General Operation Rules

General

43.1 *Scope.* This part governs the operation of civil aircraft in the United States.

(Part 43, 19 F.R. 6370, Oct. 2, 1954, effective Oct. 1, 1954.)

Aircraft Requirements

43.10 *Aircraft requirements.*

(a) No aircraft shall be operated unless an appropriate and valid airworthiness certificate or special flight permit, and a registration certificate issued to the owner of the aircraft, are carried in the aircraft.

(b) No aircraft shall be operated except in accordance with the operating limitations prescribed by the certificating authority of the country of registry.

(c) No aircraft, except foreign aircraft, shall be operated unless it is identified in accordance with the requirements of Part 1 of this subchapter.

[(d) No aircraft, except foreign aircraft, shall be operated unless the operating limitations prescribed for the particular aircraft are set forth in a current approved Aircraft Flight Manual, on placards, listings, instrument markings, or in any combination thereof. The flight manual, placards, listings, or markings shall be legible and accessible to the pilot at his station, and shall include limitations on each of the following items, which have been prescribed for a particular aircraft:

[(1) Airspeeds (e.g., normal operating speed, flaps extended speed, etc.);

[(2) Powerplant (e.g., rpm, manifold pressure, gas temperature, etc.);

[(3) Aircraft weight, center of gravity, and weight distribution, including the composition of the useful load in those combinations and ranges intended to insure that the weight and center of gravity position will remain within approved limits (e.g., combinations and ranges of crew, oil, fuel, passengers, and baggage);

[(4) Minimum flight crew;

[(5) Types of operation;

[(6) Maximum operating altitude;

[(7) Maneuvering flight load factors;

[(8) Rotor speed (for rotorcraft);

[(9) Limiting height-speed envelope (for rotorcraft); and,

[(10) Any other limitations prescribed for a particular aircraft.]

(Part 43, 19 F.R. 6370, Oct. 2, 1954, effective Oct. 1, 1954; as amended by Amdt. 43-3, 22 F.R. 181, Jan. 9, 1957, effective Feb. 7, 1957, Amdt. 43-15, 27 F.R. 3004, Mar. 30, 1962, effective May 3, 1962.)

43.11 *Transport category airplane weight limitations.*

(a) No transport category airplane or airplane certificated in accordance with the transport category performance requirements shall be taken off from any airport located at an elevation outside of the altitude range for which maximum take-off weights have been determined, and no airplane shall depart for an airport of intended destination or have any airport specified as an alternate which is located at an elevation outside of the altitude range for which maximum landing weights have been determined.

(b) The weight of the airplane at take-off shall not exceed the authorized maximum take-off weight for the elevation of the airport from which the take-off is to be made.

(c) The weight at take-off shall be such that, allowing for normal consumption of fuel and oil in flight to the airport of intended destination, the weight on arrival will not exceed the authorized maximum landing weight for the elevation of such airport.

(Added by Amdt. 43-7, 22 F.R. 5863, July 24, 1957, effective Aug. 23, 1957.)

Maintenance

43.20 *General.* No person shall operate an aircraft unless it is in an airworthy condition. Maintenance shall be performed in accordance with Part 18 of this subchapter.

(Part 43, 19 F.R. 6370, Oct. 2, 1954, effective Oct. 1, 1954; as amended by Amdt. 43-2, 21 F.R. 2587, Apr. 20, 1956, effective July 17, 1956.)

Discussion of the Policies Relating to the Requirements of Section 43.20-1

The purpose of this policy is to delineate the responsibilities of the aircraft owner or operator, and the pilot. These responsibilities have been recognized by the industry for years; however, until this time, have not been established in any formal manner.

43.20-1 *General (FAA policies which apply to sec. 43.20).*

(a) Primary responsibility for maintaining the aircraft in an airworthy condition is that of the aircraft owner or operator. The owner or operator must have the aircraft inspected, as required by section 43.22 of this part, and must maintain the airworthiness of the aircraft during the time between the required inspections by having any defects corrected or repaired in accordance with Part 18 of this subchapter during this interim. Various types of aircraft will require different degrees of maintenance. Factors such as kind of operation, climatic conditions, storage facilities, and age of the aircraft will influence the maintenance requirements. Experience has indicated that most aircraft will require some type of preventive maintenance every 25 hours or less, and minor maintenance at least every 100 hours. The owner or operator must also make sure that maintenance personnel have made appropriate entries in the aircraft and maintenance records to indicate that the aircraft has been released to service.

(b) The pilot, however, must assume responsibility for determining that an aircraft is in condition for safe flight or discontinuing the flight when unairworthy mechanical or structural conditions occur. In this connection, the pilot is expected to make a preflight inspection. The preflight inspection should include, but not be limited to, a visual inspection of the aircraft and its components for general condition and state of repair, a functional check of controls, powerplants, instruments, and a determination that sufficient fuel and oil are aboard for the proposed flight.

(Published in 21 F.R. 3183, May 15, 1956, effective July 17, 1956.)

43.21 *Flight tests.* When an aircraft has undergone any repair or alteration which may have appreciably changed its flight characteristics or substantially affected its operation in flight, such aircraft, prior to carrying passengers, shall be test flown by at least a private pilot appropriately rated for the aircraft, and a notation to that effect shall be entered by such pilot in the aircraft log.

(Part 43, 19 F.R. 6370, Oct. 2, 1954, effective Oct. 1, 1954.)

43.21-1 *Flight tests on aircraft prior to carrying passengers—determination of repairs or alterations which may have appreciably changed flight characteristics or substantially affected operation in flight (FAA policies which apply to sec. 43.21).*

(a) The flight test requirement of this section is not necessary where ground tests and/or inspections of an aircraft have been made which conclusively show that the repairs and alterations have not appreciably changed the flight characteristics or substantially affected its operation in flight.

(b) Because of the many types and variations of aircraft repairs or alterations, including engine changes, it is recognized that it is difficult to determine whether or not a repair or alteration has appreciably changed the flight characteristics of an aircraft, therefore an air carrier or other persons accomplishing repairs pursuant to air carrier maintenance rules, will include in the air carrier's or operator's maintenance man-

ual a detailed outline, for the guidance of all personnel, which specifies the procedures and circumstances under which flight tests will or will not be required.

(c) When repairs or alterations are made to aircraft other than air carrier aircraft, persons authorized under section 18.11 of this subchapter to approve such repairs or alterations as airworthy should determine whether or not a flight test is required. In making such flight test determination, such persons should consider the following: the nature of the repair or alteration, adequacy of ground test and inspection procedures, adequacy of facilities and equipment for the performance of such tests or inspections and the service experience with a particular repair or alteration.

(Published in 20 F.R. 4002 on June 9, 1955, effective June 30, 1955.)

