots.

(c) Requests for allocations under this section shall be submitted in writing to the address listed in § 93.221(a)(1) and shall identify the request as made under this section.

(d) The FAA may deny requests made under this section after a determination that all remaining slots in a particular category should be distributed by lottery.

(e) Slots may be allocated on a seasonal or temporary basis under this provision.

[Doc. No. 24105, 51 FR 21718, June 13, 1986]

§ 93.227 Slot use and loss.

(a) Except as provided in paragraphs (b), (c), (d), (g), and (l) of this section, any slot not utilized 80 percent of the time over a 2-month period shall be recalled by the FAA.

(b) Paragraph (a) of this section does not apply to slots obtained under § 93.225 of this part during:

- (1) The first 90 days after they are allocated to a new entrant carrier; or
- (2) The first 60 days after they are allocated to a limited incumbent or other incumbent carrier.

(c) Paragraph (a) of this section does not apply to slots of an operator forced by a strike to cease operations using those slots.

(d) In the case of a carrier that files for protection under the Federal bankruptcy laws and has not received a Notice of Withdrawal from the FAA for the subject slot or slots, paragraph (a) of this section does not apply:

(1) During a period after the initial petition in bankruptcy, to any slot held or operated by that carrier, for:

(i) 60 days after the carrier files the initial petition in bankruptcy; and

(ii) 30 days after the carrier, in anticipation of transferring slots, submits information to a Federal government agency in connection with a statutory antitrust, economic impact, or similar review of the transfer, provided that the information is submitted more

than 30 days after filing the initial petition in bankruptcy, and provided further that any slot to be transferred has not become subject to withdrawal under any other provision of this § 93.227; and

(2) During a period after a carrier ceases operations at an airport, to any slot held or operated by that carrier at that airport, for:

(i) 30 days after the carrier ceases operations at that airport, provided that the slot has not become subject to withdrawal under any other provision of this § 93.227; and

(ii) 30 days after the parties to a proposed transfer of any such slot comply with requests for additional information by a Federal government agency in connection with an antitrust, economic impact, or similar investigation of the transfer, provided that—

(A) The original notice of the transfer is filed with the Federal agency within 30 days after the carrier ceases operation at the airport;

(B) The request for additional information is made within 10 days of the filing of the notice by the carrier;

(C) The carrier submits the additional information to the Federal agency within 15 days of the request by such agency; and

(D) Any slot to be transferred has not become subject to withdrawal under any other provision of this § 93.227.

(e) Persons having slots withdrawn pursuant to paragraph (a) of this section must cease all use of those slots upon receipt of notice from the FAA.

(f) Persons holding slots but not using them pursuant to the provisions of paragraphs (b), (c) and (d) may lease those slots for use by others. A slot obtained in a lottery may not be leased after the expiration of the applicable time period specified in paragraph (b) of this section unless it has been operated for a 2-month period at least 65 percent of the time by the operator which obtained it in the lottery.

(g) This section does not apply to slots used for the operations described in § 93.217(a)(1) except that a U.S. air carrier or commuter operator required to file a report under paragraph (i) of this section shall include all slots operated at the airport, including slots described in § 93.217(a)(1).

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(h) Within 30 days after an operator files for protection under the Federal bankruptcy laws, the FAA shall recall any slots of that operator, if—(1) the slots were formerly used for essential air service and (2) the Office of the Secretary of Transportation determines those slots are required to provide substitute essential air service to or from the same points.

(i) Every air carrier and commuter operator or other person holding a slot at a high density airport shall, within 14 days after the last day of the 2-month period beginning January 1, 1986, and every 2 months thereafter, forward, in writing, to the address identified in § 93.221(a)(1), a list of all slots held by the air carrier, commuter operator or other person along with a listing of which air carrier or commuter operator actually operated the slot for each day of the 2-month period. The report shall identify the flight number for which the slot was used and the equipment used, and shall identify the flight as an arrival or departure. The report shall identify any common ownership or control of, by, or with any other carrier as defined in § 93.213(c) of this subpart. The report shall be signed by a senior official of the air carrier or commuter operator. If the slot is held by an "other person," the report must be signed by an official representative.

(j) The Chief Counsel of the FAA may waive the requirements of paragraph (a) of this section in the event of a highly unusual and unpredictable condition which is beyond the control of the slot-holder and which exists for a period of 9 or more days. Examples of conditions which could justify waiver under this paragraph are weather conditions which result in the restricted operation of an airport for an extended period of time or the grounding of an aircraft type.

(k) The Chief Counsel of the FAA may, upon request, grant a waiver from the requirements of paragraph (a) of this section for a slot used for the domestic segment of an intercontinental all-cargo flight. To qualify for a waiver, a carrier must operate the slot a substantial percentage of the time and must return the slot to the FAA in ad-

vance for the time periods it will not be used.

(l) The FAA will treat as used any slot held by a carrier at a High Density Traffic Airport on Thanksgiving Day, the Friday following Thanksgiving Day, and the period from December 24 through the first Saturday in January.

[Doc. No. 24105, 50 FR 52195, Dec. 20, 1985, as amended by Amdt. 93-52, 51 FR 21718, June 13, 1986; Amdt. 93-65, 57 FR 37315, Aug. 18, 1992; Amdt. 93-71, 59 FR 58771, Nov. 15, 1994]

Subpart T—Washington National Airport Traffic Rules

SOURCE: Docket No. 25143, 51 FR 43587, Dec. 3, 1986, unless otherwise noted.

§ 93.251 Applicability.

This subpart prescribes rules applicable to the operation of aircraft to or from Washington National Airport.

§ 93.253 Nonstop operations.

No person may operate an aircraft nonstop in air transportation between Washington National Airport and another airport that is more than 1,250 miles away from Washington National Airport.

Subpart U—Special Flight Rules in the Vicinity of Grand Canyon National Park, AZ

SOURCE: Doc. No. 28537, 61 FR 69330, Dec. 31, 1996, unless otherwise noted.

§ 93.301 Applicability.

This subpart prescribes special operating rules for all persons operating aircraft in the following airspace, designated as the Grand Canyon National Park Special Flight Rules Area: That airspace extending from the surface up to but not including 18,000 feet MSL within an area bounded by a line beginning at Lat. 35°55'12" N., Long. 112°04'05" W.; east to Lat. 35°55'30" N., Long. 111°45'00" W.; to Lat. 35°59'02" N., Long. 111°36'03" W.; north to Lat. 36°15'30" N., Long. 111°36'06" W.; to Lat. 36°24'49" N., Long. 111°47'45" W.; to Lat. 36°52'23" N., Long. 111°33'10" W.; west-northwest to Lat. 36°53'37" N., Long. 111°38'29" W.; southwest to Lat. 36°35'02" N., Long. 111°53'28" W.; to Lat. 36°21'30" N., Long.

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112°00'03" W.; west-northwest to Lat. 36°30'30" N., Long. 112°35'59" W.; southwest to Lat. 36°24'46" N., Long. 112°51'10" W., thence west along the boundary of Grand Canyon National Park (GCNP) to Lat. 36°14'08" N., Long. 113°10'07" W.; west-southwest to Lat. 36°09'30" N., Long. 114°03'03" W.; southeast to Lat. 36°05'11" N., Long. 113°58'46" W.; thence south along the boundary of GCNP to Lat. 35°58'23" N., Long. 113°54'14" W.; north to Lat. 36°00'10" N., Long. 113°53'48" W.; northeast to Lat. 36°02'14" N., Long. 113°50'16" W.; to Lat. 36°02'17" N., Long. 113°53'48" W.; northeast to Lat. 36°02'14" N., Long. 113°50'16" W.; to Lat. 36°02'17" N., Long. 113°49'11" W.; southeast to Lat. 36°01'22" N., Long. 113°48'21" W.; to Lat. 35°59'15" N., Long. 113°47'13" W.; to Lat. 35°57'51" N., Long. 113°46'01" W.; to Lat. 35°57'45" N., Long. 113°45'23" W.; southwest to Lat. 35°54'48" N., Long. 113°50'24" W.; southeast to Lat. 35°41'01" N., Long. 113°35'27" W.; thence clockwise via the 4.2-nautical mile radius of the Peach Springs VORTAC to Lat. 36°38'53" N., Long. 113°27'49" W.; northeast to Lat. 35°42'58" N., Long. 113°10'57" W.; north to Lat. 35°57'51" N., Long. 113°11'06" W.; east to Lat. 35°57'44" N., Long. 112°14'04" W.; thence clockwise via the 4.3-nautical mile radius of the Grand Canyon National Park Airport reference point (Lat. 35°57'08" N., Long. 112°08'49" W.) to the point of origin.

[Doc. No. 5926, 65 FR 17742, Apr. 4, 2000]

§ 93.303 Definitions.

For the purposes of this subpart:

Allocation means authorization to conduct a commercial air tour in the Grand Canyon National Park (GCNP) Special Flight Rules Area (SFRA).

Commercial air tour means any flight conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing. If the operator of a flight asserts that the flight is not a commercial air tour, factors that can be considered by the Administrator in making a determination of whether the flight is a commercial air tour include, but are not limited to—

(1) Whether there was a holding out to the public of willingness to conduct a sightseeing flight for compensation or hire;

(2) Whether a narrative was provided that referred to areas or points of interest on the surface;

(3) The area of operation;

(4) The frequency of flights;

(5) The route of flight;

(6) The inclusion of sightseeing flights as part of any travel arrangement package; or

(7) Whether the flight in question would or would not have been canceled based on poor visibility of the surface.

Commercial Special Flight Rules Area Operation means any portion of any flight within the Grand Canyon National Park Special Flight Rules Area that is conducted by a certificate holder that has operations specifications authorizing flights within the Grand Canyon National Park Special Flight Rules Area. This term does not include operations conducted under an FAA Form 7711-1, Certificate of Waiver or Authorization. The types of flights covered by this definition are set forth in the "Las Vegas Flight Standards District Office Grand Canyon National Park Special Flight Rules Area Procedures Manual" which is available from the Las Vegas Flight Standards District Office.

Flight Standards District Office means the FAA Flight Standards District Office with jurisdiction for the geographical area containing the Grand Canyon.

Park means Grand Canyon National Park.

Special Flight Rules Area means the Grand Canyon National Park Special Flight Rules Area.

[65 FR 17732, Apr. 4, 2000]

§ 93.305 Flight-free zones and flight corridors.

Except in an emergency or if otherwise necessary for safety of flight, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in 93.309, no person may operate an aircraft in the Special Flight Rules Area within the following flight-free zones:

(a) Desert View Flight-free Zone. That airspace extending from the surface up to but not including 14,500 feet MSL within an area bounded by a line beginning at Lat. 35°59'58" N., Long. 111°52'47" W.; thence east and north along the

GCNP boundary to Lat. 36°14'05" N., Long. 111°48'34" W.; southwest to Lat. 36°12'06" N., Long. 111°51'14" W.; to the point of origin; but not including the airspace at and above 10,500 feet MSL within 1 nautical mile of the western boundary of the zone. The corridor to the west, between the Desert View and Bright Angel Flight-free Zones, is designated the "Zuni Point Corridor." This corridor is 2 nautical miles wide for commercial sightseeing flights and 4 nautical miles wide for transient and general aviation operations.

(b) *Bright Angel Flight-free Zone.* That airspace extending from the surface up to but not including 14,500 feet MSL within an area bounded by a line beginning at Lat. 35°58'39" N., Long. 111°55'43" W.; north to Lat. 36°12'41" N., Long. 111°53'54" W.; northwest to Lat. 36°18'18" N., Long. 111°58'15" W.; thence west along the GCNP boundary to Lat. 36°20'11" N., Long. 112°06'25" W.; south-southwest to Lat. 36°09'31" N., Long. 112°11'15" W.; to Lat. 36°04'16" N., Long. 112°17'20" W.; thence southeast along the GCNP boundary to Lat. 36°01'54" N., Long. 112°11'24" W.; thence clockwise via the 4.3-nautical mile radius of the Grand Canyon National Park Airport reference point (Lat. 35°57'08" N., Long. 112°08'49" W.) to Lat. 35°59'37" N., Long. 112°04'29" W.; thence east along the GCNP boundary to the point of origin; but not including the airspace at and above 10,500 feet MSL within 1 nautical mile of the eastern boundary or the airspace at and above 10,500 feet MSL within 2 nautical miles of the northwestern boundary. The corridor to the east, between this flight-free zone and the Desert View Flight-free Zone, is designated the "Zuni Point Corridor." The corridor to the west, between the Bright Angel and Toroweap/Shinumo Flight-free Zones, is designated the "Dragon Corridor." This corridor is 2 nautical miles wide for commercial sightseeing flights and 4 nautical miles wide for transient and general aviation operations.

(c) *Toroweap/Shinumo Flight-free Zone.* That airspace extending from the surface up to but not including 14,500 feet MSL within an area bounded by a line beginning at Lat. 36°05'44" N., Long. 112°19'27" W.; north-northeast to Lat. 36°10'49" N., Long. 112°13'19" W.; to Lat.

36°21'02" N., Long. 112°08'47" W.; thence west and south along the GCNP boundary to Lat. 36°10'58" N., Long. 113°08'35" W.; south to Lat. 36°10'12" N., Long. 113°08'34" W.; thence northeast along the park boundary to Lat. 36°11'51" N., Long. 113°04'44" W.; thence counterclockwise via the 1.5-nautical mile radius of the Toroweap Overlook (Lat. 36°12'55" N., Long. 113°03'25" W.) to Lat. 36°13'46" N., Long. 113°01'54" W.; thence in an easterly direction along the park boundary to the point of origin; but not including the following airspace designated as the "Tuckup Corridor": at or above 10,500 feet MSL within 2 nautical miles either side of a line extending between Lat. 36°24'42" N., Long. 112°48'47" W. and Lat. 36°14'17" N., Long. 112°48'31" W.

(d) *Sanup Flight-free Zone.* That airspace extending from the surface up to but not including 8,000 feet MSL within an area bounded by a line beginning at Lat. 36°02'38" N., Long. 113°21'11" W.; west to Lat. 36°06'20" N., Long. 113°51'40" W.; southeast to Lat. 36°00'07" N., Long. 113°42'58" W.; southeast to Lat. 35°59'37" N., Long. 113°42'47" W.; to Lat. 35°59'20" N., Long. 113°43'00" W.; to Lat. 35°58'40" N., Long. 113°43'58" W.; southeast to Lat. 35°50'16" N., Long. 113°37'13" W.; thence along the park boundary to the point of origin.