43.22 ***Inspections.***

(a) ***Periodic and one-hundred-hour inspections.***

(1) No aircraft shall be operated, except when it carries a special flight authorization or a currently effective experimental certificate, unless within the preceding 12 calendar months it has been given a periodic inspection in accordance with the requirements of Part 18 of this subchapter and has been approved for return to service by a person authorized by section 18.12(b) of Part 18 of this subchapter. Additionally, an aircraft shall not carry passengers for hire or be used for flight instruction for hire unless within each 100 hours of time in service it has been inspected in accordance with the requirements of Part 18 of this subchapter and has been approved for return to service by a person authorized in section 18.12(a) of Part 18 of this subchapter: *Provided,* That this interval may be exceeded by not more than 10 hours when necessary to reach a point at which the inspection may be accomplished, in which event such time must be included in the next 100-hour interval.

(2) The periodic inspection required by subparagraph (1) of this paragraph will be acceptable as a 100-hour inspection. The inspection conducted for the issuance of an airworthiness certificate will be accepted as a periodic inspection.

(b) *Progressive inspection.* An aircraft shall be exempt from the provisions of paragraph (a) of this section if the owner or operator provides or makes arrangements for suitable procedures, personnel, and facilities for progressive inspection as prescribed by the Administrator in accordance with Part 18 of this subchapter.

(c) *Other exemptions.* An aircraft shall be exempt from the provisions of paragraphs (a) and (b) of this section if:

(1) It is an aircraft operated in accordance with the provisions of Part 40 or Part 41 of this subchapter; or

(2) It is an aircraft of more than 12,500 pounds maximum certificated take-off weight and is operated in accordance with the provisions of Part 42 of this subchapter.

Discussion Relating to Maintenance Requirements in Section 43.22

This section provides the aircraft owner with two methods of inspection whereby the continued airworthiness of an aircraft may be assured.

The first method is the use of the periodic inspection, and the 100-hour inspection if passengers are carried for hire. Both the periodic and 100-hour inspections are complete inspections of the aircraft—identical in scope. The periodic inspection must be accomplished by a mechanic with an inspection authorization, a repair station, or the aircraft manufacturer; whereas the 100-hour inspection may be performed by any certified rated mechanic as well as the aforementioned agencies.

The second method, or alternative method, is the progressive inspection which is a formal plan for continuous or progressive inspection of an aircraft whereby the inspection workload may be adjusted or equalized to suit the operation of the aircraft or the need of the owner. Its purpose is to permit greater utilization of the aircraft. The owner electing to employ the progressive inspection must provide proper personnel, procedures, and facilities prior

to commencing such inspection. The use of progressive inspection eliminates the need for periodic and 100-hour inspections during the period that the progressive inspection is followed.

43.22–1 Deleted.

(Deletion published in 24 F.R. 7637, Sept. 23, 1959, effective Sept. 17, 1959.)

43.22–2 *Progressive inspections (FAA rules which apply to sec. 43.22(b)).*

(a) If a registered aircraft owner or lessee elects to use the progressive inspection he shall provide the following inspection personnel, inspection procedures manual, facilities and technical information; and submit a statement to this effect to the local General Safety District Office (see appendix A for example) prior to using such inspection:

(1) The services of an authorized mechanic, an airframe repair station, or the manufacturer of the aircraft to supervise or conduct the progressive inspection.

(2) An inspection procedures manual which must be maintained in a current condition at all times. It shall be available to and in a form that is readily understood by pilot and maintenance personnel. It shall contain the following information in detail:

(i) An explanation of the progressive inspection outlining continuity of inspection responsibility including responsibility for submission of reports and maintenance of records and technical reference material.

(ii) An inspection schedule including instructions for exceeding an interval by not more than 10 hours while en route and for amending any interval on the basis of service experience.

(iii) Sample routine and detailed inspection forms, including instructions for their use.

(iv) Sample reports and records and instructions for their use.

(3) Sufficient housing and equipment for the necessary disassembly and proper inspection of the aircraft undergoing progressive inspection.

(4) Appropriate and current technical information for the aircraft undergoing progressive inspection shall be available to inspection personnel.

(b) Upon discontinuance of a progressive inspection the registered owner or lessee shall submit immediately to the local General Safety District Office a written statement to this effect (see appendix A for example).

(Published in 17 F.R. 7676, Aug. 21, 1952, effective Aug. 25, 1952; amended in 21 F.R. 3183, May 15, 1956, effective July 17, 1956.)

43.23 *Aircraft and engine maintenance records.* The registered owner or operator shall maintain a maintenance record in a form and manner prescribed by the Administrator which shall include a current and accurate record of the total time in service on the aircraft and on each engine, a record of inspections, and the record of maintenance required by Part 18 of this subchapter. Such records shall be:

(a) Presented for required entries each time inspection or maintenance is accomplished on the aircraft or engine,

(b) Transferred to the new registered owner or operator upon disposition of the aircraft or engine involved, and

(c) Made available for inspection by authorized representatives of the Administrator or Board.

43.23–1 *Aircraft and engine maintenance records (FAA rules which apply to sec. 43.23).* The maintenance records prescribed in section 43.23 of this part shall provide a separate, current, and permanent record of the maintenance accomplished on the aircraft and each engine and shall be suitably identified as to the make, model, serial number, and, if applicable, registration number of the aircraft or engine involved. Each record shall be of sufficient size to accommodate the following basic information for the aircraft, and where applicable, each engine:

(a) *Maintenance.* The record of maintenance shall include the type and extent of maintenance, alterations, repair, overhaul, or inspection and reflect the time in service and date when completed.

(b) *Compliance with mandatory notes.* Chronological listing of compliance with service bulletins, airworthiness directives, etc., including a description of the method of compliance.

(c) *Weight and balance record.* Current empty weight, empty center of gravity and useful load.

(d) *Equipment list.* Entries shall be made to reflect optional equipment which has been added or removed. Required equipment shall not be listed except when exchanged or replaced by optional equipment.

(e) *Record of major repairs and major alterations.* Reference to repair and alteration Form FAA–337 by date or work order by number and approving agency is sufficient.

(Published in 15 F.R. 768, Feb. 11, 1950, effective Feb. 11, 1950, amended in 21 F.R. 3183, May 15, 1956, effective July 17, 1956.)

43.23–2 *Maintenance of engine maintenance records (FAA interpretations which apply to sec. 43.23).* A record of the previous operating time and history of all engines overhauled, repaired, or reassembled to standards other than those for rebuilt engines, as defined in section 43.24–1 of this part shall be retained in the engine maintenance records.

(Published in 21 F.R. 3184, May 15, 1956, effective July 17, 1956.)

43.24 *Rebuilt engine logs.* A new record without previous operating history may be used for an aircraft engine rebuilt by the manufacturer or any agency approved by the manufacturer for such work, provided such new record contains a signed statement by such manufacturer or agency giving the date the engine was rebuilt and such other information as the Administrator may require.

43.24–1 *Rebuilt engine (FAA interpretations which apply to sec. 43.24).* A rebuilt engine is defined as a used engine which has been completely disassembled, inspected, repaired as necessary, reassembled, tested, and approved in the same manner and to the same tolerances and limits as a new engine. Component parts of such engines may be either used parts or new parts. The used parts may be either the parts from the same engine or from other service engines, but they must conform to production drawing tolerances and limits to which new parts must conform. In addition, all parts, either new or used, meeting approved oversize and undersize dimensions acceptable for new engines are also eligible.