EFFECTIVE DATE NOTE: By Doc. No. 28537, 61 FR 69330, Dec. 31, 1996, § 93.305 was added, effective May 1, 1997. By Amdt. 93-74, 62 FR 8864, Feb. 26, 1997, the effectiveness of § 93.305 was delayed until Jan. 31, 1998. By Amdt. 93-75, 62 FR 66250, Dec. 17, 1997, the effectiveness of § 93.305 was further delayed until Jan. 31, 1999. By Amdt. 93-76, 64 FR 5154, Feb. 3, 1999, the effectiveness of § 93.305 was further delayed until Jan. 31, 2000. By Amdt. 93-79, 65 FR 5397, Feb. 3, 2000, the effectiveness of § 93.305 was further delayed until Jan. 31, 2001. By Amdt. 93-80, 65 FR 17742, Apr. 4, 2000, § 93.305 was made effective Dec. 1, 2000, and amended by revising paragraphs (a), (c), and (d), and the last sentence of paragraph (b) and by adding a new sentence at the end of paragraph (b), effective Dec. 1, 2000. At 65 FR 69847, Nov. 20, 2000, the effectiveness of § 93.305 was delayed until Dec. 28, 2000. At 66 FR 1005, Jan. 4, 2001, the effectiveness of § 93.305 was delayed until Apr. 1, 2001. At 66 FR 16584, Mar. 26, 2001, the effective date was further delayed until Apr. 19, 2001, for § 93.305(c) and (d), and until Dec. 1, 2001, for § 93.305(a) and (b). At 66 FR 63296, Dec. 5, 2001, the effective date for § 93.305(a) and (b), and also for the amendments published on Apr. 4,

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2001, was further delayed until Feb. 20, 2003. For the convenience of the user, the added and revised text follows:

§ 93.305 Flight-free zones and flight corridors.

* * * * *

(a) Desert View Flight-free Zone. That airspace extending from the surface up to but not including 14,500 feet MSL within an area bounded by a line beginning at Lat. 35°59'58" N., Long. 111°52'47" W.; thence east to Lat. 36°00'00" N., Long. 111°51'04" W.; thence north to 36°00'24" N., Long. 111°51'04" W.; thence east to 36°00'24" N., Long. 111°45'44" W.; thence north along the GCNP boundary to Lat. 36°14'05" N., Long. 111°48'34" W.; thence southwest to Lat. 36°12'06" N., Long. 111°51'14" W.; to the point of origin; but not including the airspace at and above 10,500 feet MSL within 1 nautical mile of the western boundary of the zone. The corridor to the west between the Desert View and Bright Angel Flight-free Zones, is designated the "Zuni Point Corridor." This corridor is 2 nautical miles wide for commercial air tour flights and 4 nautical miles wide for transient and general aviation operations.

(b) * * * This corridor is 2 nautical miles wide for commercial air tour flights and 4 nautical miles wide for transient and general aviation operations. The Bright Angel Flight-free Zone does not include the following airspace designated as the Bright Angel Corridor: That airspace one-half nautical mile on either side of a line extending from Lat. 36°14'57" N., Long. 112°08'45" W. and Lat. 36°15'01" N., Long. 111°55'39" W.

(c) Toroweap/Shinumo Flight-free Zone. That airspace extending from the surface up to but not including 14,500 feet MSL within an area bounded by a line beginning at Lat. 36°05'44" N., Long. 112°19'27" W.; north-northeast to Lat. 36°10'49" N., Long. 112°13'19" W.; to Lat. 36°21'02" N., Long. 112°08'47" W.; thence west and south along the GCNP boundary to Lat. 36°10'58" N., Long. 113°08'35" W.; south to Lat. 36°10'12" N., Long. 113°08'34" W.; thence in an easterly direction along the park boundary to the point of origin; but not including the following airspace designated as the "Tuckup Corridor": at or above 10,500 feet MSL within 2 nautical miles either side of a line extending between Lat. 36°24'42" N., Long. 112°48'47" W. and Lat. 36°14'17" N., Long. 112°48'31" W. The airspace designated as the "Fossil Canyon Corridor" is also excluded from the Toroweap/Shinumo Flight-free Zone at or above 10,500 feet MSL within 2 nautical miles either side of a line extending between Lat. 36°16'26" N., Long. 112°34'35" W. and Lat. 36°22'51" N., Long. 112°18'18" W. The Fossil Canyon Corridor is to be used for transient and general aviation operations only.

(d) Sanup Flight-free Zone. That airspace extending from the surface up to but not including 8,000 feet MSL within an area bounded by a line beginning at Lat. 35°59'32" N., Long. 113°20'28" W.; west to Lat. 36°00'55" N., Long. 113°42'09" W.; southeast to Lat. 35°59'57" N., Long. 113°41'09" W.; to Lat. 35°59'09" N., Long. 113°40'53" W.; to Lat. 35°58'45" N., Long. 113°40'15" W.; to Lat. 35°57'52" N., Long. 113°39'34" W.; to Lat. 35°56'44" N., Long. 113°39'07" W.; to Lat. 35°56'04" N., Long. 113°39'20" W.; to Lat. 35°55'02" N., Long. 113°40'43" W.; to Lat. 35°54'47" N., Long. 113°40'51" W.; southeast to Lat. 35°50'16" N., Long. 113°37'13" W.; thence along the park boundary to the point of origin.

* * * * *

§ 93.307 Minimum flight altitudes.

Except in an emergency, or if otherwise necessary for safety of flight, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in 93.309, no person may operate an aircraft in the Special Flight Rules Area at an altitude lower than the following:

(a) Minimum sector altitudes—(1) Commercial air tours—(i) Marble Canyon Sector. Lees Ferry to Boundary Ridge: 6,000 feet MSL.

(ii) Supai Sector. Boundary Ridge to Supai Point: 7,500 feet MSL.

(iii) Diamond Creek Sector. Supai Point to Diamond Creek: 6,500 feet MSL.

(iv) Pearce Ferry Sector. Diamond Creek to the Grand Wash Cliffs: 5,000 feet MSL.

(2) Transient and general aviation operations—(i) Marble Canyon Sector. Lees Ferry to Boundary Ridge: 8,000 feet MSL.

(ii) Supai Sector. Boundary Ridge to Supai Point: 10,000 feet MSL.

(iii) Diamond Creek Sector. Supai Point to Diamond Creek: 9,000 feet MSL.

(iv) Pearce Ferry Sector. Diamond Creek to the Grand Wash Cliffs: 8,000 feet MSL.

(b) Minimum corridor altitudes—(1) Commercial air tours—(i) Zuni Point Corridors. 7,500 feet MSL.

(ii) Dragon Corridor. 7,500 feet MSL.

(2) Transient and general aviation operations—(i) Zuni Point Corridor. 10,500 feet MSL.

(ii) Dragon Corridor. 10,500 feet MSL.

(iii) Tuckup Corridor. 10,500 feet MSL.

(iv) Fossil Canyon Corridor. 10,500 feet MSL.

[Doc. No. 28537, 61 FR 69330, Dec. 31, 1996, as amended by Amdt. 93-80, 65 FR 17742, 17743, Apr. 4, 2000]

§ 93.309 General operating procedures.

Except in an emergency, no person may operate an aircraft in the Special Flight Rules Area unless the operation is conducted in accordance with the following procedures. (NOTE: The following procedures do not relieve the pilot from see-and-avoid responsibility or compliance with the minimum safe altitude requirements specified in § 91.119 of this chapter.):

(a) Unless necessary to maintain a safe distance from other aircraft or terrain remain clear of the flight-free zones described in § 93.305;

(b) Unless necessary to maintain a safe distance from other aircraft or terrain, proceed through the Zuni Point, Dragon, Tuckup, and Fossil Canyon Flight Corridors described in § 93.305 at the following altitudes unless otherwise authorized in writing by the Flight Standards District Office:

(1) *Northbound*. 11,500 or 13,500 feet MSL.

(2) *Southbound*. 10,500 or 12,500 feet MSL.

(c) For operation in the flight-free zones described in § 93.305, or flight below the altitudes listed in § 93.307, is authorized in writing by the Flight Standards District Office and is conducted in compliance with the conditions contained in that authorization. Normally authorization will be granted for operation in the areas described in § 93.305 or below the altitudes listed in § 93.307 only for operations of aircraft necessary for law enforcement, fire-fighting, emergency medical treatment/evacuation of persons in the vicinity of the Park; for support of Park maintenance or activities; or for aerial access to and maintenance of other property located within the Special Flight Rules Area. Authorization may be issued on a continuing basis;

(d) Is conducted in accordance with a specific authorization to operate in that airspace incorporated in the operator's operations specifications and approved by the Flight Standards Dis-

trict Office in accordance with the provisions of this subpart;

(e) Is a search and rescue mission directed by the U.S. Air Force Rescue Coordination Center;

(f) Is conducted within 3 nautical miles of Grand Canyon Bar Ten Airstrip, Pearce Ferry Airstrip, Cliff Dwellers Airstrip, Marble Canyon Airstrip, or Tuweep Airstrip at an altitude less than 3,000 feet above airport elevation, for the purpose of landing at or taking off from that facility; or

(g) Is conducted under an instrument flight rules (IFR) clearance and the pilot is acting in accordance with ATC instructions. An IFR flight plan may not be filed on a route or at an altitude that would require operation in an area described in § 93.305.

[Doc. No. 28537, 61 FR 69330, Dec. 31, 1996, as amended by Amdt. 93-80, 65 FR 17743, Apr. 4, 2000]

§ 93.311 Minimum terrain clearance.

Except in an emergency, when necessary for takeoff or landing, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in § 93.309(c), no person may operate an aircraft within 500 feet of any terrain or structure located between the north and south rims of the Grand Canyon.

§ 93.313 Communications.

Except when in contact with the Grand Canyon National Park Airport Traffic Control Tower during arrival or departure or on a search and rescue mission directed by the U.S. Air Force Rescue Coordination Center, no person may operate an aircraft in the Special Flight Rules Area unless he monitors the appropriate frequency continuously while in that airspace.

§ 93.315 Requirements for commercial Special Flight Rules Area operations.

Each person conducting commercial Special Flight Rules Area operations must be certificated in accordance with Part 119 for Part 135 or 121 operations and hold appropriate Grand Canyon National Park Special Flight Rules Area operations specifications.

[65 FR 17732, Apr. 4, 2000]

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§ 93.316 [Reserved]

§ 93.317 Commercial Special Flight Rules Area operation curfew.

Unless otherwise authorized by the Flight Standards District Office, no person may conduct a commercial Special Flight Rules Area operation in the Dragon and Zuni Point corridors during the following flight-free periods:

- (a) Summer season (May 1–September 30)—6 p.m. to 8 a.m. daily; and
- (b) Winter season (October 1–April 30)—5 p.m. to 9 a.m. daily.

[65 FR 17732, Apr. 4, 2000]

§ 93.319 Commercial air tour limitations.

(a) Unless excepted under paragraph (f) or (g) of this section, no certificate holder certificated in accordance with part 119 for part 121 or 135 operations may conduct more commercial air tours in the Grand Canyon National Park in any calendar year than the number of allocations specified on the certificate holder's operations specifications.

(b) The Administrator determines the number of initial allocations for each certificate holder based on the total number of commercial air tours conducted by the certificate holder and reported to the FAA during the period beginning on May 1, 1997 and ending on April 30, 1998, unless excepted under paragraph (g).

(c) Certificate holders who conducted commercial air tours during the base year and reported them to the FAA receive an initial allocation.

(d) A certificate holder must use one allocation for each flight that is a commercial air tour, unless excepted under paragraph (f) or (g) of this section.

(e) Each certificate holder's operation specifications will identify the following information, as applicable:

- (1) Total SFRA allocations; and
- (2) Dragon corridor and Zuni Point corridor allocations.

(f) Certificate holders satisfying the requirements of § 93.315 of this subpart are not required to use a commercial air tour allocation for each commercial air tour flight in the GCNP SFRA provided the following conditions are satisfied:

(1) The certificate holder conducts its operations in conformance with the routes and airspace authorizations as specified in its Grand Canyon National Park Special Flight Rules Area operations specifications;

(2) The certificate holder must have executed a written contract with the Hualapai Indian Nation which grants the certificate holder a trespass permit and specifies the maximum number of flights to be permitted to land at Grand Canyon West Airport and at other sites located in the vicinity of that airport and operates in compliance with that contract; and

(3) The certificate holder must have a valid operations specification that authorizes the certificate holder to conduct the operations specified in the contract with the Hualapai Indian Nation and specifically approves the number of operations that may transit the Grand Canyon National Park Special Flight Rules Area under this exception.

(g) Certificate holders conducting commercial air tours at or above 14,500 feet MSL but below 18,000 feet MSL who did not receive initial allocations in 1999 because they were not required to report during the base year may operate without an allocation when conducting air tours at those altitudes. Certificate holders conducting commercial air tours in the area affected by the eastward shift of the SFRA who did not receive initial allocations in 1999 because they were not required to report during the base year may continue to operate on the specified routes without an allocation in the area bounded by longitude line 111 degrees 42 minutes east and longitude line 111 degrees 36 minutes east. This exception does not include operation in the Zuni Point corridor.

[65 FR 17732, Apr. 4, 2000]

§ 93.321 Transfer and termination of allocations.

(a) Allocations are not a property interest; they are an operating privilege subject to absolute FAA control.

(b) Allocations are subject to the following conditions:

- (1) The Administrator will re-authorize and re-distribute allocations no earlier than two years from the effective date of this rule.

(2) Allocations that are held by the FAA at the time of reallocation may be distributed among remaining certificate holders, proportionate to the size of each certificate holder's allocation.

(3) The aggregate SFRA allocations will not exceed the number of operations reported to the FAA for the base year beginning on May 1, 1997 and ending on April 30, 1998, except as adjusted to incorporate operations occurring for the base year of April 1, 2000 and ending on March 31, 2001, that operate at or above 14,500 feet MSL and below 18,000 feet MSL and operations in the area affected by the eastward shift of the SFRA bounded by longitude line 111 degrees 42 minutes east to longitude 111 degrees 36 minutes east.

(4) Allocations may be transferred among Part 135 or Part 121 certificate holders, subject to all of the following:

(i) Such transactions are subject to all other applicable requirements of this chapter.

(ii) Allocations authorizing commercial air tours outside the Dragon and Zuni Point corridors may not be transferred into the Dragon and Zuni Point corridors. Allocations authorizing commercial air tours within the Dragon and Zuni Point corridors may be transferred outside of the Dragon and Zuni Point corridors.

(iii) A certificate holder must notify in writing the Las Vegas Flight Standards District Office within 10 calendar days of a transfer of allocations. This notification must identify the parties involved, the type of transfer (permanent or temporary) and the number of allocations transferred. Permanent transfers are not effective until the Flight Standards District Office reissues the operations specifications reflecting the transfer. Temporary transfers are effective upon notification.

(5) An allocation will revert to the FAA upon voluntary cessation of commercial air tours within the SFRA for any consecutive 180-day period unless the certificate holder notifies the FSDO in writing, prior to the expiration of the 180-day time period, of the following: the reason why the certificate holder has not conducted any commercial air tours during the consecutive 180-day period; and the date the certificate holder intends on re-

suming commercial air tours operations. The FSDO will notify the certificate holder of any extension to the consecutive 180-days. A certificate holder may be granted one extension.

(6) The FAA retains the right to redistribute, reduce, or revoke allocations based on:

- (i) Efficiency of airspace;
- (ii) Voluntary surrender of allocations;
- (iii) Involuntary cessation of operations; and
- (iv) Aviation safety.

[65 FR 17733, Apr. 4, 2000]

§ 93.323 Flight plans.

Each certificate holder conducting a commercial SFRA operation must file a visual flight rules (VFR) flight plan in accordance with § 91.153. This section does not apply to operations conducted in accordance with § 93.309(g). The flight plan must be on file with a FAA Flight Service Station prior to each flight. Each VFR flight plan must identify the purpose of the flight in the "remarks" section according to one of the types set forth in the "Las Vegas Flight Standards District Office Grand Canyon National Park Special Flight Rules Area Procedures Manual" which is available from the Las Vegas Flight Standards District Office.

[65 FR 17733, Apr. 4, 2000]

§ 93.325 Quarterly reporting.

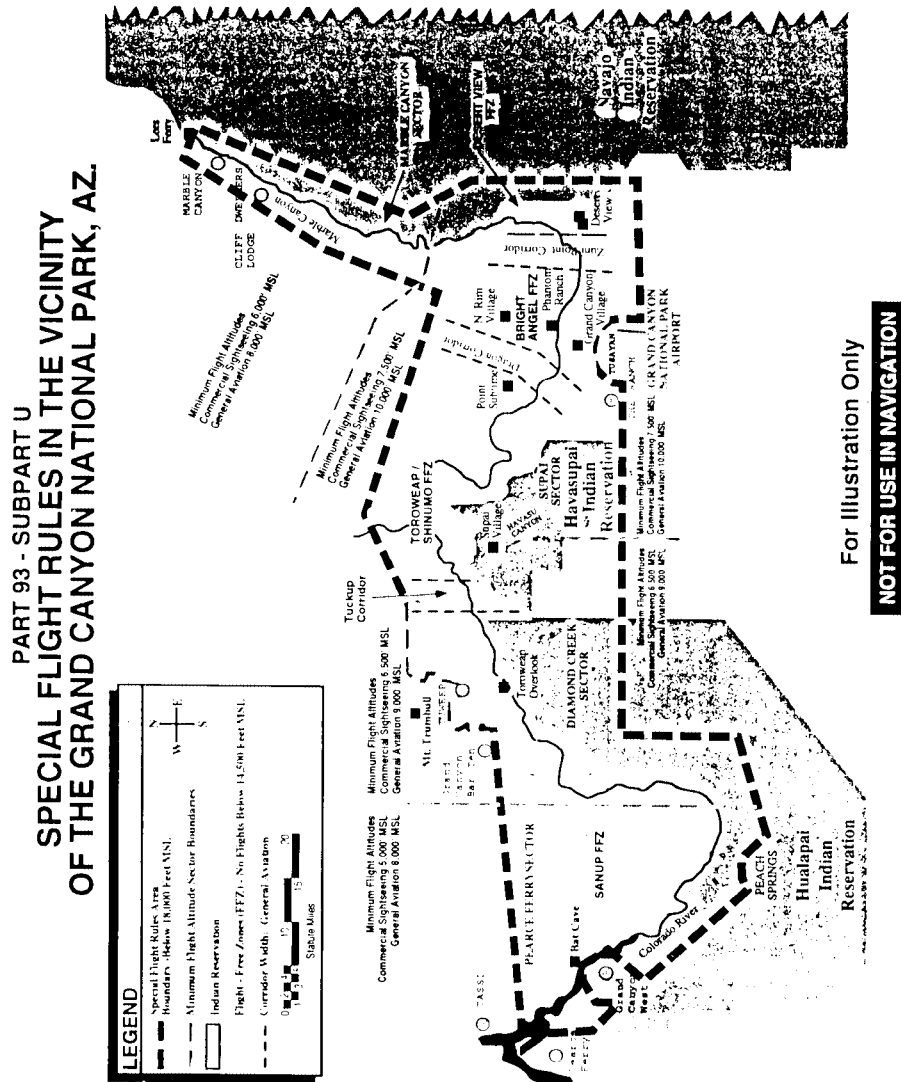
(a) Each certificate holder must submit in writing, within 30 days of the end of each calendar quarter, the total number of commercial SFRA operations conducted for that quarter. Quarterly reports must be filed with the Las Vegas Flight Standards District Office.

(b) Each quarterly report must contain the following information.

- (1) Make and model of aircraft;
- (2) Identification number (registration number) for each aircraft;
- (3) Departure airport for each segment flown;
- (4) Departure date and actual Universal Coordinated Time, as applicable for each segment flown;
- (5) Type of operation; and
- (6) Route(s) flown.

[65 FR 17733, Apr. 4, 2000]

APPENDIX TO SUBPART U OF PART 93—SPECIAL FLIGHT RULES IN THE VICINITY OF THE GRAND CANYON NATIONAL PARK, AZ



PART 93 - SUBPART U
SPECIAL FLIGHT RULES IN THE VICINITY
OF THE GRAND CANYON NATIONAL PARK, AZ.

PART 95—IFR ALTITUDES

Subpart A—General

- Sec.
- 95.1 Applicability.
- 95.3 Symbols.

Subpart B—Designated Mountainous Areas

- 95.11 General.
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Subpart C—En Route IFR Altitudes Over Particular Routes and Intersections

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Subpart D—Changeover Points

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AUTHORITY: 49 U.S.C. 106(g), 40103, 40113, and 14 CFR 11.49(b)(2).

Subpart A—General

§ 95.1 Applicability.

(a) This part prescribes altitudes governing the operation of aircraft under IFR on Federal airways, jet routes, area navigation low or high routes, or other direct routes for which a MEA is designated in this part. In addition, it designates mountainous areas and changeover points.

(b) The MAA is the highest altitude on a Federal airway, jet route, area navigation low or high route, or other direct route for which a MEA is designated in this part at which adequate reception of navigation aid signals is assured.

(c) The MCA applies to the operation of an aircraft proceeding to a higher minimum en route altitude when crossing specified radio fixes.

(d) The MEA prescribed for a Federal airway or segment thereof, area navigation low or high route, or other direct route, applies to the entire width of the airway, segment or route between the radio fixes defining the airway, segment or route. An MEA prescribed for an off-airway route or route segment applies to the airspace five statute miles on each side of a direct course between radio fixes defining that route or route segment.

(e) The MOCA applies to the operation of an aircraft within 25 statute miles of the VOR station concerned. The MOCA assures obstruction clearance between the fixes specified but adequate reception of navigational signals is assured only within 25 miles of the VOR station concerned.

(f) The MRA applies to the operation of an aircraft over an intersection used in the navigation of that aircraft. The

MRA is the lowest altitude at which the intersection can be determined.

(g) The COP applies to operation of an aircraft along a Federal airway, jet route, area navigation low or high route, or other direct route for which a MEA is designated in this part. It is the most appropriate point for transfer of the airborne navigation reference between the facility or way point abaft the aircraft and the next appropriate facility or way point along the Federal airway, jet route, area navigation low or high route, or other direct route that provides:

(1) Continuous reception between facilities; and

(2) A common source of azimuth guidance for all aircraft operating along the same segment of the Federal airway, jet route, area navigation low or high route, or other direct route.

[Doc. No. 1580, 28 FR 6718, June 29, 1963, as amended by Amdt. 95-118, 29 FR 13166, Sept. 23, 1964; Amdt. 95-198, 35 FR 14610, Sept. 18, 1970]

§ 95.3 Symbols.

For the purposes of this part—

(a) *COP* means changeover point.

(b) *L* means compass locator;

(c) *LF/MF* means low frequency, medium frequency;

(d) *LFR* means low frequency radio range;

(e) *VOR-E* means VOR and distance measuring equipment; and

(f) *Z* means a very high frequency location marker.

[Doc. No. 1580, 28 FR 6718, June 29, 1963, as amended by Amdt. 95-118, 29 FR 13166, Sept. 23, 1964]

Subpart B—Designated Mountainous Areas

§ 95.11 General.

The areas described in this subpart are designated mountainous areas.

[Doc. No. 1580, 28 FR 6718, June 29, 1963]

§ 95.13 Eastern United States Mountainous Area.

All of the following area excluding those portions specified in the exceptions.

(a) *Area*.

latitude 42°26' N., longitude 79°13' W.; thence to latitude 42°05' N., longitude 80°00' W.; thence to latitude 40°50' N., longitude 80°00' W.; thence to latitude 40°26' N., longitude 79°54' W.; thence to latitude 38°25' N., longitude 81°46' W.; thence to latitude 36°00' N., longitude 86°00' W.; thence to latitude 33°37' N., longitude 86°45' W.; thence to latitude 32°30' N., longitude 86°25' W.; thence to latitude 33°22' N., longitude 85°00' W.; thence to latitude 36°35' N., longitude 79°20' W.; thence to latitude 40°11' N., longitude 76°24' W.; thence to latitude 41°24' N., longitude 74°30' W.; thence to latitude 41°43' N., longitude 72°40' W.; thence to latitude 42°13' N., longitude 72°44' W.; thence to latitude 42°13' N., longitude 72°44' W.; thence to latitude 43°12' N., longitude 71°30' W.; thence to latitude 43°45' N., longitude 70°30' W.; thence to latitude 45°00' N., longitude 69°30' W.; thence to latitude 47°10' N., longitude 67°55' W., point of beginning.

(b) *Exceptions.* The area bounded by the following coordinates:

Beginning at latitude 45°00' N., longitude 73°26' W.; thence to latitude 44°32' N., longitude 73°04' W.; thence to latitude 42°51' N., longitude 73°41' W.; thence to latitude 41°38' N., longitude 73°46' W.; thence to latitude 41°16' N., longitude 73°50' W.; thence to latitude 41°17' N., longitude 74°00' W.; thence to latitude 41°25' N., longitude 73°58' W.; thence to latitude 41°26' N., longitude 74°01' W.; thence to latitude 41°37' N., longitude 73°58' W.; thence to latitude 42°41' N., longitude 73°55' W.; thence to latitude 43°02' N., longitude 76°15' W.; thence to latitude 43°17' N., longitude 75°21' W.; thence to latitude 42°59' N., longitude 74°43' W.; thence to latitude 42°52' N., longitude 73°53' W.; thence to latitude 44°30' N., longitude 73°18' W.; thence to latitude 45°00' N., longitude 73°39' W.; thence to latitude 45°00' N., longitude 73°26' W., point of beginning.

[21 FR 2750, Apr. 28, 1956. Redesignated by Amdt. 1-1, 28 FR 6718, June 29, 1963]

§ 95.15 Western United States Mountainous Area.

All of the following area excluding that portion specified in the exceptions:

(a) *Area.* From the Pacific coastline of the United States, eastward along the Canadian and Mexican borders, to the following coordinates:

Beginning at latitude 49°00' N., longitude 108°00' W.; thence to latitude 46°45' N., longitude 104°00' W.; thence to latitude 44°06' N.,

longitude 103°15' W.; thence to latitude 43°00' N., longitude 103°15' W.; thence to latitude 41°52' N., longitude 103°39' W.; thence to latitude 35°11' N., longitude 103°39' W.; thence to latitude 33°17' N., longitude 104°27' W.; thence to latitude 32°17' N., longitude 104°14' W.; thence to latitude 29°48' N., longitude 102°00' W.

(b) *Exceptions.* (1) Beginning at latitude 35°25' N., longitude 119°09' W.; thence to latitude 35°29' N., longitude 118°58' W.; thence to latitude 36°49' N., longitude 119°37' W.; thence to latitude 38°30' N., longitude 121°24' W.; thence to latitude 39°30' N., longitude 121°32' W.; thence to latitude 40°08' N., longitude 122°08' W.; thence to latitude 40°06' N., longitude 122°20' W.; thence to latitude 39°05' N., longitude 122°12' W.; thence to latitude 38°01' N., longitude 121°51' W.; thence to latitude 37°37' N., longitude 121°12' W.; thence to latitude 37°00' N., longitude 120°58' W.; thence to latitude 36°14' N., longitude 120°11' W., point of beginning.

(2) Beginning at latitude 49°00' N., longitude 122°21' W.; thence to latitude 48°34' N., longitude 122°21' W.; thence to latitude 48°08' N., longitude 122°00' W.; thence to latitude 47°12' N., longitude 122°00' W.; thence to latitude 46°59' N., longitude 122°13' W.; thence to latitude 46°52' N., longitude 122°16' W.; thence to latitude 46°50' N., longitude 122°40' W.; thence to latitude 46°35' N., longitude 122°48' W.; thence to latitude 46°35' N., longitude 123°17' W.; thence to latitude 47°15' N., longitude 123°17' W.; thence to latitude 47°41' N., longitude 122°54' W.; thence to latitude 48°03' N., longitude 122°48' W.; thence to latitude 48°17' N., longitude 123°15' W.; thence North and East along the United States and Canada Boundary to latitude 49°00' N., longitude 122°21' W., point of beginning.