(Published in 15 F.R. 768, Feb. 11, 1950, effective Feb. 11, 1950.)

43.24–2 *Approval of rebuilt aircraft engines (FAA rules which apply to sec. 43.24).*

(a) *Logbook entries.* Other information which must be entered in the logbook of a rebuilt engine consists of a notation when (1) any mandatory changes required by Airworthiness Directives have been incorporated, and (2) any changes have been incorporated as a result of compliance with manufacturers' service bulletins, where such recording is requested specifically in the bulletin.

(b) *Compliance date.* All manufacturers who grant zero time to rebuild engines, and all agencies approved by the manufacturer to do such work must apply paragraph (a) as soon as possible, but not later than November 1, 1949.

(Published in 15 F.R. 768, Feb. 11, 1950, effective Feb. 11, 1950.)

Aircraft Instruments and Equipment

43.30 *Instruments and equipment for NC powered aircraft or powered aircraft with standard airworthiness certificates.* The following instruments and equipment, or instruments and equipment which the Administrator has found to be the equivalent, are required for the particular category of operation specified:

Note: **Instrument and equipment installations are required to comply with the applicable airworthiness parts of the Civil Air Regulations.**

(a) *Contact flight rules (day).*

(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, or equivalent, for each altitude engine.

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

(10) Position indicator, if aircraft has retractable landing gear.

(11) Approved flotation gear readily available for each occupant and a Very pistol or equivalent signal device, if the aircraft is operated for hire over water beyond gliding distance from shore without the aid of power.

(12) *Safety belts for all occupants.* Safety belts shall be of an approved type. In no case shall the rated strength of a safety belt be less than that corresponding with the ultimate load factors specified in the pertinent currently effective aircraft airworthiness parts of the regulations in this subchapter taking due account of the dimensional characteristics of the safety belt installation for the specific seat or berth arrangement. The webbing of safety belts shall be subject to periodic replacement as prescribed by the Administrator.

(b) *Contact flight rules (night).*

(1) Equipment specified in paragraph (a) of this section.

(2) Set of certificated forward and rear position lights.

(3) An approved anti-collision light system for aircraft having a maximum certificated weight of more than 12,500 pounds and for all aircraft which are required to have anti-collision light systems installed by the terms of their airworthiness certificate; except that, in the event of failure of any light of such system, the aircraft may continue flight to the next stop where repairs or replacements can be made without undue delay.

(4) One electric landing light, if the aircraft is operated for hire.

(5) Rescinded.

(6) An adequate source of electrical energy for such electrical and radio equipment as is installed.

(7) One spare set of fuses or 3 spare fuses of each magnitude.

(c) *Instrument flight rules.*

(1) Equipment specified for contact flight rules in paragraph (a) of this section and for night flight, equipment specified in paragraph (b) 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.

(4) Bank indicator.

(5) Sensitive altimeter adjustable for change in barometric pressure.

(6) Clock with a sweep second hand.

(7) Generator of adequate capacity.

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

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

43.30–1 *Instrument flight rules (FAA interpretations which apply to sec. 43.30(c)(2)).* Two-way radio communications systems and navigational equipment, which will normally provide continuous coverage from any point along the routes flown, will be considered to be appropriate to the ground facilities to be used. Where either an LF/MF or VOR system will not provide continuous route coverage, a combination of LF/MF and VOR systems which will provide two-way radio communications and reception of navigational signals from any point along the routes to be flown will also be considered as complying with section 43.30(c)(2).

(Published in 19 F.R. 5305, Aug. 20, 1954, effective Sept. 15, 1954.)

43.31 *Aircraft electronic navigation equipment accuracy.* Except for aircraft in which the omnidirectional radio range (VOR equipment is maintained, checked, and inspected in accordance with a procedure approved [1] by the Administrator, no person shall operate an aircraft under instrument flight rules using the VOR system of radio navigation unless the aircraft VOR equipment has been operationally checked, both within the preceding ten hours of aircraft flight time and

[1] An approved continuous maintenance and inspection program specified in Operations Specifications issued by or approved by the Administrator or any equivalent maintenance and inspection system specifically approved by the Administrator.

within the preceding ten days, and found to be within the limits of the indicated bearing error specified in this section for the particular check. The checks shall be conducted in accordance with either paragraph (a) or (b) of this section as follows:

(a)

(1) If an FAA operated or approved test signal [2] is available at the airport of intended departure, a check of the VOR equipment shall be accomplished using this test signal. The maximum permissible indicated bearing error is plus or minus 4°.

[2] FAA operated or approved test signals, and ground check points on an airport surface and airborne check points designated by the Administrator, will be shown in the Airman's Guide.

(2) If an FAA operated or approved test signal is not available at the airport of intended departure, a check shall be accomplished using a point on an airport surface designated [2] by the Administrator as a VOR system check point. The maximum permissible indicated bearing error is plus or minus 4°.[3]

[3] In making this check, caution should be exercised to head the aircraft in a direction to prevent the aircraft structure from interfering with the ground signal.

(3) If neither an FAA operated or approved test signal nor a designated check point on the airport surface is available, a check shall be accomplished using an airborne check point designated [2] as such by the Administrator. The maximum permissible indicated bearing error is plus or minus 6°.

(4) In the event none of the checks prescribed in subparagraphs (1), (2), and (3) of this paragraph can be accomplished, because of the unavailability of a check signal or point, the following airborne procedure shall be accomplished.

(i) Select the VOR radial which lies along the center line of an established VOR airway,

(ii) Choose a prominent ground point along the selected radial preferably more than 20 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 point. The maximum permissible difference between the published radial and the indicated bearing is plus or minus 6°.

(b) If dual systems (defined as VOR units independent of each other with the exception of the antenna) are installed in the aircraft, one system may be checked against the other in the following manner in lieu of the check procedures specified above: Both systems shall be tuned to the same VOR ground facility and the indicated bearings to that station noted. The maximum permissible variation between the two indicated bearings is 4°.

(c) The person making the VOR operational check as specified in paragraphs (a) or (b) of this section shall make an entry of such check in the aircraft log or other permanent record showing the date, place, bearing error, and his signature.

43.32 Flight recorders.

(a) The holder of an air carrier or commercial operator certificate shall not operate any of the following airplanes in the conduct of flights (other than a ferry flight conducted for the purpose of delivering a newly acquired airplane from the place where an air carrier or commercial operator takes possession to a base where a flight recorder is to be installed), unless there is installed on the airplane an approved flight recorder which records at least time, altitude, airspeed, vertical acceleration, and heading:

(1) Airplanes of more than 12,500 pounds maximum certificated takeoff weight which are certificated for operations above 25,000 feet altitude;

(2) Turbine-powered airplanes of more than 12,500 pounds maximum certificated takeoff weight.