[21 FR 2750, Apr. 28, 1956. Redesignated by Amdt. 1-1, 28 FR 6718, June 29, 1963, and amended by Amdt. 95-255, 40 FR 2579, Jan. 14, 1975]

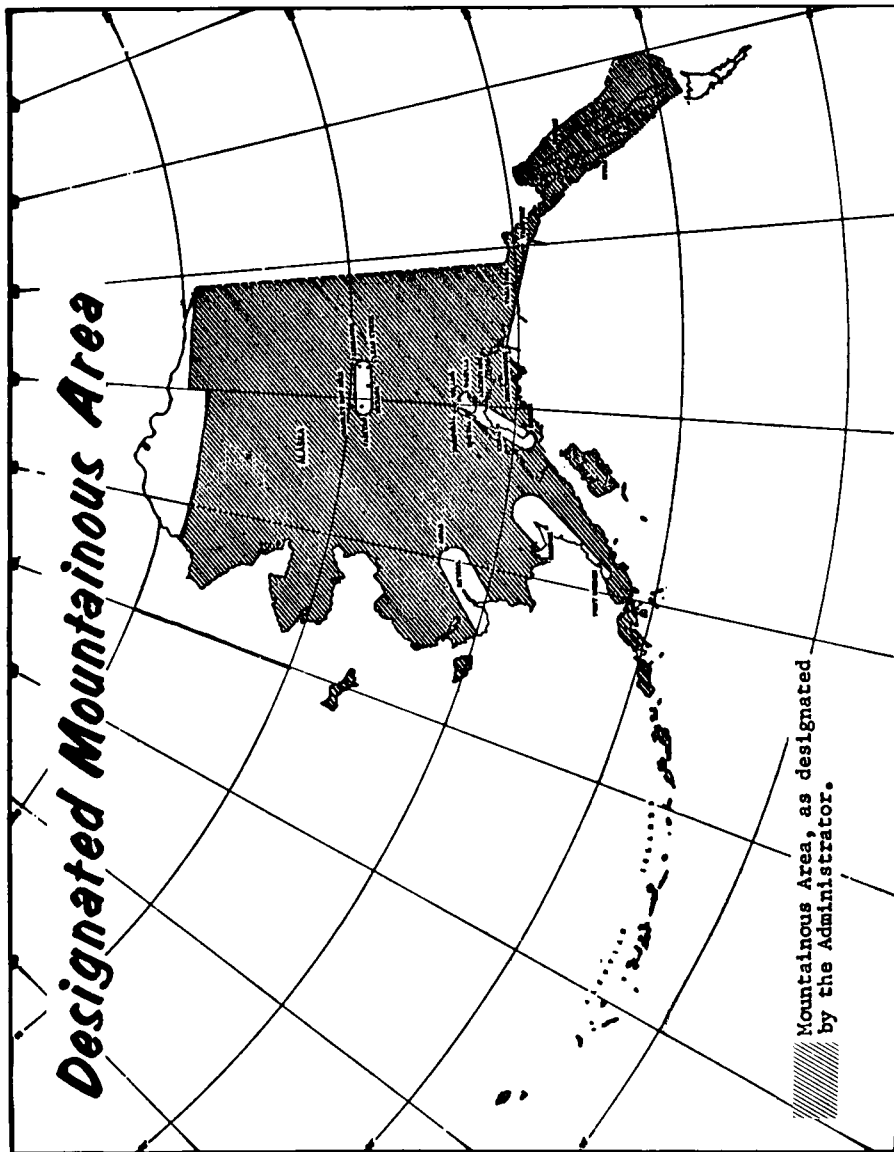
§ 95.17 Alaska Mountainous Area.

All of the following area excluding those portions specified in the exceptions:

(a) *Area.* The Territory of Alaska.

(b) *Exceptions.*

(1) Beginning at latitude 64°54' N., longitude 147°20' W.; thence to latitude 64°50' N., longitude 151°22' W.; thence to latitude 64°26' N., longitude 151°22' W.; thence to latitude 64°25' N., longitude 147°20' W.; thence to latitude 64°54' N., longitude 147°20' W., point of beginning.



(2) Beginning at latitude 61°50' N., longitude 151°12' W.; thence to latitude 61°24' N., longitude 150°28' W.; thence to latitude 59°40' N., longitude 152°23' W.; thence to latitude 59°33' N., longitude 151°28' W.; thence to latitude 60°31' N., longitude 150°43' W.; thence to latitude 61°13' N., longitude 149°39' W.; thence to latitude 61°37' N., longitude 149°15' W.;

thence to latitude 61°44' N., longitude 149°48' W.; thence to latitude 62°23' N., longitude 149°54' W.; thence to latitude 62°23' N., longitude 150°14' W.; thence to latitude 61°50' N., longitude 151°12' W., point of beginning.

(3) Beginning at latitude 58°56' N., longitude 156°58' W.; thence to latitude 58°47' N., longitude 156°27' W.; thence to latitude 56°43'

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N., longitude 158°39' W.; thence to latitude 56°50' N., longitude 159°00' W.; thence along the shore line to latitude 58°56' N., longitude 156°58' W., point of beginning.

(4) Beginning at latitude 61°47' N., longitude 159°40' W.; thence to latitude 61°34' N., longitude 159°15' W.; thence to latitude 60°32' N., longitude 161°42' W.; thence to latitude 60°45' N., longitude 162°06' W.; thence to latitude 61°47' N., longitude 159°40' W., point of beginning.

(5) Beginning at a point where latitude 69°30' intersects the northwest coast of Alaska and eastward along the 69°30' parallel to the 150° Meridian; thence northward along the 150° Meridian to 69°50' north latitude;

thence eastward along the 69°50' parallel to a point where 69°50' intersects the northeast coastline of Alaska; thence westward along the northern coastline of Alaska to the intersection of latitude 69°30', point of beginning.

[21 FR 2750, Apr. 28, 1956, as amended by Amdt. 88, 27 FR 4356, May 8, 1962. Redesignated by Amdt. 1-1, 28 FR 6718, June 29, 1963]

§ 95.19 Hawaii Mountainous Area.

The following islands of the State of Hawaii: Kauai, Oahu, Molokai, Lanai, Kahoowawe, Maui, and Hawaii.



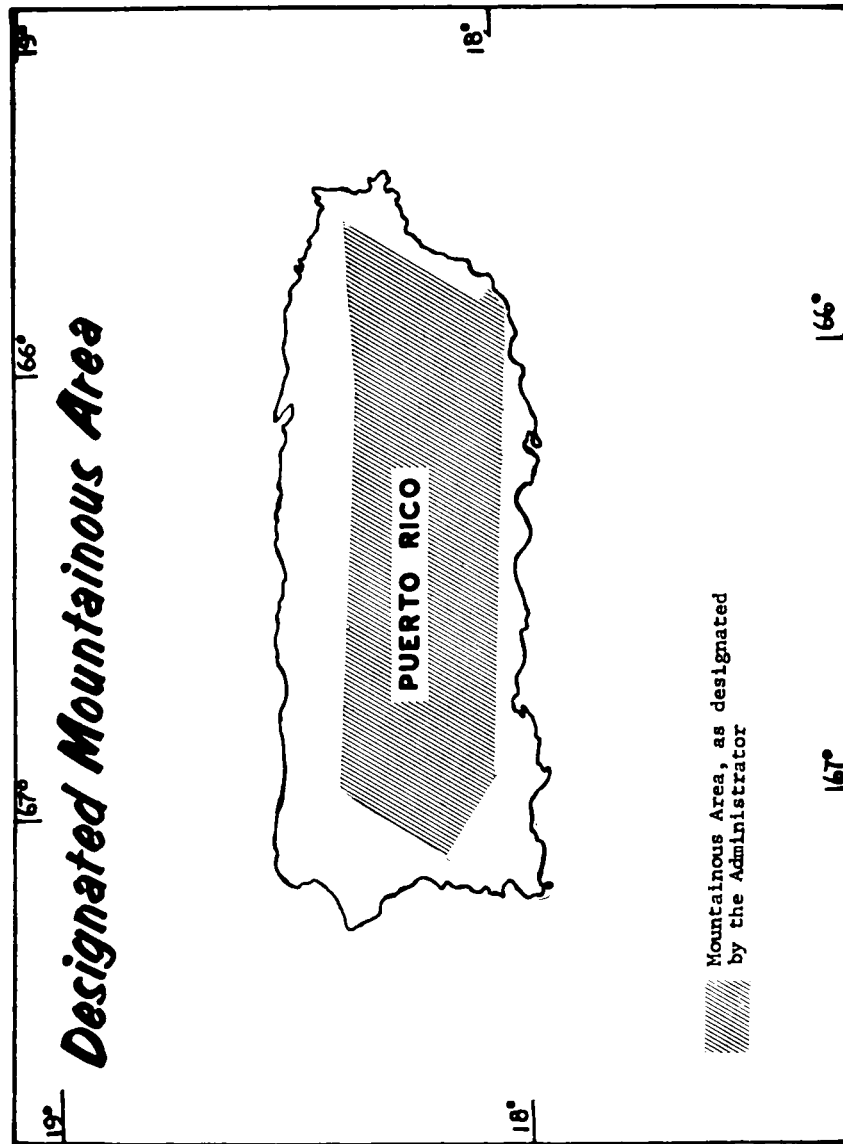
[Amdt. 88, 27 FR 4536, May 8, 1962. Redesignated by Amdt. 1-1, 28 FR 6719, June 29, 1963]

§ 95.21 Puerto Rico Mountainous Area.

The area bounded by the following coordinates:

Beginning at latitude 18°22' N., longitude 66°58' W.; thence to latitude 18°19' N., longitude 66°06' W.; thence to latitude 18°20' N., longitude 65°50' W.; thence to latitude 18°20'

N., longitude 65°42' W.; thence to latitude 18°03' N., longitude 65°52' W.; thence to latitude 18°02' N., longitude 65°51' W.; thence to latitude 17°59' N., longitude 65°55' W.; thence to latitude 18°05' N., longitude 66°57' W.; thence to latitude 18°11' N., longitude 67°07' W.; thence to latitude 18°22' N., longitude 66°58' W.; the point of beginning.



[Amdt. 88, 27 FR 4536, May 8, 1962; 27 FR 5603, June 13, 1962. Redesignated by Amdt. 1-1, 28 FR 6719, June 29, 1963]

§ 95.31

Subpart C—En Route IFR Altitudes Over Particular Routes and Intersections

EDITORIAL NOTE: The prescribed IFR altitudes for flights over particular routes and intersections in this subpart were formerly carried as §§610.11 through 610.6887 of this title and were transferred to part 95 as §§95.41 through 95.6887, respectively, but are not carried in the Code of Federal Regulations. For FEDERAL REGISTER citations affecting these routes, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 95.31 General.

This subpart prescribes IFR altitudes for flights along particular routes or route segments and over additional intersections not listed as a part of a route or route segment.

[Doc. No. 1580, 28 FR 6719, June 29, 1963]

Subpart D—Changeover Points

EDITORIAL NOTE: The prescribed COP's for Federal airways, jet routes, or other direct routes for which an MEA is designated in this part are not carried in the Code of Federal Regulations. For Federal Register citations affecting these routes see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 95.8001 General.

This subpart prescribes COP's for Federal airways, jet routes, area navigation routes, or other direct routes for which an MEA is designated in this part. Unless otherwise specified the COP is midway between the navigation facilities or way points for straight route segments, or at the intersection of radials or courses forming a dogleg in the case of dogleg route segments.

[Doc. No. 10580, 35 FR 14610, Sept. 18, 1970]

PART 97—STANDARD INSTRUMENT APPROACH PROCEDURES

Subpart A—General

Sec.

- 97.1 Applicability.
- 97.3 Symbols and terms used in procedures.
- 97.5 Bearings; courses; headings; radials; miles.

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Subpart B—Procedures

97.10 General.

Subpart C—TERPS Procedures

97.20 General.

AUTHORITY: 49 U.S.C. 106(g), 40103, 40106, 40113, 40114, 40120, 44502, 44514, 44701, 44719, 44721-44722.

SOURCE: Docket No. 1580, 28 FR 6719, June 29, 1963, unless otherwise noted.

Subpart A—General

§ 97.1 Applicability.

This part prescribes standard instrument approach procedures for instrument letdown to airports in the United States and the weather minimums that apply to takeoffs and landings under IFR at those airports.

§ 97.3 Symbols and terms used in procedures.

As used in the standard terminal instrument procedures prescribed in this part—

(a) *A* means alternate airport weather minimum.

(b) *Aircraft approach category* means a grouping of aircraft based on a speed of V_{REF} , if specified, or if V_{REF} is not specified, $1.3 V_{SO}$ at the maximum certificated landing weight. V_{REF} , V_{SO} , and the maximum certificated landing weight are those values as established for the aircraft by the certification authority of the country of registry. The categories are as follows:

(1) Category A: Speed less than 91 knots.

(2) Category B: Speed 91 knots or more but less than 121 knots.

(3) Category C: Speed 121 knots or more but less than 141 knots.

(4) Category D: Speed 141 knots or more but less than 166 knots.

(5) Category E: Speed 166 knots or more.

(c) Approach procedure segments for which altitudes (all altitudes prescribed are minimum altitudes unless otherwise specified) or courses, or both, are prescribed in procedures, are as follows:

(1) *Initial approach* is the segment between the initial approach fix and the intermediate fix or the point where the

aircraft is established on the intermediate course or final approach course.

(2) *Initial approach altitude* means the altitude (or altitudes, in High Altitude Procedures) prescribed for the initial approach segment of an instrument approach.

(3) *Intermediate approach* is the segment between the intermediate fix or point and the final approach fix.

(4) *Final approach* is the segment between the final approach fix or point and the runway, airport, or missed-approach point.

(5) *Missed approach* is the segment between the missed-approach point, or point of arrival at decision height, and the missed-approach fix at the prescribed altitude.

(d) *C* means circling landing minimum, a statement of ceiling and visibility values, or minimum descent altitude and visibility, required for the circle-to-land maneuver.

(d-1) *Copter procedures* means helicopter procedures, with applicable minimums as prescribed in §97.35 of this part. Helicopters may also use other procedures prescribed in Subpart C of this part and may use the Category A minimum descent altitude (MDA) or decision height (DH). The required visibility minimum may be reduced to one-half the published visibility minimum for Category A aircraft, but in no case may it be reduced to less than one-quarter mile or 1,200 feet RVR.

(e) *Ceiling minimum* means the minimum ceiling, expressed in feet above the surface of the airport, required for takeoff or required for designating an airport as an alternate airport.

(f) *D* means day.

(g) *FAF* means final approach fix.

(h) *HAA* means height above airport.

(h-1) *HAL* means height above a designated helicopter landing area used for helicopter instrument approach procedures.

(i) *HAT* means height above touchdown.

(j) *MAP* means missed approach point.

(k) *More than 65 knots* means an aircraft that has a stalling speed of more than 65 knots (as established in an approved flight manual) at maximum cer-

tificated landing weight with full flaps, landing gear extended, and power off.

(l) *MSA* means minimum safe altitude, an emergency altitude expressed in feet above mean sea level, which provides 1,000 feet clearance over all obstructions in that sector within 25 miles of the facility on which the procedure is based (LOM in ILS procedures).

(m) *N* means night.

(n) *NA* means not authorized.

(o) *NOPT* means no procedure turn required (altitude prescribed applies only if procedure turn is not executed).

(o-1) *Point in space approach* means a helicopter instrument approach procedure to a missed approach point that is more than 2,600 feet from an associated helicopter landing area.

(p) *Procedure turn* means the maneuver prescribed when it is necessary to reverse direction to establish the aircraft on an intermediate or final approach course. The outbound course, direction of turn, distance within which the turn must be completed, and minimum altitude are specified in the procedure. However, the point at which the turn may be commenced, and the type and rate of turn, is left to the discretion of the pilot.

(q) *RA* means radio altimeter setting height.

(r) *RVV* means runway visibility value.

(s) *S* means straight-in landing minimum, a statement of ceiling and visibility, minimum descent altitude and visibility, or decision height and visibility, required for a straight-in landing on a specified runway. The number appearing with the *S* indicates the runway to which the minimum applies. If a straight-in minimum is not prescribed in the procedure, the circling minimum specified applies to a straight-in landing.