(b) When an air carrier or commercial operator conducts a flight with an airplane which has a flight recorder installed as required by paragraph (a) of this section, the flight recorder shall be operated continuously from the instant the pilot commences the takeoff roll until he has completed the landing roll at a place of landing, subject to the following exceptions:

(1) If an airplane with an inoperative flight recorder is located at a place where facilities for the repair or replacement of the recorder are not available, the airplane may be ferried with the flight recorder inoperative to a base where the recorder can be repaired or replaced.

(2) If the flight recorder becomes inoperative after the airplane has become airborne, the particular flight may be continued and completed as originally planned.

(3) During an airworthiness flight test, the flight recorder may be turned off for any period of time necessary to conduct tests of the operation of the recorder, or any communication or electrical equipment, installed in the airplane.

(c) Recorded information shall be retained by the air carrier or commercial operator for a period of at least 60 days. For a particular flight or series of flights, the information shall be retained for a longer period if requested by an authorized representative of the Administrator or the Civil Aeronautics Board.

(Amendments 43-13, published in 26 F.R. 3985, May 9, 1961, effective June 6, 1961.)

Piloting Rules (General)

[43.40 Deleted effective November 1, 1962.]

The provisions of section 43.40 have been transferred to Part 61 [New].*

[43.41 Deleted effective November 1, 1962.]

The provisions of section 43.41 have been transferred to Part 61 [New].

[43.41-1 Deleted effective November 1, 1962.]

The provisions of section 43.41-1 have been transferred to Part 61 [New].

[43.42 Deleted effective November 1, 1962.]

The provisions of section 43.42 have been transferred to Part 61 [New].

43.45 *Use of liquor, narcotics, and drugs.* No person shall pilot an aircraft or serve as a member of the crew while under the influence of intoxicating liquor or use any drug which affects his faculties in any manner contrary to safety. A pilot shall not permit any person to be carried in the aircraft who is obviously under the influence of intoxicating liquor or drugs, except a medical patient under proper care or in case of emergency.

43.46 *Towing by aircraft.* No pilot shall tow anything by aircraft unless authority for such operation has been issued by the Administrator.

43.46-1 *Authorization (FAA policies which apply to sec. 43.46).* Authority for towing objects by aircraft is issued by the Administrator in the form of a Certificate of Waiver or Authorization, Form FAA-663. This certificate is issued to the operator of the aircraft by the local General Aviation District Office.

(Published in 18 F.R. 6871, Oct. 31, 1953, effective Nov. 25, 1953.)

43.46-2 *Application (FAA policies which apply to sec. 43.46).* An application will be made by the operator of the aircraft in the following manner:

(a) *Application form.* Obtain three copies of Form FAA-400, Application for Certificate of Waiver, from the local General Aviation District Office, and fill out all copies as follows:

(1) Type, or print, in ink.

(2) Give complete information on items 1 through 7.

(3) Sign all copies of the application on the reverse in the space provided for the applicant's signature.

(b) *Application procedure.*

(1) Submit all copies of the application to the local General Aviation District Office, and

(2) Arrange with the local agent for inspection of the aircraft, and equipment to be used, and the aircraft records.

(c) *Inspection.* Inspection of aircraft and equipment will include:

(1) Hitches, release mechanisms, and type of rope or cable used.

(2) Loading conditions of the aircraft.

(3) Area and procedure for dropping the tow or cable.

*Available from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C., for 30 cents.

(4) Proper lighting for aircraft and tow when night operations are involved.

(5) General airworthy condition of the aircraft and tow.

(Published in 18 F.R. 6871, Oct. 31, 1953, effective Nov. 25, 1953.)

43.46–3 *Certificate conditions (FAA policies which apply to sec. 43.46).* A Certificate of Waiver or Authorization for towing objects by aircraft will be issued subject to the following conditions and limitations:

(a) *Operations authorized.* Operations will be limited to those specified on the certificate. No authorization will be issued unless the operation:

(1) Will not create a hazard to other air traffic, or persons or property on the ground.

(2) In a control zone, can be controlled by air traffic control, or other air traffic can be advised of the operation.

(3) On airways, or in the vicinity of busy airports, can be made known to affected air traffic.

(4) Can be conducted in accordance with such special provisions which the approving agent deems necessary.

(b) *Duration.* The certificate will contain an expiration date which will allow ample time to complete the operation, but may be surrendered by the holder or cancelled by the Administrator at any time.

(c) *Special provisions.* The certificate will contain such special provisions as the approving agent may deem necessary in the interest of safety. *Examples illustrating such provisions are:*

(1) A thorough inspection of the aircraft, engine, and special equipment shall be made prior to each day's operations.

(2) A planned course of action shall be followed with emphasis on selection of available emergency landing areas.

(3) A capable and experienced pilot holding at least a commercial rating will be used.

(4) Air traffic control and appropriate officials of the community shall be notified prior to beginning operations.

(5) Any other specific precaution the agent may assign.

(Published in 18 F.R. 6872, Oct. 31, 1953, effective Nov. 25, 1953.)

43.47 ***Dropping objects or persons.***

(a) No person piloting an aircraft shall permit any object to be dropped from such aircraft in flight which creates a hazard to persons or property.

Note: **This rule prohibits neither aerial application operations, such as seeding, spraying or dusting, nor the dropping of newspapers, periodicals, circulars, or objects of any other kind, provided reasonable precautions are taken to avoid injury or damage to persons or property.**

[(b) Except in an emergency, no person piloting an aircraft may allow a parachute jump to be made from that aircraft contrary to the provisions of Part 105 [New].]

(Sec. 43.47(b) amended by preamble to Part 105 [New] published in 27 F.R. 11635, on Nov. 27, 1962, effective Feb. 26, 1963.)

43.48 ***Aerobatic flight.*** **No pilot shall intentionally fly an aircraft in aerobatic flight carrying passengers unless all occupants are equipped with approved parachutes.**

43.48–1 *Aerobatic flight (FAA interpretations which apply to sec. 43.48).* Aerobatic flight, insofar as it concerns the wearing of parachutes, must be deemed to exist when any maneuver intentionally performed results in the following:

(a) A bank in excess of 60° relative to the horizon, or

(b) A nose up or nose down attitude in excess of 30° relative to the horizon.

An example of the application of this interpretation is that parachutes are not required when stalls, lazy eights, etc., are performed within these limits, while these same maneuvers performed with attitudes in excess of the limits would require the wearing of parachutes. Stalls as practiced for the private pilot flight test normally would not exceed the prescribed limits.

Consideration must be given to the fact that these limits are not intended to insure that all

maneuvers which could be performed within them are also within the safe operating limits of the aircraft. It is reasonably certain that a prolonged full power descent in a nose down attitude of less than 30° would exceed placarded speeds, and that sudden full application of elevators at cruising speed could produce stresses sufficient to cause structural failure.

This interpretation is intended only to define the circumstances under which parachutes must be worn in accordance with section 43.48, and does not in any way modify the definition of aerobatic flight as it applies to other sections of the Civil Air Regulations.

(Published in 15 F.R. 5843, Aug. 30, 1950, effective Aug. 30, 1950.)