(t) *Shuttle* means a shuttle, or race-track-type, pattern with 2-minute legs prescribed in lieu of a procedure turn.

(u) *65 knots or less* means an aircraft that has a stalling speed of 65 knots or less (as established in an approved flight manual) at maximum certificated landing weight with full flaps, landing gear extended, and power off.

(v) *T* means takeoff minimum.

(w) *TDZ* means touchdown zone.

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(x) *Visibility minimum* means the minimum visibility specified for approach, or landing, or takeoff, expressed in statute miles, or in feet where RVR is reported.

(Secs. 307(c), 313(a), 601, Federal Aviation Act of 1958, as amended (49 U.S.C. 1348(c), 1354(a), 1421); sec. 6(c), Department of Transportation Act (49 U.S.C. 1655(c)))

[Doc. No. 8130, 32 FR 13911, Oct. 6, 1967, as amended by Amdt. 97-803, 37 FR 6287, Mar. 28, 1972; Amdt. 97-1133, 44 FR 15659, Mar. 15, 1979; Amdt. 97-1333, 67 FR 70828, Nov. 26, 2002]

§ 97.5 Bearings; courses; headings; radials; miles.

(a) All bearings, courses, headings, and radials in this part are magnetic.

(b) RVR values are stated in feet. Other visibility values are stated in statute miles. All other mileages are stated in nautical miles.

[Doc. No. 561, 32 FR 13912, Oct. 6, 1967]

Subpart B—Procedures

EDITORIAL NOTE: The procedures set forth in this subpart were formerly carried as §§ 609.100 through 609.500 of this title and were transferred to part 97 as §§ 97.11 through 97.19, respectively, but are not carried in the Code of Federal Regulations. For Federal Register citations affecting these procedures, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 97.10 General.

This subpart prescribes standard instrument approach procedures other than those based on the criteria contained in the U.S. Standard for Terminal Instrument Approach Procedures (TERPs). Standard instrument approach procedures adopted by the FAA and described on FAA Form 3139 are incorporated into this part and made a part hereof as provided in 5 U.S.C. 552(a)(1) and pursuant to 1 CFR part 20. The incorporated standard instrument approach procedures are available for examination at the Rules Docket and at the National Flight Data Center, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20590. Copies of SIAPs adopted in a particular FAA Region are also available for examination at the headquarters of that region. Moreover, cop-

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ies of SIAPs originating in a particular Flight Inspection District Office are available for examination at that office. Based on the information contained on FAA Form 3139, standard instrument approach procedures are portrayed on charts prepared for the use of pilots by the U.S. Coast and Geodetic Survey and other publishers of aeronautical charts.

[Doc. No. 9748, 35 FR 5609, Apr. 7, 1970]

Subpart C—TERPS Procedures

SOURCE: Docket No. 8130, 32 FR 13912, Oct. 6, 1967, unless otherwise noted.

EDITORIAL NOTE: The procedures for §§ 97.21 through 97.35, respectively, are not carried in the Code of Federal Regulations. For FEDERAL REGISTER citations affecting these procedures, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 97.20 General.

This subpart prescribes standard instrument approach procedures based on the criteria contained in the U.S. Standard for Terminal Instrument Approach Procedures (TERPs). The standard instrument approach procedures adopted by the FAA and described on FAA Form 8260-3, 8260-4, or 8260-5 are incorporated into this part and made a part hereof as provided in 5 U.S.C. 552(a)(1) and pursuant to 1 CFR part 20. The incorporated standard instrument approach procedures are available for examination at the Rules Docket and at the National Flight Data Center, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20590. Copies of SIAPs adopted in a particular FAA Region are also available for examination at the headquarters of that Region. Moreover, copies of SIAPs originating in a particular Flight Inspection District Office are available for examination at that Office. Based on the information contained on FAA Form 8260-3, 8260-4, and 8260-5, standard instrument approach procedures are portrayed on charts prepared for the use of pilots by the U.S. Coast and Geodetic Survey

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and other publishers of aeronautical charts.

(Sec. 6(c) Department of Transportation Act, 49 U.S.C. 1655(c) and 5 U.S.C. 552(a)(1))

[Doc. No. 9748, 35 FR 5609, Apr. 7, 1970]

PART 99—SECURITY CONTROL OF AIR TRAFFIC

Subpart A—General

Sec.

- 99.1 Applicability.
- 99.3 Definitions.
- 99.5 Emergency situations.
- 99.7 Special security instructions.
- 99.9 Radio requirements.
- 99.11 ADIZ flight plan requirements.
- 99.12 Transponder-on requirements.
- 99.15 Arrival or completion notice.
- 99.17 Position reports; aircraft operating in or penetrating an ADIZ; IFR.
- 99.19 Position reports; aircraft operating in or penetrating an ADIZ; DVFR.
- 99.21 Position reports; aircraft entering the United States through an ADIZ; United States aircraft.
- 99.23 Position reports; aircraft entering the United States through an ADIZ; foreign aircraft.
- 99.27 Deviation from flight plans and ATC clearances and instructions.
- 99.29 Radio failure; DVFR.
- 99.31 Radio failure; IFR.

Subpart B—Designated Air Defense Identification Zones

- 99.41 General.
- 99.42 Contiguous U.S. ADIZ.
- 99.43 Alaska ADIZ.
- 99.45 Guam ADIZ.
- 99.47 Hawaii ADIZ.
- 99.49 Defense Area.

AUTHORITY: 49 U.S.C. 106(g), 40101, 40103, 40106, 40113, 40120, 44502, 44721.

SOURCE: Docket No. 25113, 53 FR 18217, May 20, 1988, unless otherwise noted.

Subpart A—General

§ 99.1 Applicability.

(a) This subpart prescribes rules for operating civil aircraft in a defense area, or into, within, or out of the United States through an Air Defense Identification Zone (ADIZ), designated in subpart B.

(b) Except for §§99.7 and 99.12, this subpart does not apply to the operation of any aircraft—

(1) Within the 48 contiguous States and the District of Columbia, or within the State of Alaska, on a flight which remains within 10 nautical miles of the point of departure;

(2) Operating at true airspeed of less than 180 knots in the Hawaii ADIZ or over any island, or within 12 nautical miles of the coastline of any island, in the Hawaii ADIZ;

(3) Operating at true airspeed of less than 180 knots in the Alaska ADIZ while the pilot maintains a continuous listening watch on the appropriate frequency; or

(4) Operating at true airspeed of less than 180 knots in the Guam ADIZ.

(c) An FAA ATC center may exempt the following operations from this subpart (except §99.7), on a local basis only, with the concurrence of the military commanders concerned:

(1) Aircraft operations that are conducted wholly within the boundaries of an ADIZ and are not currently significant to the air defense system.

(2) Aircraft operations conducted in accordance with special procedures prescribed by the military authorities concerned.

[Doc. No. 25113, 53 FR 18217, May 20, 1988, as amended by Amdt. 99-14, 53 FR 44182, Nov. 2, 1988; 66 FR 49822, Sept. 28, 2001]

§ 99.3 Definitions.

Aeronautical facility means, for the purposes of this subpart, a communications facility where flight plans or position reports are normally filed during flight operations.

Air defense identification zone (ADIZ) means an area of airspace over land or water in which the ready identification, location, and control of civil aircraft is required in the interest of national security.

Defense area means any airspace of the contiguous United States that is not an ADIZ in which the control of aircraft is required for reasons of national security.

Defense visual flight rules (DVFR) *flight* means, for the purposes of this subpart, a flight within an ADIZ conducted by a civil aircraft under the visual flight rules in part 91 of this title.

[Doc. No. FAA-2001-10693, 66 FR 49822, Sept. 28, 2001]

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§ 99.5 Emergency situations.

In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command of an aircraft may deviate from the rules in this part to the extent required by that emergency. He shall report the reasons for the deviation to the communications facility where flight plans or position reports are normally filed (referred to in this part as “an appropriate aeronautical facility”) as soon as possible.

§ 99.7 Special security instructions.

Each person operating an aircraft in an ADIZ or Defense Area shall, in addition to the applicable rules of this part, comply with special security instructions issued by the Administrator in the interest of national security and that are consistent with appropriate agreements between the FAA and the Department of Defense.

§ 99.9 Radio requirements

(a) A person who operates a civil aircraft into an ADIZ must have a functioning two-way radio, and the pilot must maintain a continuous listening watch on the appropriate aeronautical facility’s frequency.

(b) No person may operate an aircraft into, within, or whose departure point is within an ADIZ unless—

(1) The person files a DVFR flight plan containing the time and point of ADIZ penetration, and

(2) The aircraft departs within five minutes of the estimated departure time contained in the flight plan.

[Doc. No. FAA-2001-10693, 66 FR 49822, Sept. 28, 2001]

§ 99.11 ADIZ flight plan requirements.

(a) Unless otherwise authorized by air traffic control, a person must not operate an aircraft into, within, or whose departure point is within an ADIZ unless the person files, activates, and closes a flight plan with the appropriate aeronautical facility.

(b) Unless ATC authorizes an abbreviated flight plan—

(1) A flight plan for IFR flight must contain the information specified in § 91.169; and

(2) A flight plan for VFR flight must contain the information specified in § 91.153(a) (1) through (6).

(3) If airport of departure is within the Alaskan ADIZ and there is no facility for filing a flight plan then:

(i) Immediately after takeoff or when within range of an appropriate aeronautical facility, comply with provisions of paragraph (b)(1) or (b)(2) as appropriate.

(ii) Proceed according to the instructions issued by the appropriate aeronautical facility.

(c) The pilot shall designate a flight plan for VFR flight as a DVFR flight plan.

[Doc. No. 25113, 53 FR 18217, May 20, 1988; 53 FR 44182, Nov. 2, 1988, as amended by Amdt. 99-15, 54 FR 34331, Aug. 18, 1989; 66 FR 49822, Sept. 28, 2001]

§ 99.12 Transponder-on requirements.

(a) *Aircraft transponder-on operation.* Each person operating an aircraft into or out of the United States into, within, or across an ADIZ designated in subpart B of this part, if that aircraft is equipped with an operable radar beacon transponder, shall operate the transponder, including altitude encoding equipment if installed, and shall reply on the appropriate code or as assigned by ATC.

(b) *ATC transponder equipment and use.* Effective September 7, 1990, unless otherwise authorized by ATC, no person may operate a civil aircraft into or out of the United States into, within, or across the contiguous U.S. ADIZ designated in subpart B of this part unless that aircraft is equipped with a coded radar beacon transponder.

(c) *ATC transponder and altitude reporting equipment and use.* Effective December 30, 1990, unless otherwise authorized by ATC, no person may operate a civil aircraft into or out of the United States into, within, or across the contiguous U.S. ADIZ unless that aircraft is equipped with a coded radar beacon transponder and automatic pressure altitude reporting equipment having altitude reporting capability that automatically replies to interrogations by transmitting pressure altitude information in 100-foot increments.

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(d) Paragraphs (b) and (c) of this section do not apply to the operation of an aircraft which was not originally certificated with an engine-driven electrical system and which has not subsequently been certified with such a system installed, a balloon, or a glider.

[Doc. No. 24903, 55 FR 8395, Mar. 7, 1990]

§ 99.15 Arrival or completion notice.

The pilot in command of an aircraft for which a flight plan has been filed shall file an arrival or completion notice with an appropriate aeronautical facility, unless the flight plan states that no notice will be filed.

§ 99.17 Position reports; aircraft operating in or penetrating an ADIZ; IFR.

The pilot of an aircraft operating in or penetrating an ADIZ under IFR—

(a) In controlled airspace, shall make the position reports required in § 91.183; and

(b) In uncontrolled airspace, shall make the position reports required in § 99.19.

[Doc. No. 25113, 53 FR 18217, May 20, 1988, as amended by Amdt. 99-15, 54 FR 34331, Aug. 18, 1989]

§ 99.19 Position reports; aircraft operating in or penetrating an ADIZ; DVFR.

No pilot may operate an aircraft penetrating an ADIZ under DVFR unless—

(a) That pilot reports to an appropriate aeronautical facility before penetration: The time, position, and altitude at which the aircraft passed the last reporting point before penetration and the estimated time of arrival over the next appropriate reporting point along the flight route;

(b) If there is no appropriate reporting point along the flight route, that pilot reports at least 15 minutes before penetration: The estimated time, position, and altitude at which he will penetrate; or

(c) If the airport departure is within an ADIZ or so close to the ADIZ boundary that it prevents his complying with paragraphs (a) or (b) of this section, that pilot has reported immediately after taking off: the time of departure, altitude, and estimated time of arrival

over the first reporting point along the flight route.

§ 99.21 Position reports; aircraft entering the United States through an ADIZ; United States aircraft.

The pilot of an aircraft entering the United States through an ADIZ shall make the reports required in § 99.17 or 99.19 to an appropriate aeronautical facility.

§ 99.23 Position reports; aircraft entering the United States through an ADIZ; foreign aircraft.

In addition to such other reports as ATC may require, no pilot in command of a foreign civil aircraft may enter the U.S. through an ADIZ unless that pilot makes the reports required in § 99.17 or 99.19 or reports the position of the aircraft when it is not less than one hour and not more than 2 hours average direct cruising distance from the United States.

[Doc. No. 25113, 53 FR 18217, May 20, 1988; 53 FR 21989, June 13, 1988]

§ 99.27 Deviation from flight plans and ATC clearances and instructions.

(a) No pilot may deviate from the provisions of an ATC clearance or ATC instruction except in accordance with § 91.123 of this chapter.

(b) No pilot may deviate from the filed IFR flight plan when operating an aircraft in uncontrolled airspace unless that pilot notifies an appropriate aeronautical facility before deviating.

(c) No pilot may deviate from the filed DVFR flight plan unless that pilot notifies an appropriate aeronautical facility before deviating.

[Doc. No. 25113, 53 FR 18217, May 20, 1988, as amended by Amdt. 99-15, 54 FR 34331, Aug. 18, 1989]

§ 99.29 Radio failure; DVFR.

If the pilot operating an aircraft under DVFR in an ADIZ cannot maintain two-way radio communications, the pilot may proceed in accordance with original DVFR flight plan or land as soon as practicable. The pilot shall report the radio failure to an appropriate aeronautical facility as soon as possible.

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§ 99.31 Radio failure; IFR.

If a pilot operating an aircraft under IFR in an ADIZ cannot maintain two-way radio communications, the pilot shall proceed in accordance with § 91.185 of this chapter.

[Doc. No. 25113, 53 FR 18217, May 20, 1988, as amended by Amdt. 99-15, 54 FR 34331, Aug. 18, 1989]

Subpart B—Designated Air Defense Identification Zones

§ 99.41 General.