43.49 *Parachutes.* No pilot shall carry on an aircraft a parachute which is available for emergency use unless:

(a) It is an approved chair-type (canopy in back) parachute which has been packed by a qualified parachute rigger within the preceding 120 days; or

(b) It is an approved-type, other than a chair-type (canopy in back) parachute which has been packed by a qualified parachute rigger within the preceding 60 days.

43.50 *Transportation of explosives and other dangerous articles.* No person piloting an aircraft shall permit explosives or other dangerous articles such as inflammable liquids or solids, oxidizing material, corrosive liquid, inflammable or noninflammable compressed gas, poison gas or liquid, poisonous liquid or solid, or tear gas to be carried in aircraft, except as provided for in Part 49 of this chapter. Small arms ammunition for personal use, necessary aircraft signaling devices, and equipment necessary to safe operation of the aircraft are permitted.

43.51 *Fuel supply.* Aircraft operated under IFR conditions shall carry sufficient fuel, considering weather reports and forecasts of wind and other weather conditions, to complete the flight to the point of first intended landing, to fly from there to the alternate airport, and to fly thereafter for 45 minutes at normal cruising speed.

Student Pilot Limitations Deleted

The provisions of *Student Pilot Limitations* have been transferred to Part 61 [New] effective November 1, 1962.

43.52 Deleted effective November 1, 1962.

The provisions of section 43.52 have been transferred to Part 61 [New].

43.55 Deleted effective November 1, 1962.

The provisions of section 43.55 have been transferred to Part 61 [New].

43.56 Deleted effective November 1, 1962.

The provisions of section 43.56 have been transferred to Part 61 [New].

Private and Commercial Pilot Privileges and Limitations

43.60 Deleted effective November 1, 1962.

The provisions of section 43.60 have been transferred to Part 61 [New].

43.61 Deleted effective November 1, 1962.

The provisions of section 43.61 have been transferred to Part 61 [New].

43.62 Deleted effective November 1, 1962.

The provisions of section 43.62 have been transferred to Part 61 [New].

43.63 Deleted effective November 1, 1962.

The provisions of section 43.63 have been transferred to Part 61 [New].

43.64 *Flight instruction limitations.* This section governs flight instructions:

(a) *Aircraft.* Aircraft shall be equipped with fully functioning dual controls.

(b) Deleted effective November 1, 1962.

(c) Deleted effective November 1, 1962.

(d) Deleted effective November 1, 1962.

The provisions of paragraphs (b), (c), and (d) of section 43.64 have been transferred to Part 61 [New].

43.65 Deleted effective November 1, 1962.

The provisions of section 43.65 have been transferred to Part 61 [New].

43.67 *Simulated instrument flight.* Aircraft shall not be flown under simulated instrument flight conditions unless:

(a) Fully functioning dual controls are installed in the aircraft.

(b) An appropriately rated pilot occupies the other control seat as safety pilot, and

(c) Such safety pilot at all times has adequate vision forward and to either side of the aircraft, or a competent observer occupies a position in the aircraft so that his field of vision adequately supplements that of the safety pilot.

[43.68 Deleted effective November 1, 1962.]

The provisions of section 43.68 have been transferred to Part 61 [New].

Definitions

43.70 *Definitions.* As used in this part terms shall be defined as follows:

Aircraft. An aircraft means any contrivance now known or hereafter invented, used, or designed for navigation of or flight in the air, including airframe, powerplant, propeller, and appliances.

Category. Category shall indicate a classification of aircraft such as airplane, helicopter, glider, etc.

Class. Class shall indicate a difference in basic design of aircraft within a category, such as single-engine land, multiengine sea, etc.

Copilot. Copilot shall mean a pilot serving in any piloting capacity other than as pilot in command on aircraft requiring two pilots for normal operations, but excluding a pilot who is on board the aircraft for the sole purpose of receiving dual instruction.

Dual instruction time. Dual instruction time shall mean that portion of the flight time during which a person is receiving flight instruction from a rated flight instructor on board the aircraft.

Flight instructor. Flight instructor means a pilot who is qualified to instruct other pilots and who has received a flight instructor rating.

Flight time. Flight time shall mean the total time from the moment the aircraft first moves under its own power for the purpose of flight until the moment it comes to rest at the end of the flight.[4]

[4] For example, a pilot taxies to the warmup apron and holds there for several minutes before taking off to permit the engine to warmup. Such taxi and warmup time is not considered flight time. Flight time begins when the aircraft leaves the warmup apron and ends when the pilot returns to parking apron and turns the switches off.

Maintenance. Maintenance, which includes preventive maintenance, means the inspection, overhaul, repair, upkeep, and preservation of airframes, powerplants, propellers, and appliances, including the replacement of parts.

Operate. Operate means to cause or authorize the operation of aircraft, whether with or without the right of legal control (in the capacity of owner, lessee, or otherwise) of the aircraft.

One-hundred-hour inspection. A 100-hour inspection is an inspection of an aircraft required within each 100 hours of time in service and is a complete airworthiness inspection of such aircraft and its various components and systems in accordance with procedures prescribed by the Administrator.

Passenger. A passenger is an occupant of the aircraft in flight other than a crew member.

Periodic inspection. A periodic inspection is an inspection of an aircraft required once each 12 calendar months and is a complete airworthiness inspection of such aircraft and its various components and systems in accordance with procedures prescribed by the Administrator.

Pilot. A pilot is a person holding a valid pilot certificate issued by the Administrator.

Pilot in command. Pilot in command shall mean the pilot responsible for the operation

and safety of the aircraft during the time defined as flight time.

Progressive inspection. A progressive inspection is a continuing airworthiness inspection of an aircraft and its various components and systems at scheduled intervals in accordance with procedures prescribed by the Administrator.

Solo flight time. Solo flight time shall mean the flight time during which a pilot is the sole occupant of an aircraft.

Time in service. Time in service, as used in computing maintenance and inspection time records, is the time from the moment an aircraft leaves the ground until it touches the ground at the end of a flight.

To pilot. To pilot means to be in command of the aircraft during take-off, in flight, or landing.

Type. Type shall mean all aircraft of the same basic design including all modifications thereto except those modifications which result in a change in handling or flight characteristics.

Note: The reporting and/or record-keeping requirements contained herein have been approved by the Bureau of the Budget in accordance with the Federal Reports Act of 1942.

holder of a valid private or commercial pilot certificate, type ratings for each aircraft exceeding 12,500 pounds maximum certificated weight will be issued to such holder, without further showing of competency, upon presentation of reliable evidence that the certificate holder either has passed an official rating test, as prescribed by the Administrator, in that type aircraft; or has served as pilot in command and sole manipulator of the controls for at least 10 hours since May 1, 1949, and such aircraft was within his category and class ratings. A private or commercial pilot may serve as pilot in command of aircraft for which he is not rated when it is being flown without passengers and is not being operated for remuneration, unless other limitations placed on his certificate prohibit him from doing so.

Note: Nothing contained in this section shall be construed as relieving the restrictions with respect to private pilots operating aircraft for hire.

43.64 *Flight instruction limitations.* This section governs flight instructions:

(a) *Aircraft.* Aircraft shall be equipped with fully functioning dual controls.

(b) *Flight time.* A flight instructor shall not give more than 8 hours of dual flight instruction in any one day and not more than 36 hours of dual flight instruction in any 7-day period.

(c) *Endorsement of student pilot certificates.* A flight instructor shall endorse the certificate of any student pilot for solo flight or flight in different categories, classes, and types of aircraft only if he has determined that the student is competent to exercise such privileges with safety, and for cross-country flight only if he has additionally determined that the student has an elementary knowledge of aeronautical charts, meteorological data, and the use of a magnetic compass.

(d) *Aircraft category limitations.* A flight instructor shall not give flight instruction in a category of aircraft in which he has not demonstrated to an authorized representative of the Administrator his proficiency as a flight instructor.

43.65 *Instrument flight limitations.* No person shall pilot an aircraft under instrument flight rules or in weather conditions less than the minimums prescribed for flight under Visual Flight Rules unless he holds a currently effective instrument rating issued by the Administrator.

43.67 *Simulated instrument flight.* Aircraft shall not be flown under simulated instrument flight conditions unless:

(a) Fully functioning dual controls are installed in the aircraft.

(b) An appropriately rated pilot occupies the other control seat as safety pilot, and

(c) Such safety pilot at all times has adequate vision forward and to either side of the aircraft, or a competent observer occupies a position in the aircraft so that his field of vision adequately supplements that of the safety pilot.

43.68 *Recent flight experience.* This section governs recent flight experience:

(a) *General.* No person shall pilot an aircraft carrying passengers unless within the preceding 90 days he has made at least 5 take-offs and landings to a full stop in aircraft of the same category, class, and type of aircraft to be flown. No person shall pilot a glider carrying passengers in aero-tow flight unless within the preceding 12 months he has made at least 6 aero-tow flights aggregating 1 hour during which the foregoing take-off and landing requirements are met.

(b) *Night flight.* No person shall pilot an aircraft carrying passengers during the period from one hour after sunset to one hour before sunrise, unless he has made at least 5 take-offs and landings to a full stop during such period within the preceding 90 days.

(c) *Instruction flight.* A flight instructor shall not exercise the privileges of the instructor rating unless within the preceding 12 calendar months he has either:

(1) Given at least 10 hours of flight instruction while appropriately rated, or

(2) Demonstrated his continued proficiency to the Administrator.

(d) *Instrument flight.* A pilot shall not pilot an aircraft under instrument flight rules or in weather conditions less than the minimums prescribed for flight under Visual

Flight Rules, unless he has had at least 6 hours of instrument flight under actual or simulated flight conditions during the preceding six calendar months or until he has had 6 hours of such flight time under:

(1) Actual instrument conditions, accompanied by a pilot of at least private rating holding an appropriate aircraft and instrument rating, or

(2) Simulated instrument conditions in an aircraft accompanied by a pilot of at least private rating holding an appropriate aircraft rating, or

(3) Simulated instrument conditions in equipment approved by the Administrator, except that at least 3 hours must have been had in accordance with subparagraphs (1) or (2) of this paragraph.

Definitions

43.70 *Definitions.* As used in this part terms shall be defined as follows:

Aircraft. An aircraft means any contrivance now known or hereafter invented, used, or designed for navigation of or flight in the air, including airframe, powerplant, propeller, and appliances.

Category. Category shall indicate a classification of aircraft such as airplane, helicopter, glider, etc.

Class. Class shall indicate a difference in basic design of aircraft within a category, such as single-engine land, multiengine sea, etc.

Copilot. Copilot shall mean a pilot serving in any piloting capacity other than as pilot in command on aircraft requiring two pilots for normal operations, but excluding a pilot who is on board the aircraft for the sole purpose of receiving dual instruction.

Dual instruction time. Dual instruction time shall mean that portion of the flight time during which a person is receiving flight instruction from a rated flight instructor on board the aircraft.

Flight instructor. Flight instructor means a pilot who is qualified to instruct other pilots and who has received a flight instructor rating.

Flight time. Flight time shall mean the total time from the moment the aircraft first moves under its own power for the purpose of flight until the moment it comes to rest at the end of the flight.[4]

[4] For example, a pilot taxies to the warmup apron and holds there for several minutes before taking off to permit the engine to warmup. Such taxi and warmup time is not considered flight time. Flight time begins when the aircraft leaves the warmup apron and ends when the pilot returns to parking apron and turns the switches off.

Maintenance. Maintenance, which includes preventive maintenance, means the inspection, overhaul, repair, upkeep, and preservation of airframes, powerplants, propellers, and appliances, including the replacement of parts.

Operate. Operate means to cause or authorize the operation of aircraft, whether with or without the right of legal control (in the capacity of owner, lessee, or otherwise) of the aircraft.

One-hundred-hour inspection. A 100-hour inspection is an inspection of an aircraft required within each 100 hours of time in service and is a complete airworthiness inspection of such aircraft and its various components and systems in accordance with procedures prescribed by the Administrator.

Passenger. A passenger is an occupant of the aircraft in flight other than a crew member.

Periodic inspection. A periodic inspection is an inspection of an aircraft required once each 12 calendar months and is a complete airworthiness inspection of such aircraft and its various components and systems in accordance with procedures prescribed by the Administrator.

Pilot. A pilot is a person holding a valid pilot certificate issued by the Administrator.

Pilot in command. Pilot in command shall mean the pilot responsible for the operation

and safety of the aircraft during the time defined as flight time.

Progressive inspection. A progressive inspection is a continuing airworthiness inspection of an aircraft and its various components and systems at scheduled intervals in accordance with procedures prescribed by the Administrator.

Solo flight time. Solo flight time shall mean the flight time during which a pilot is the sole occupant of an aircraft.

Time in service. Time in service, as used in computing maintenance and inspection time records, is the time from the moment an aircraft leaves the ground until it touches the ground at the end of a flight.

To pilot. To pilot means to be in command of the aircraft during take-off, in flight, or landing.

Type. Type shall mean all aircraft of the same basic design including all modifications thereto except those modifications which result in a change in handling or flight characteristics.

Note: The reporting and/or record-keeping requirements contained herein have been approved by the Bureau of the Budget in accordance with the Federal Reports Act of 1942.

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Appendix A

Date

Federal Aviation Agency
General Safety District Office
Podunk
U.S.A.

Gentlemen:

As registered owner (or lessee) of (make) (model) aircraft N (registration number) (serial number), I wish to inform you that arrangements have been made for progressive inspection of such aircraft in accordance with the requirements of CAR 43.22(b). As of this date, the aircraft will be inspected in accordance with the requirements of CAR 18.30(c).

The records and procedures established for the progressive inspection are available at (address) and the aircraft is normally based at (name and address of airport).

(Signature of owner, lessee, or person authorized to sign for owner or lessee)
(Name of registered owner or lessee)
(Permanent mailing address)

Figure 1.—Sample of letter to indicate use of progressive inspection.