The airspace above the areas described in this subpart is established as an ADIZ Defense Area. The lines between points described in this subpart are great circles except that the lines joining adjacent points on the same parallel of latitude are rhumb lines.

§ 99.42 Contiguous U.S. ADIZ

The area bounded by a line from 43°15'N, 65°55'W; 44°21'N; 67°16'W; 43°10'N; 69°40'W; 41°05'N; 69°40'W; 40°32'N; 72°15'W; 39°55'N; 73°00'W; 39°38'N; 73°00'W; 39°36'N; 73°40'W; 37°00'N; 75°30'W; 36°10'N; 75°10'W; 35°10'N; 75°10'W; 32°00'N; 80°30'W; 30°30'N; 81°00'W; 26°40'N; 79°40'W; 25°00'N; 80°05'W; 24°25'N; 81°15'W; 24°20'N; 81°45'W; 24°30'N; 82°06'W; 24°41'N; 82°06'W; 24°43'N; 82°00'W; 25°00'N; 81°30'W; 25°10'N; 81°23'W; 25°35'N; 81°30'W; 26°15'N; 82°20'W; 27°50'N; 83°05'W; 28°55'N; 83°30'W; 29°42'N; 84°00'W; 29°20'N; 85°00'W; 30°00'N; 87°10'W; 30°00'N; 88°30'W; 28°45'N; 88°55'W; 28°45'N; 90°00'W; 29°25'N; 94°00'W; 28°20'N; 96°00'W; 27°30'N; 97°00'W; 26°00'N; 97°00'W; 25°58'N; 97°07'W; westward along the U.S./Mexico border to 32°32'03"N, 117°07'25"W; 32°30'N; 117°25'W; 32°35'N; 118°30'W; 33°05'N; 119°45'W; 33°55'N; 120°40'W; 34°50'N; 121°10'W; 38°50'N; 124°00'W; 40°00'N; 124°35'W; 40°25'N; 124°40'W; 42°50'N; 124°50'W; 46°15'N; 124°30'W; 48°30'N; 125°00'W; 48°20'N; 128°00'W; 48°20'N; 132°00'W; 37°42'N; 130°40'W; 29°00'N; 124°00'W; 30°45'N; 120°50'W; 32°00'N; 118°24'W; 32°30'N; 117°20'W; 32°32'03"N; 117°07'25"W; eastward along the U.S./Mexico border to 25°58'N, 97°07'W; 26°00'N; 97°00'W; 26°00'N; 95°00'W; 26°30'N; 95°00'W; then via 26°30'N; parallel to 26°30'N; 84°00'W; 24°00'N; 83°00'W; then Via 24°00'N; parallel to 24°00'N; 79°25'W; 25°40'N; 79°25'W; 27°30'N; 78°50'W; 30°45'N;

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74°00'W; 39°30'N; 63°45'W; 43°00'N; 65°48'W; to point of beginning.

[Doc. No. FAA-2001-10693, 66 FR 49822, Sept. 28, 2001]

§ 99.43 Alaska ADIZ.

The area is bounded by a line from 54°00'N; 136°00'W; 56°57'N; 144°00'W; 57°00'N; 145°00'W; 53°00'N; 158°00'W; 50°00'N; 169°00'W; 50°00'N; 180°00'; 50°00'N; 170°00'E; 53°00'N; 170°00'E; 60°00'00'N; 180°00'; 65°00'N; 169°00'W; then along 169°00'W; to 75°00'N; 169°00'W; then along the 75°00'N; parallel to 75°00'N, 141°00'W; 69°50'N; 141°00'W 71°18'N; 156°44'W; 68°40'N; 167°10'W; 67°00'N; 165°00'W; 65°40'N; 168°15'W; 63°45'N; 165°30'W; 61°20'N; 166°40'W; 59°00'N; 163°00'W; then south along 163°00'W to 54°00'N, 163°00'W; 56°30'N; 154°00'W; 59°20'N; 146°00'W; 59°30'N; 140°00'W; 57°00'N; 136°00'W; 54°35'N, 133°00'W; to point of beginning.

[Doc. No. FAA-2001-10693, 66 FR 49822, Sept. 28, 2001]

§ 99.45 Guam ADIZ.

(a) *Inner boundary.* From a point 13°52'07" N, 143°59'16" E, counter-clockwise along the 50-nautical-mile radius arc of the NIMITZ VORTAC (located at 13°27'11" N, 144°43'51" E); to a point 13°02'08" N, 145°28'17" E; then to a point 14°49'07" N, 146°13'58" E; counter-clockwise along the 35-nautical-mile radius arc of the SAIPAN NDB (located at 15°06'46" N, 145°42'42" E); to a point 15°24'21" N, 145°11'21" E; then to the point of origin.

(b) *Outer boundary.* The area bounded by a circle with a radius of 250 NM centered at latitude 13°32'41" N, longitude 144°50'30" E.

§ 99.47 Hawaii ADIZ.

(a) *Outer boundary.* The area included in the irregular octagonal figure formed by a line connecting 26°30' N, 156°00' W; 26°30' N, 161°00' W; 24°00' N, 164°00' W; 20°00' N, 164°00' W; 17°00' N, 160°00' W; 17°00' N, 156°00' W; 20°00' N, 153°00' W; 22°00' N, 153°00' W; to point of beginning.

(b) *Inner boundary.* The inner boundary to follow a line connecting 22°30' N, 157°00' W; 22°30' N, 160°00' W; 22°00' N, 161°00' W; 21°00' N, 161°00' W; 20°00' N,

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160°00' W; 20°00' N, 156°30' W; 21°00' N, 155°30' W; to point of beginning.

§ 99.49 Defense Area.

All airspace of the United States is designated as Defense Area except that airspace already designated as Air Defense Identification Zone.

PART 101—MOORED BALLOONS, KITES, UNMANNED ROCKETS AND UNMANNED FREE BALLOONS

Subpart A—General

- Sec.
- 101.1 Applicability.
- 101.3 Waivers.
- 101.5 Operations in prohibited or restricted areas.
- 101.7 Hazardous operations.

Subpart B—Moored Balloons and Kites

- 101.11 Applicability.
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- 101.15 Notice requirements.
- 101.17 Lighting and marking requirements.
- 101.19 Rapid deflation device.

Subpart C—Unmanned Rockets

- 101.21 Applicability.
- 101.22 Special provisions for large model rockets.
- 101.23 Operating limitations.
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Subpart D—Unmanned Free Balloons

- 101.31 Applicability.
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- 101.35 Equipment and marking requirements.
- 101.37 Notice requirements.
- 101.39 Balloon position reports.

AUTHORITY: 49 U.S.C. 106(g), 40103, 40113–40114, 45302, 44502, 44514, 44701–44702, 44721, 46308.

Subpart A—General

§ 101.1 Applicability.

(a) This part prescribes rules governing the operation in the United States, of the following:

(1) Except as provided for in §101.7, any balloon that is moored to the surface of the earth or an object thereon and that has a diameter of more than 6 feet or a gas capacity of more than 115 cubic feet.

(2) Except as provided for in §101.7, any kite that weighs more than 5 pounds and is intended to be flown at the end of a rope or cable.

(3) Any unmanned rocket except:

- (i) Aerial firework displays; and,
- (ii) Model rockets:

(a) Using not more than four ounces of propellant;

(b) Using a slow-burning propellant;

(c) Made of paper, wood, or breakable plastic, containing no substantial metal parts and weighing not more than 16 ounces, including the propellant; and

(d) Operated in a manner that does not create a hazard to persons, property, or other aircraft.

(4) Except as provided for in §101.7, any unmanned free balloon that—

(i) Carries a payload package that weighs more than four pounds and has a weight/size ratio of more than three ounces per square inch on any surface of the package, determined by dividing the total weight in ounces of the payload package by the area in square inches of its smallest surface;

(ii) Carries a payload package that weighs more than six pounds;

(iii) Carries a payload, of two or more packages, that weighs more than 12 pounds; or

(iv) Uses a rope or other device for suspension of the payload that requires an impact force of more than 50 pounds to separate the suspended payload from the balloon.

(b) For the purposes of this part, a *gyroglider* attached to a vehicle on the surface of the earth is considered to be a kite.

[Doc. No. 1580, 28 FR 6721, June 29, 1963, as amended by Amdt. 101–1, 29 FR 46, Jan. 3, 1964; Amdt. 101–3, 35 FR 8213, May 26, 1970]

§ 101.3 Waivers.

No person may conduct operations that require a deviation from this part except under a certificate of waiver issued by the Administrator.

[Doc. No. 1580, 28 FR 6721, June 29, 1963]

§ 101.5 Operations in prohibited or restricted areas.

No person may operate a moored balloon, kite, unmanned rocket, or unmanned free balloon in a prohibited or

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restricted area unless he has permission from the using or controlling agency, as appropriate.

[Doc. No. 1457, 29 FR 46, Jan. 3, 1964]

§ 101.7 Hazardous operations.

(a) No person may operate any moored balloon, kite, unmanned rocket, or unmanned free balloon in a manner that creates a hazard to other persons, or their property.

(b) No person operating any moored balloon, kite, unmanned rocket, or unmanned free balloon may allow an object to be dropped therefrom, if such action creates a hazard to other persons or their property.

(Sec. 6(c), Department of Transportation Act (49 U.S.C. 1655(c)))

[Doc. No. 12800, 39 FR 22252, June 21, 1974]

Subpart B—Moored Balloons and Kites

SOURCE: Docket No. 1580, 28 FR 6722, June 29, 1963, unless otherwise noted.

§ 101.11 Applicability.

This subpart applies to the operation of moored balloons and kites. However, a person operating a moored balloon or kite within a restricted area must comply only with §101.19 and with additional limitations imposed by the using or controlling agency, as appropriate.

§ 101.13 Operating limitations.

(a) Except as provided in paragraph (b) of this section, no person may operate a moored balloon or kite—

(1) Less than 500 feet from the base of any cloud;

(2) More than 500 feet above the surface of the earth;

(3) From an area where the ground visibility is less than three miles; or

(4) Within five miles of the boundary of any airport.

(b) Paragraph (a) of this section does not apply to the operation of a balloon or kite below the top of any structure and within 250 feet of it, if that shielded operation does not obscure any lighting on the structure.

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§ 101.15 Notice requirements.

No person may operate an unshielded moored balloon or kite more than 150 feet above the surface of the earth unless, at least 24 hours before beginning the operation, he gives the following information to the FAA ATC facility that is nearest to the place of intended operation:

(a) The names and addresses of the owners and operators.

(b) The size of the balloon or the size and weight of the kite.

(c) The location of the operation.

(d) The height above the surface of the earth at which the balloon or kite is to be operated.

(e) The date, time, and duration of the operation.

§ 101.17 Lighting and marking requirements.

(a) No person may operate a moored balloon or kite, between sunset and sunrise unless the balloon or kite, and its mooring lines, are lighted so as to give a visual warning equal to that required for obstructions to air navigation in the FAA publication “Obstruction Marking and Lighting”.

(b) No person may operate a moored balloon or kite between sunrise and sunset unless its mooring lines have colored pennants or streamers attached at not more than 50 foot intervals beginning at 150 feet above the surface of the earth and visible for at least one mile.

(Sec. 6(c), Department of Transportation Act (49 U.S.C. 1655(c)))

[Doc. No. 1580, 28 FR 6722, June 29, 1963, as amended by Amdt. 101–4, 39 FR 22252, June 21, 1974]

§ 101.19 Rapid deflation device.

No person may operate a moored balloon unless it has a device that will automatically and rapidly deflate the balloon if it escapes from its moorings. If the device does not function properly, the operator shall immediately notify the nearest ATC facility of the location and time of the escape and the estimated flight path of the balloon.

Subpart C—Unmanned Rockets**§ 101.21 Applicability.**

This subpart applies to the operation of unmanned rockets. However, a person operating an unmanned rocket within a restricted area must comply only with §101.23(g) and with additional limitations imposed by the using or controlling agency, as appropriate.

[Doc. No. 1580, 28 FR 6722, June 29, 1963]

§ 101.22 Special provisions for large model rockets.

Persons operating model rockets that use not more than 125 grams of propellant; that are made of paper, wood, or breakable plastic; that contain no substantial metal parts, and that weigh not more than 1,500 grams, including the propellant, need not comply with §101.23 (b), (c), (g), and (h), provided:

(a) That person complies with all provisions of §101.25; and

(b) The operation is not conducted within 5 miles of an airport runway or other landing area unless the information required in §101.25 is also provided to the manager of that airport.

[Amdt. 101-6, 59 FR 50393, Oct. 3, 1994]

§ 101.23 Operating limitations.

No person may operate an unmanned rocket—

(a) In a manner that creates a collision hazard with other aircraft;

(b) In controlled airspace;

(c) Within five miles of the boundary of any airport;

(d) At any altitude where clouds or obscuring phenomena of more than five-tenths coverage prevails;

(e) At any altitude where the horizontal visibility is less than five miles;

(f) Into any cloud;

(g) Within 1,500 feet of any person or property that is not associated with the operations; or

(h) Between sunset and sunrise.

(Sec. 6(c), Department of Transportation Act (49 U.S.C. 1655(c)))

[Doc. No. 1580, 28 FR 6722, June 29, 1963, as amended by Amdt. 101-4, 39 FR 22252, June 21, 1974]

§ 101.25 Notice requirements.

No person may operate an unmanned rocket unless that person gives the following information to the FAA ATC facility nearest to the place of intended operation no less than 24 hours prior to and no more than 48 hours prior to beginning the operation:

(a) The names and addresses of the operators; except when there are multiple participants at a single event, the name and address of the person so designated as the event launch coordinator, whose duties include coordination of the required launch data estimates and coordinating the launch event;

(b) The estimated number of rockets to be operated;

(c) The estimated size and the estimated weight of each rocket; and

(d) The estimated highest altitude or flight level to which each rocket will be operated.

(e) The location of the operation.

(f) The date, time, and duration of the operation.

(g) Any other pertinent information requested by the ATC facility.

[Doc. No. 1580, 28 FR 6722, June 29, 1963, as amended by Amdt. 101-6, 59 FR 50393, Oct. 3, 1994]

Subpart D—Unmanned Free Balloons

SOURCE: Docket No. 1457, 29 FR 47, Jan. 3, 1964, unless otherwise noted.

§ 101.31 Applicability.

This subpart applies to the operation of unmanned free balloons. However, a person operating an unmanned free balloon within a restricted area must comply only with §101.33 (d) and (e) and with any additional limitations that are imposed by the using or controlling agency, as appropriate.

§ 101.33 Operating limitations.