Date

Federal Aviation Agency
General Safety District Office
Podunk
U.S.A.

Gentlemen:

As registered owner (or lessee) of (make) (model) aircraft N (registration number), (serial number), I wish to inform you that such aircraft will no longer be inspected in accordance with a progressive inspection as of this date. The aircraft will be inspected in accordance with CAR 43.22(a) after this date.

(Signature of owner, lessee or person authorized to sign for owner or lessee)
(Name of registered owner or lessee)
(Permanent mailing address)

Figure 2.— Sample of letter to indicate discontinuance of progressive inspection.

SPECIAL CIVIL AIR REGULATION NO. SR-330

Effective: February 28, 1949
Adopted: February 28, 1949

Special Flight Instruction for Military Personnel of Foreign Governments

Section 43.1010 of the Civil Air Regulations provides that no aircraft shall be operated in violation of its prescribed operating limitations. The operating limitations referred to are those prescribed by requirements of the Civil Air Regulations for various civilian uses including flight instruction. Certain aircraft currently being used for flight instruction by CAA certificated flight schools are training aircraft released as surplus by our armed services. Some of these schools have contracted to give flight instruction to personnel of foreign governments whose officials desire such personnel to be given a similar course of instruction to that given United States military personnel in the same model aircraft. However, due to differences between military and civilian requirements, the military surplus aircraft used by the CAA certificated schools are, by virtue of the airworthiness requirements placarded against certain intentional acrobatic maneuvers which are part of the military instruction program.

We have been advised that the aforementioned requirement is impeding instruction of the aviation cadets of a foreign government and we have been requested to authorize use of war surplus aircraft for the training of personnel of foreign governments on a basis similar to that used by our own armed services. It is our opinion that international considerations warrant the granting of such a request.

For the reasons stated above the Board finds that notice and public procedures are impractical and contrary to the public interest and that good cause exists for making this regulation effective without prior notice.

In consideration of the foregoing, the Civil Aeronautics Board hereby makes and promulgates the following Special Civil Air Regulation effective immediately:

Notwithstanding the provisions of section 43.1010 of the Civil Air Regulations, military personnel of a foreign government being trained in a CAA certificated school may receive special training in maneuvers not within the approved airplane operating limitations: ***Provided,*** That

(1) an official request for such special training has been made to the Administrator by an accredited representative of the foreign government concerned; and

(2) the Administrator finds that such training can be done with a standard of safety equivalent to that maintained by the United States Air Force and Navy. There shall be no violation of the United States Air Force or Navy Technical Orders pertinent to the phase of the training for which approval is being given.

(3) such aircraft shall not be used to demonstrate compliance with any acrobatic maneuver required in a flight test for the issuance of an airman certificate or rating, against which it has been placarded.

SPECIAL CIVIL AIR REGULATION NO. SR-389B

Effective: January 30, 1959
Adopted: December 24, 1958

Emergency Exits for Airplanes Carrying Passengers for Hire

Special Civil Air Regulation No. SR-389A, effective September 13, 1957, superseded Special Civil Air Regulation No. SR-389. All of the provisions of SR-389 were retained in SR-389A. However, the latter special regulation as amended on October 17, 1957, contained an addition to the occupant/exit table which permitted the Viscount 700 series airplanes to carry 53 occupants when 7 exits were provided.

Special Civil Air Regulation No. SR-389, effective October 27, 1952, superseded Special Civil Air Regulation No. SR-387. Except for correcting some minor errors with respect to the number of exits authorized by the Civil Aeronautics Administration, there was no difference between the two special regulations.

Special Civil Air Regulation No. SR-387, effective October 27, 1952, was adopted in order to make applicable to the then operating transport airplanes more stringent rules regarding the number of occupants permitted per exit. SR-387 required, among other things, that all large airplanes (more than 12,500 pounds maximum certificated takeoff weight) comply with either section 4b.362 (a), (b), and (c) of Part 4b of the Civil Air Regulations as amended by Amendment 4b-4 effective December 20, 1951, or with the specific requirements set up in SR-387. Subsequently, the provisions of section 4b.362 (a), (b), and (c) of Part 4b were revised by Amendment 4b-5, effective April 9, 1957.

Special Civil Air Regulation No. SR-389A permits the airplanes listed in the occupant/exit table to carry additional occupants if additional exits are provided, except that in no case shall more than 8 additional occupants be carried for any one additional exit. The preamble to Civil Air Regulations Draft Release No. 58-11 stated that the intent of this provision was that no more than 8 additional occupants could be authorized if the most effective exit for emergency evacuation were provided, which, by reference to the rule proposed in the draft release, is seen to be one comparable to a Type I exit as prescribed in section 4b.362. As herein set forth, it is intended that as many as 8 additional occupants may be authorized with the addition of an exit of reasonably high effectiveness and that a lesser number of occupants would be authorized with the addition of a less effective exit. For the purpose of this regulation, it has been established that the addition of an exit, approximating a Type II or IV exit as prescribed in section 4b.362, would possibly permit the addition of 8 occupants. This relaxation over the rule proposed in Draft Release 58-11 was prompted by comments received to the draft release and the fact that a number of airplanes had already received approval to carry 8 additional occupants with the addition of an exit com-

parable to a Type IV based on the Administrator's interpretation of SR-389A. Justification for the relaxation is based upon the current requirements of section 4b.362(c) wherein it may be seen that for the addition of a Type IV exit on each side, an increase of 30 passengers is permitted. While such a ratio is not advocated for airplanes covered by this special regulation because of other factors considered in establishing these values for section 4b.362, permitting 8 occupants to be added for a Type IV exit represents a more reasonable and realistic view than that proposed in Draft Release 58-11. Therefore, it is expressly provided herein that since the effectiveness of the exit varies with the type, size, and location, 8 additional occupants shall be authorized only when an exit comparable to a Type II or a Type IV exit as prescribed in section 4b.362 is provided.

Special Civil Air Regulation No. SR-389A does not contain provisions regarding the required reduction in occupancy when the number of exits is reduced. In order to cover such cases, it is provided herein that upon removal of any exit the maximum number of occupants shall be reduced by at least 8.

The occupant/exit table has been modified by listing the "L-1049 Series" in lieu of the "L-1049," and the "CV-340 and CV-440" in lieu of the "CV-340."

Interested persons have been afforded an opportunity to participate in the making of this regulation (23 F.R. 3275), and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, the Civil Aeronautics Board hereby makes and promulgates the following Special Civil Air Regulation, effective January 30, 1959.

1. Contrary provisions of the Civil Air Regulations notwithstanding, no large airplane (more than 12,500 pounds maximum certificated take-off weight) while carrying passengers for hire shall be operated with occupants in excess of the number permitted by applying the provisions of section 4b.362 (a), (b), and (c) of Part 4b of the Civil Air Regulations as amended by Amendment 4b-5, effective April 9, 1957, except that airplane types listed in the following table may be operated with the listed maximum number of occupants (including all crew members) and the listed corresponding number of exits (including emergency exits and doors) heretofore approved by the Administrator for emergency egress of passengers.