No person may operate an unmanned free balloon—

(a) Unless otherwise authorized by ATC, below 2,000 feet above the surface within the lateral boundaries of the surface areas of Class B, Class C, Class D, or Class E airspace designated for an airport;

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(b) At any altitude where there are clouds or obscuring phenomena of more than five-tenths coverage;

(c) At any altitude below 60,000 feet standard pressure altitude where the horizontal visibility is less than five miles;

(d) During the first 1,000 feet of ascent, over a congested area of a city, town, or settlement or an open-air assembly of persons not associated with the operation; or

(e) In such a manner that impact of the balloon, or part thereof including its payload, with the surface creates a hazard to persons or property not associated with the operation.

[Doc. No. 1457, 29 FR 47, Jan. 3, 1964, as amended by Amdt. 101-5, 56 FR 65662, Dec. 17, 1991]

§ 101.35 Equipment and marking requirements.

(a) No person may operate an unmanned free balloon unless—

(1) It is equipped with at least two payload cut-down systems or devices that operate independently of each other;

(2) At least two methods, systems, devices, or combinations thereof, that function independently of each other, are employed for terminating the flight of the balloon envelope; and

(3) The balloon envelope is equipped with a radar reflective device(s) or material that will present an echo to surface radar operating in the 200 MHz to 2700 MHz frequency range.

The operator shall activate the appropriate devices required by paragraphs (a) (1) and (2) of this section when weather conditions are less than those prescribed for operation under this subpart, or if a malfunction or any other reason makes the further operation hazardous to other air traffic or to persons and property on the surface.

(b) No person may operate an unmanned free balloon below 60,000 feet standard pressure altitude between sunset and sunrise (as corrected to the altitude of operation) unless the balloon and its attachments and payload, whether or not they become separated during the operation, are equipped with lights that are visible for at least 5 miles and have a flash frequency of at

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least 40, and not more than 100, cycles per minute.

(c) No person may operate an unmanned free balloon that is equipped with a trailing antenna that requires an impact force of more than 50 pounds to break it at any point, unless the antenna has colored pennants or streamers that are attached at not more than 50 foot intervals and that are visible for at least one mile.

(d) No person may operate between sunrise and sunset an unmanned free balloon that is equipped with a suspension device (other than a highly conspicuously colored open parachute) more than 50 feet along, unless the suspension device is colored in alternate bands of high conspicuity colors or has colored pennants or streamers attached which are visible for at least one mile.

(Sec. 6(c), Department of Transportation Act (49 U.S.C. 1655(c)))

[Doc. No. 1457, 29 FR 47, Jan. 3, 1964, as amended by Amdt. 101-2, 32 FR 5254, Mar. 29, 1967; Amdt. 101-4, 39 FR 22252, June 21, 1974]

§ 101.37 Notice requirements.

(a) *Prelaunch notice:* Except as provided in paragraph (b) of this section, no person may operate an unmanned free balloon unless, within 6 to 24 hours before beginning the operation, he gives the following information to the FAA ATC facility that is nearest to the place of intended operation:

(1) The balloon identification.

(2) The estimated date and time of launching, amended as necessary to remain within plus or minus 30 minutes.

(3) The location of the launching site.

(4) The cruising altitude.

(5) The forecast trajectory and estimated time to cruising altitude or 60,000 feet standard pressure altitude, whichever is lower.

(6) The length and diameter of the balloon, length of the suspension device, weight of the payload, and length of the trailing antenna.

(7) The duration of flight.

(8) The forecast time and location of impact with the surface of the earth.

(b) For solar or cosmic disturbance investigations involving a critical time element, the information in paragraph (a) of this section shall be given within 30 minutes to 24 hours before beginning the operation.

(c) *Cancellation notice:* If the operation is canceled, the person who intended to conduct the operation shall immediately notify the nearest FAA ATC facility.

(d) *Launch notice:* Each person operating an unmanned free balloon shall notify the nearest FAA or military ATC facility of the launch time immediately after the balloon is launched.

§ 101.39 Balloon position reports.

(a) Each person operating an unmanned free balloon shall:

(1) Unless ATC requires otherwise, monitor the course of the balloon and record its position at least every two hours; and

(2) Forward any balloon position reports requested by ATC.

(b) One hour before beginning descent, each person operating an unmanned free balloon shall forward to the nearest FAA ATC facility the following information regarding the balloon:

(1) The current geographical position.

(2) The altitude.

(3) The forecast time of penetration of 60,000 feet standard pressure altitude (if applicable).

(4) The forecast trajectory for the balance of the flight.

(5) The forecast time and location of impact with the surface of the earth.

(c) If a balloon position report is not recorded for any two-hour period of flight, the person operating an unmanned free balloon shall immediately notify the nearest FAA ATC facility. The notice shall include the last recorded position and any revision of the forecast trajectory. The nearest FAA ATC facility shall be notified immediately when tracking of the balloon is re-established.

(d) Each person operating an unmanned free balloon shall notify the nearest FAA ATC facility when the operation is ended.

PART 103—ULTRALIGHT VEHICLES

Subpart A—General

Sec.	
103.1	Applicability.
103.3	Inspection requirements.
103.5	Waivers.
103.7	Certification and registration.

Subpart B—Operating Rules

103.9	Hazardous operations.
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103.13	Operation near aircraft; right-of-way rules.
103.15	Operations over congested areas.
103.17	Operations in certain airspace.
103.19	Operations in prohibited or restricted areas.
103.20	Flight restrictions in the proximity of certain areas designated by notice to airmen.
103.21	Visual reference with the surface.
103.23	Flight visibility and cloud clearance requirements.

AUTHORITY: 49 U.S.C. 106(g), 40103–40104, 40113, 44701.

SOURCE: Docket No. 21631, 47 FR 38776, Sept. 2, 1982, unless otherwise noted.

Subpart A—General

§ 103.1 Applicability.

This part prescribes rules governing the operation of ultralight vehicles in the United States. For the purposes of this part, an ultralight vehicle is a vehicle that:

(a) Is used or intended to be used for manned operation in the air by a single occupant;

(b) Is used or intended to be used for recreation or sport purposes only;

(c) Does not have any U.S. or foreign airworthiness certificate; and

(d) If unpowered, weighs less than 155 pounds; or

(e) If powered:

(1) Weighs less than 254 pounds empty weight, excluding floats and safety devices which are intended for deployment in a potentially catastrophic situation;

(2) Has a fuel capacity not exceeding 5 U.S. gallons;

(3) Is not capable of more than 55 knots calibrated airspeed at full power in level flight; and

(4) Has a power-off stall speed which does not exceed 24 knots calibrated airspeed.

§ 103.3 Inspection requirements.

(a) Any person operating an ultralight vehicle under this part shall, upon request, allow the Administrator, or his designee, to inspect the vehicle to determine the applicability of this part.

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(b) The pilot or operator of an ultralight vehicle must, upon request of the Administrator, furnish satisfactory evidence that the vehicle is subject only to the provisions of this part.

§ 103.5 Waivers.

No person may conduct operations that require a deviation from this part except under a written waiver issued by the Administrator.

§ 103.7 Certification and registration.

(a) Notwithstanding any other section pertaining to certification of aircraft or their parts or equipment, ultralight vehicles and their component parts and equipment are not required to meet the airworthiness certification standards specified for aircraft or to have certificates of airworthiness.

(b) Notwithstanding any other section pertaining to airman certification, operators of ultralight vehicles are not required to meet any aeronautical knowledge, age, or experience requirements to operate those vehicles or to have airman or medical certificates.

(c) Notwithstanding any other section pertaining to registration and marking of aircraft, ultralight vehicles are not required to be registered or to bear markings of any type.

Subpart B—Operating Rules

§ 103.9 Hazardous operations.

(a) No person may operate any ultralight vehicle in a manner that creates a hazard to other persons or property.

(b) No person may allow an object to be dropped from an ultralight vehicle if such action creates a hazard to other persons or property.

§ 103.11 Daylight operations.

(a) No person may operate an ultralight vehicle except between the hours of sunrise and sunset.

(b) Notwithstanding paragraph (a) of this section, ultralight vehicles may be operated during the twilight periods 30 minutes before official sunrise and 30 minutes after official sunset or, in Alaska, during the period of civil twilight as defined in the Air Almanac, if:

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(1) The vehicle is equipped with an operating anticollision light visible for at least 3 statute miles; and

(2) All operations are conducted in uncontrolled airspace.

§ 103.13 Operation near aircraft; right-of-way rules.

(a) Each person operating an ultralight vehicle shall maintain vigilance so as to see and avoid aircraft and shall yield the right-of-way to all aircraft.

(b) No person may operate an ultralight vehicle in a manner that creates a collision hazard with respect to any aircraft.

(c) Powered ultralights shall yield the right-of-way to unpowered ultralights.

§ 103.15 Operations over congested areas.

No person may operate an ultralight vehicle over any congested area of a city, town, or settlement, or over any open air assembly of persons.

§ 103.17 Operations in certain airspace.

No person may operate an ultralight vehicle within Class A, Class B, Class C, or Class D airspace or within the lateral boundaries of the surface area of Class E airspace designated for an airport unless that person has prior authorization from the ATC facility having jurisdiction over that airspace.

[Amdt. 103–17, 56 FR 65662, Dec. 17, 1991]

§ 103.19 Operations in prohibited or restricted areas.

No person may operate an ultralight vehicle in prohibited or restricted areas unless that person has permission from the using or controlling agency, as appropriate.

§ 103.20 Flight restrictions in the proximity of certain areas designated by notice to airmen.

No person may operate an ultralight vehicle in areas designated in a Notice to Airmen under § 91.137, § 91.138, § 91.141, § 91.143 or § 91.145 of this chapter, unless authorized by:

(a) Air Traffic Control (ATC); or

(b) A Flight Standards Certificate of Waiver or Authorization issued for the demonstration or event.

[Doc. No. FAA-2000-8274, 66 FR 47378, Sept. 11, 2001]

§ 103.21 Visual reference with the surface.

No person may operate an ultralight vehicle except by visual reference with the surface.

§ 103.23 Flight visibility and cloud clearance requirements.

No person may operate an ultralight vehicle when the flight visibility or distance from clouds is less than that in the table found below. All operations in Class A, Class B, Class C, and Class D airspace or Class E airspace designated for an airport must receive prior ATC authorization as required in § 103.17 of this part.

Airspace	Flight visibility	Distance from clouds
Class A	Not applicable	Not Applicable.
Class B	3 statute miles	Clear of Clouds.
Class C	3 statute miles	500 feet below. 1,000 feet above. 2,000 feet horizontal.
Class D	3 statute miles	500 feet below. 1,000 feet above. 2,000 feet horizontal.
Class E: Less than 10,000 feet MSL.	3 statute miles	500 feet below. 1,000 feet above. 2,000 feet horizontal.
At or above 10,000 feet MSL.	5 statute miles	1,000 feet below. 1,000 feet above. 1 statute mile horizontal.
Class G: 1,200 feet or less above the surface (re- gardless of MSL altitude).	1 statute mile	Clear of clouds.
More than 1,200 feet above the surface but less than 10,000 feet MSL.	1 statute mile	500 feet below. 1,000 feet above. 2,000 feet horizontal.
More than 1,200 feet above the surface and at or above 10,000 feet MSL.	5 statute miles	1,000 feet below. 1,000 feet above. 1 statute mile horizontal.

[Amdt. 103-17, 56 FR 65662, Dec. 17, 1991]

PART 105—PARACHUTE OPERATIONS

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AUTHORITY: 49 U.S.C. 106(g), 40113-40114, 44701-44702, 44721.

SOURCE: Doc. No. FAA-1999-5483, 66 FR 23553, May 9, 2001, unless otherwise noted.

§ 105.1 Applicability.

(a) Except as provided in paragraphs (b) and (c) of this section, this part prescribes rules governing parachute operations conducted in the United States.

(b) This part does not apply to a parachute operation conducted—

(1) In response to an in-flight emergency, or

(2) To meet an emergency on the surface when it is conducted at the direction or with the approval of an agency of the United States, or of a State, Puerto Rico, the District of Columbia, or a possession of the United States, or an agency or political subdivision thereof.

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(c) Sections 105.5, 105.9, 105.13, 105.15, 105.17, 105.19 through 105.23, 105.25(a)(1) and 105.27 of this part do not apply to a parachute operation conducted by a member of an Armed Force—

(1) Over or within a restricted area when that area is under the control of an Armed Force.

(2) During military operations in uncontrolled airspace.

§ 105.3 Definitions.

For the purposes of this part—

Approved parachute means a parachute manufactured under a type certificate or a Technical Standard Order (C-23 series), or a personnel-carrying U.S. military parachute (other than a high altitude, high speed, or ejection type) identified by a Navy Air Facility, an Army Air Field, and Air Force-Navy drawing number, an Army Air Field order number, or any other military designation or specification number.

Automatic Activation Device means a self-contained mechanical or electromechanical device that is attached to the interior of the reserve parachute container, which automatically initiates parachute deployment of the reserve parachute at a pre-set altitude, time, percentage of terminal velocity, or combination thereof.

Direct Supervision means that a certificated rigger personally observes a non-certificated person packing a main parachute to the extent necessary to ensure that it is being done properly, and takes responsibility for that packing.

Drop Zone means any pre-determined area upon which parachutists or objects land after making an intentional parachute jump or drop. The center-point target of a drop zone is expressed in nautical miles from the nearest VOR facility when 30 nautical miles or less; or from the nearest airport, town, or city depicted on the appropriate Coast and Geodetic Survey World Aeronautical Chart or Sectional Aeronautical Chart, when the nearest VOR facility is more than 30 nautical miles from the drop zone.

Foreign parachutist means a parachutist who is neither a U.S. citizen or a resident alien and is participating in parachute operations within the United

States using parachute equipment not manufactured in the United States.

Freefall means the portion of a parachute jump or drop between aircraft exit and parachute deployment in which the parachute is activated manually by the parachutist at the parachutist's discretion or automatically, or, in the case of an object, is activated automatically.

Main parachute means a parachute worn as the primary parachute used or intended to be used in conjunction with a reserve parachute.

Object means any item other than a person that descends to the surface from an aircraft in flight when a parachute is used or is intended to be used during all or part of the descent.

Parachute drop means the descent of an object to the surface from an aircraft in flight when a parachute is used or intended to be used during all or part of that descent.

Parachute jump means a parachute operation that involves the descent of one or more persons to the surface from an aircraft in flight when a parachute is used or intended to be used during all or part of that descent.

Parachute operation means the performance of all activity for the purpose of, or in support of, a parachute jump or a parachute drop. This parachute operation can involve, but is not limited to, the following persons: parachutist, parachutist in command and passenger in tandem parachute operations, drop zone or owner or operator, jump master, certificated parachute rigger, or pilot.

Parachutist means a person who intends to exit an aircraft while in flight using a single-harness, dual parachute system to descend to the surface.

Parachutist in command means the person responsible for the operation and safety of a tandem parachute operation.

Passenger parachutist means a person who boards an aircraft, acting as other than the parachutist in command of a tandem parachute operation, with the intent of existing the aircraft while in-flight using the forward harness of a dual harness tandem parachute system to descend to the surface.

Pilot chute means a small parachute used to initiate and/or accelerate deployment of a main or reserve parachute.

Ram-air parachute means a parachute with a canopy consisting of an upper and lower surface that is inflated by ram air entering through specially designed openings in the front of the canopy to form a gliding airfoil.

Reserve parachute means an approved parachute worn for emergency use to be activated only upon failure of the main parachute or in any other emergency where use of the main parachute is impractical or use of the main parachute would increase risk.

Single-harness, dual parachute system: means the combination of a main parachute, approved reserve parachute, and approved single person harness and dual-parachute container. This parachute system may have an operational automatic activation device installed.

Tandem parachute operation: means a parachute operation in which more than one person simultaneously uses the same tandem parachute system while descending to the surface from an aircraft in flight.

Tandem parachute system: means the combination of a main parachute, approved reserve parachute, and approved harness and dual parachute container, and a separate approved forward harness for a passenger parachutist. This parachute system must have an operational automatic activation device installed.

§ 105.5 General.

No person may conduct a parachute operation, and no pilot in command of an aircraft may allow a parachute operation to be conducted from an aircraft, if that operation creates a hazard to air traffic or to persons or property on the surface.

§ 105.7 Use of alcohol and drugs.

No person may conduct a parachute operation, and no pilot in command of an aircraft may allow a person to conduct a parachute operation from that aircraft, if that person is or appears to be under the influence of—

- (a) Alcohol, or

- (b) Any drug that affects that person's faculties in any way contrary to safety.

§ 105.9 Inspections.

The Administrator may inspect any parachute operation to which this part applies (including inspections at the site where the parachute operation is being conducted) to determine compliance with the regulations of this part.

Subpart B—Operating Rules

§ 105.13 Radio equipment and use requirements.

(a) Except when otherwise authorized by air traffic control—

(1) No person may conduct a parachute operation, and no pilot in command of an aircraft may allow a parachute operation to be conducted from that aircraft, in or into controlled airspace unless, during that flight—

(i) The aircraft is equipped with a functioning two-way radio communication system appropriate to the air traffic control facilities being used; and

(ii) Radio communications have been established between the aircraft and the air traffic control facility having jurisdiction over the affected airspace of the first intended exit altitude at least 5 minutes before the parachute operation begins. The pilot in command must establish radio communications to receive information regarding air traffic activity in the vicinity of the parachute operation.

(2) The pilot in command of an aircraft used for any parachute operation in or into controlled airspace must, during each flight—

(i) Continuously monitor the appropriate frequency of the aircraft's radio communications system from the time radio communications are first established between the aircraft and air traffic control, until the pilot advises air traffic control that the parachute operation has ended for that flight.

(ii) Advise air traffic control when the last parachutist or object leaves the aircraft.

(b) Parachute operations must be aborted if, prior to receipt of a required air traffic control authorization, or during any parachute operation in or into controlled airspace, the required

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radio communications system is or becomes inoperative.

§ 105.15 Information required and notice of cancellation or postponement of a parachute operation.

(a) Each person requesting an authorization under §§ 105.21(b) and 105.25(a)(2) of this part and each person submitting a notification under § 105.25(a)(3) of this part must provide the following information (on an individual or group basis):

(1) The date and time the parachute operation will begin.

(2) The radius of the drop zone around the target expressed in nautical miles.

(3) The location of the center of the drop zone in relation to—

(i) The nearest VOR facility in terms of the VOR radial on which it is located and its distance in nautical miles from the VOR facility when that facility is 30 nautical miles or less from the drop zone target; or

(ii) the nearest airport, town, or city depicted on the appropriate Coast and Geodetic Survey World Aeronautical Chart or Sectional Aeronautical Chart, when the nearest VOR facility is more than 30 nautical miles from the drop zone target.

(4) Each altitude above mean sea level at which the aircraft will be operated when parachutists or objects exist the aircraft.

(5) The duration of the intended parachute operation.

(6) The name, address, and telephone number of the person who requests the authorization or gives notice of the parachute operation.

(7) The registration number of the aircraft to be used.

(8) The name of the air traffic control facility with jurisdiction of the airspace at the first intended exit altitude to be used for the parachute operation.

(b) Each holder of a certificate of authorization issued under §§ 105.21(b) and 105.25(b) of this part must present that certificate for inspection upon the request of the Administrator or any Federal, State, or local official.

(c) Each person requesting an authorization under §§ 105.21(b) and 105.25(a)(2) of this part and each person submitting a notice under § 105.25(a)(3) of this part

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must promptly notify the air traffic control facility having jurisdiction over the affected airspace if the proposed or scheduled parachute operation is canceled or postponed.

§ 105.17 Flight visibility and clearance from cloud requirements.

No person may conduct a parachute operation, and no pilot in command of an aircraft may allow a parachute operation to be conducted from that aircraft—

(a) Into or through a cloud, or

(b) When the flight visibility or the distance from any cloud is less than that prescribed in the following table:

Altitude	Flight visibility (statute miles)	Distance from clouds
1,200 feet or less above the surface regardless of the MSL altitude.	3	500 feet below, 1,000 feet above, 2,000 feet horizontal.
More than 1,200 feet above the surface but less than 10,000 feet MSL.	3	500 feet below, 1,000 feet above, 2,000 feet horizontal.
More than 1,200 feet above the surface and at or above 10,000 feet MSL.	5	1,000 feet below, 1,000 feet above, 1 mile horizontal.

§ 105.19 Parachute operations between sunset and sunrise.

(a) No person may conduct a parachute operation, and no pilot in command of an aircraft may allow a person to conduct a parachute operation from an aircraft between sunset and sunrise, unless the person or object descending from the aircraft displays a light that is visible for at least 3 statute miles.

(b) The light required by paragraph (a) of this section must be displayed from the time that the person or object is under a properly functioning open parachute until that person or object reaches the surface.

§ 105.21 Parachute operations over or into a congested area or an open-air assembly of persons.

(a) No person may conduct a parachute operation, and no pilot in command of an aircraft may allow a parachute operation to be conducted from that aircraft, over or into a congested area of a city, town, or settlement, or an open-air assembly of persons unless

a certificate of authorization for that parachute operation has been issued under this section. However, a parachutist may drift over a congested area or an open-air assembly of persons with a fully deployed and properly functioning parachute if that parachutist is at a sufficient altitude to avoid creating a hazard to persons or property on the surface.

(b) An application for a certificate of authorization issued under this section must—

(1) Be made in the form and manner prescribed by the Administrator, and

(2) Contain the information required in §105.15(a) of this part.

(c) Each holder of, and each person named as a participant in a certificate of authorization issued under this section must comply with all requirements contained in the certificate of authorization.

(d) Each holder of a certificate of authorization issued under this section must present that certificate for inspection upon the request of the Administrator, or any Federal, State, or local official.

§105.23 Parachute operations over or onto airports.

No person may conduct a parachute operation, and no pilot in command of an aircraft may allow a parachute operation to be conducted from that aircraft, over or onto any airport unless—

(a) For airports with an operating control tower:

(1) Prior approval has been obtained from the management of the airport to conduct parachute operations over or on that airport.

(2) Approval has been obtained from the control tower to conduct parachute operations over or onto that airport.

(3) Two-way radio communications are maintained between the pilot of the aircraft involved in the parachute operation and the control tower of the airport over or onto which the parachute operation is being conducted.

(b) For airports without an operating control tower, prior approval has been obtained from the management of the airport to conduct parachute operations over or on that airport.

(c) A parachutist may drift over that airport with a fully deployed and prop-

erly functioning parachute if the parachutist is at least 2,000 feet above that airport's traffic pattern, and avoids creating a hazard to air traffic or to persons and property on the ground.

§105.25 Parachute operations in designated airspace.

(a) No person may conduct a parachute operation, and no pilot in command of an aircraft may allow a parachute operation to be conducted from that aircraft—

(1) Over or within a restricted area or prohibited area unless the controlling agency of the area concerned has authorized that parachute operation;

(2) Within or into a Class A, B, C, D airspace area without, or in violation of the requirements of, an air traffic control authorization issued under this section;

(3) Except as provided in paragraph (c) and (d) of this section, within or into Class E or G airspace area unless the air traffic control facility having jurisdiction over the airspace at the first intended exit altitude is notified of the parachute operation no earlier than 24 hours before or no later than 1 hour before the parachute operation begins.

(b) Each request for a parachute operation authorization or notification required under this section must be submitted to the air traffic control facility having jurisdiction over the airspace at the first intended exit altitude and must include the information prescribed by §105.15(a) of this part.

(c) For the purposes of paragraph (a)(3) of this section, air traffic control facilities may accept a written notification from an organization that conducts parachute operations and lists the scheduled series of parachute operations to be conducted over a stated period of time not longer than 12 calendar months. The notification must contain the information prescribed by §105.15(a) of this part, identify the responsible persons associated with that parachute operation, and be submitted at least 15 days, but not more than 30 days, before the parachute operation begins. The FAA may revoke the acceptance of the notification for any failure of the organization conducting

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the parachute operations to comply with its requirements.

(d) Paragraph (a)(3) of this section does not apply to a parachute operation conducted by a member of an Armed Force within a restricted area that extends upward from the surface when that area is under the control of an Armed Force.

Subpart C—Parachute Equipment and Packing

§ 105.41 Applicability.

This subpart prescribed rules governing parachute equipment used in civil parachute operations.

§ 105.43 Use of single-harness, dual-parachute systems.

No person may conduct a parachute operation using a single-harness, dual-parachute system, and no pilot in command of an aircraft may allow any person to conduct a parachute operation from that aircraft using a single-harness, dual-parachute system, unless that system has at least one main parachute, one approved reserve parachute, and one approved single person harness and container that are packed as follows:

(a) The main parachute must have been packed within 120 days before the date of its use of a certificated parachute rigger, the person making the next jump with that parachute, or a non-certificated person under the direct supervision of a certification parachute rigger.

(b) The reserve parachute must have been packed by a certificated parachute rigger—

(1) Within 120 days before the date of its use, if its canopy, shroud, and harness are composed exclusively of nylon, rayon, or similar synthetic fiber or material that is substantially resistant to damage from mold, mildew, and other fungi, and other rotting agents propagated in a moist environment; or

(2) Within 60 days before the date of its use, if it is composed of any amount of silk, pongee, or other natural fiber, or material not specified in paragraph (b)(1) of this section.

(c) If installed, the automatic activation device must be maintained in accordance with manufacturer instruc-

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tions for that automatic activation device.

§ 105.45 Use of tandem parachute systems.

(a) No person may conduct a parachute operation using a tandem parachute system, and no pilot in command of an aircraft may allow any person to conduct a parachute operation from that aircraft using a tandem parachute system, unless—

(1) One of the parachutists using the tandem parachute system is the parachutist in command, and meets the following requirements:

(i) Has a minimum of 3 years of experience in parachuting, and must provide documentation that the parachutist—

(ii) Has completed a minimum of 500 freefall parachute jumps using a ram-air parachute, and

(iii) Holds a master parachute license issued by an organization recognized by the FAA, and

(iv) Has successfully completed a tandem instructor course given by the manufacturer of the tandem parachute system used in the parachute operation or a course acceptable to the Administrator.

(v) Has been certified by the appropriate parachute manufacturer or tandem course provider as being properly trained on the use of the specific tandem parachute system to be used.

(2) The person acting as parachutist in command:

(i) Has briefed the passenger parachutist before boarding the aircraft. The briefing must include the procedures to be used in case of an emergency with the aircraft or after exiting the aircraft, while preparing to exit and exiting the aircraft, freefall, operating the parachute after freefall, landing approach, and landing.

(ii) Uses the harness position prescribed by the manufacturer of the tandem parachute equipment.

(b) No person may make a parachute jump with a tandem parachute system unless—

(1) The main parachute has been packed by a certificated parachute rigger, the parachutist in command making the next jump with that parachute,

or a person under the direct supervision of a certificated parachute rigger.

(2) The reserve parachute has been packed by a certificated parachute rigger in accordance with §105.43(b) of this part.

(3) The tandem parachute system contains an operational automatic activation device for the reserve parachute, approved by the manufacturer of that tandem parachute system. The device must—

(i) Have been maintained in accordance with manufacturer instructions, and

(ii) Be armed during each tandem parachute operation.

(4) The passenger parachutist is provided with a manual main parachute activation device and instructed on the use of that device, if required by the owner/operator.

(5) The main parachute is equipped with a single-point release system.

(6) The reserve parachute meets Technical Standard Order C23 specifications.

§ 105.47 Use of static lines.

(a) Except as provided in paragraph (c) of this section, no person may conduct a parachute operation using a static line attached to the aircraft and the main parachute unless an assist device, described and attached as follows, is used to aid the pilot chute in performing its function, or, if no pilot chute is used, to aid in the direct deployment of the main parachute canopy. The assist device must—

(1) Be long enough to allow the main parachute container to open before a load is placed on the device.

(2) Have a static load strength of—

(i) At least 28 pounds but not more than 160 pounds if it is used to aid the pilot chute in performing its function; or

(ii) At least 56 pounds but not more than 320 pounds if it is used to aid in the direct deployment of the main parachute canopy; and

(3) Be attached as follows:

(i) At one end, to the static line above the static-line pins or, if static-line pins are not used, above the static-line ties to the parachute cone.

(ii) At the other end, to the pilot chute apex, bridle cord, or bridle loop, or, if no pilot chute is used, to the main parachute canopy.

(b) No person may attach an assist device required by paragraph (a) of this section to any main parachute unless that person is a certificated parachute rigger or that person makes the next parachute jump with that parachute.

(c) An assist device is not required for parachute operations using direct-deployed, ram-air parachutes.

§ 105.49 Foreign parachutists and equipment.

(a) No person may conduct a parachute operation, and no pilot in command of an aircraft may allow a parachute operation to be conducted from that aircraft with an unapproved foreign parachute system unless—

(1) The parachute system is worn by a foreign parachutist who is the owner of that system.

(2) The parachute system is of a single-harness dual parachute type.

(3) The parachute system meets the civil aviation authority requirements of the foreign parachutist's country.

(4) All foreign non-approved parachutes deployed by a foreign parachutist during a parachute operation conducted under this section shall be packed as follows—

(i) The main parachute must be packed by the foreign parachutist making the next parachute jump with that parachute, a certificated parachute rigger, or any other person acceptable to the Administrator.

(ii) The reserve parachute must be packed in accordance with the foreign parachutist's civil aviation authority requirements, by a certificated parachute rigger, or any other person acceptable to the Administrator.