2. Additional occupants above the values listed in the table may be carried if additional exits are provided, except that in no case shall more than 8 additional occupants be carried for any one additional exit. For the addition of exits comparable to at least a Type II or Type IV exit as prescribed in section 4b.362, a maximum of 8 additional occupants may be authorized and for exits not comparable to at least a Type II or Type IV exit, the Administrator after consideration, among other factors, of the type, size, and location of the exit, may authorize a lesser number of additional occupants.

3. For airplanes which have a ratio (as computed from the table in this special regulation) of maximum number of occupants to number of exits greater than 14:1 and for airplanes which do not have installed at least one full-size door-type exit in the side of the fuselage in the

rearward portion of the cabin, the first additional exit approved by the Administrator for increased occupancy shall be a floor-level exit not less than 24 inches wide by 48 inches high located in the side of the fuselage in the rearward portion of the cabin. In no case shall an occupancy greater than 115 be allowed unless there is such an exit on each side of the fuselage.

4. The maximum number of occupants authorized (listed in the table) shall be reduced where the number of approved exits is less than that shown in the table. The reduction in the maximum number of occupants for each exit eliminated shall be determined by the Administrator taking due account of the effectiveness of the remaining exits for emergency evacuation, except that the maximum number of occupants shall be reduced by at least 8 for each eliminated exit. In no case, when exits are deleted, shall the resulting ratio of occupants to exits be greater than 14:1, and there shall be at least one exit on each side of the fuselage irrespective of the number of occupants.

Airplane type	Maximum number of occupants including all crew members	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

*The DC–6A, if converted to a passenger transport configuration, will be governed by the maximum number applicable to the DC–6B.

This regulation supersedes Special Civil Air Regulation No. SR–389A as amended by Amendment No. 1 and shall remain effective until superseded or rescinded by the Board or the Administrator of the Federal Aviation Agency, as appropriate.

AMENDMENT I TO SPECIAL CIVIL AIR REGULATION NO. SR-389B

Effective: September 11, 1959
Adopted: September 11, 1959

Emergency Exits for Airplanes Carrying Passengers for Hire

Special Civil Air Regulation No. SR-389B, adopted by the Civil Aeronautics Board on December 24, 1958, and effective January 30, 1959, specified in part that no large airplane while carrying passengers for hire shall be operated with occupants in excess of the number permitted by applying the provisions of section 4b.362 (a), (b), and (c) of Part 4b of the Civil Air Regulations as amended by Amendment 4b-5 effective April 9, 1957, except for those airplanes listed in the table in SR-389B. Special Civil Air Regulations SR-389A, which preceded SR-389B, contained a similar provision but referred to Amendment 4b-4 effective December 20, 1951. The effect of SR-389B was to apply the current Part 4b exit requirements referenced in SR-389A.

A review of the history of the development of SR-389B indicates that such retroactive application of current Part 4b requirements was included inadvertently and that it would impose an unnecessary burden on the operators of certain airplanes. SR-389B is therefore being amended to eliminate this retroactive provision.

Since this amendment imposes no additional burden on any person, notice and public procedure hereon are unnecessary, and the amendment is made effective immediately.

In consideration of the foregoing, Paragraph 1 of Special Civil Air Regulation No. SR-389B is hereby amended to read as follows, effective September 11, 1959.

1. Contrary provisions of the Civil Air Regulations notwithstanding, no large airplane (more than 12,500 pounds maximum certificated take-off weight) type certificated under Civil Air Regulations effective prior to April 9, 1957, while carrying passengers for hire, shall be operated with occupants in excess of the number permitted by applying the provisions of section 4b.362 (a), (b), and (c) of Part 4b of Civil Air Regulations as amended by Amendment 4b-4 effective December 20, 1951, except that airplane types listed in the following table may be operated with the listed maximum number of occupants (including all crew members) and the listed corresponding number of exits (including emergency exits and doors) heretofore approved by the Administrator for the emergency egress of passengers.

SPECIAL CIVIL AIR REGULATION NO. SR–392C

Effective: Feb. 3, 1962
Adopted: Jan. 30, 1962
Published: Feb. 3, 1962
(27 F.R. 1008)

Facilitation of Experiments With Exterior Lighting Systems

Special Civil Air Regulation No. SR–392B, adopted on February 25, 1957, permits experimentation with exterior lighting systems, which do not comply with the standards prescribed in the Civil Air Regulations, on aircraft with standard airworthiness certificates. Several conditions are imposed to insure that the number of aircraft engaged in the experiments is reasonably limited; that the experimental exterior lights are in fact installed for bonafide experimentation; and that the results of such experimentation become generally available. This special regulation expires on February 25, 1962.

In a notice of proposed rule making contained in Draft Release No. 61–27 and published in the Federal Register, December 23, 1961 (26 F.R. 12294), the Agency gave notice that it has under consideration the termination of SR–392B and requested comments from interested persons concerning this matter. In response to such request, the Agency has received numerous reports, arguments and other evidence. However, the volume of the comments received is such that there is not sufficient time remaining to review and evaluate such comments prior to the termination of SR–392B. Therefore, in order to afford the Agency the opportunity to fully consider all the relevant matter presented and to take whatever additional rule making action that may be indicated, it is necessary to extend the termination date of SR–392B to June 25, 1962.

Since this regulation continues in effect the provisions of the previous regulation and imposes no additional burden upon any person, compliance with the notice and public procedure provisions of the Administrative Procedure Act is unnecessary and good cause exists for making this regulation effective on less than 30 days' notice.

In consideration of the foregoing, the following Special Civil Air Regulation is adopted to become effective on February 3, 1962:

Contrary provisions of the Civil Air Regulations notwithstanding, experimental exterior lighting equipment which does not comply with the relevant specifications contained in the Civil Air Regulations may, subject to the approval of the Administrator, be installed and used on aircraft for the purpose of experimentation intended to improve exterior lighting for a period not to exceed 6 months: *Provided,* That

(1) The Administrator may grant approval for additional periods if he finds that the experiments can be reasonably expected to contribute to improvements in exterior lighting;

(2) Not more than 15 aircraft possessing a U.S. certificate of airworthiness may have installed at any one time experimental exterior lighting equipment of one basic type;

(3) The Administrator shall prescribe such conditions and limitations as may be necessary to insure safety and avoid confusion in air navigation;

(4) The person engaged in the operation of the aircraft shall disclose publicly the deviations of the exterior lighting from the relevant specifications contained in the Civil Air Regulations at times and in a manner prescribed by the Administrator; and

(5) Upon application for approval to conduct experimentation with exterior lighting, the applicant shall advise the Administrator of the specific purpose of the experiments to be conducted; and, at the conclusion of the approved period of experimentation, he shall advise the Administrator of the detailed results thereof.

This regulation supersedes Special Civil Air Regulation No. SR–392B and shall terminate June 25, 1962, unless sooner superseded or rescinded.