Federal Aviation Agency
Washington, D.C.

Civil Aeronautics Manual 42

Irregular Air Carrier and Off-Route Rules

Supplement No. 7, CAM 42 dated February 15, 1960 **August 17, 1962**

SUBJECT: Revisions to CAM 42.

This supplement is issued to incorporate into CAM 42 Civil Air Regulations Amendments 42-40 through 42-43, and Special Civil Air Regulations Nos. SR-392D, SR-411B, and SR-446A.

Amendment 42-40 concerns proving periods for large airplanes. It was issued May 31, 1962, and became effective July 9, 1962.

Amendment 42-41 concerns the period allowed for compliance with the recurrent training requirements of air carrier training programs. It was issued July 30, 1962, and became effective August 3, 1962.

Amendment 42-42 concerns flight time limitations for flight engineers on large airplanes. It was issued August 10, 1962, to become effective September 17, 1962.

Amendment 42-43 concerns issuance of certificates. It was issued August 17, 1962, to become effective August 23, 1962.

Special regulation SR-392D concerns the display of experimental exterior lighting systems approved for use on aircraft. This regulation was issued June 22, 1962, and became effective June 25, 1962.

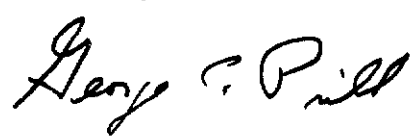
Special regulation SR-411B concerns the operation of certain transport category airplanes in cargo service at increased zero fuel and landing weights. This regulation was issued June 29, 1962, became effective June 30, 1962, and supersedes Special Civil Air Regulation No. SR-411A.

Special regulation SR-446A prohibits the use of portable frequency modulation (FM) type radio receivers on certain aircraft during flight. This regulation was issued May 22, 1962, became effective May 25, 1962, and supersedes Special Civil Air Regulation No. SR-446.

This supplement also deletes Special Civil Air Regulations Nos. SR-403A and SR-419. SR-403A was rescinded effective May 10, 1962, as the provisions of this regulation were incorporated into a grant of exemption issued to the Department of the Interior on April 20, 1962. SR-419 was superseded by Special Civil Air Regulation No. SR-432A which was incorporated in CAM 42 by Supplement No. 6 dated April 1, 1962.

New or revised material is enclosed in black brackets on the pages submitted with this supplement, except Special Civil Air Regulations Nos. SR-392D, SR-411B, and SR-446A and the pages in the addendum containing the preambles of amendments.

Remove the following pages:	*Insert the following new pages:*
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— — —	130-1 through 130-3
135 through 138	135 and 136
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Addendum

Preambles of Amendments to Part 42	P–1

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.**

VFR. **The symbol used to designate visual flight rules.**

V_{s_0}. **V_{s_0} means the power-off true-indicated stalling speed of an aircraft. (See the airworthiness requirements under which the airplane was type certificated for the manner in which V_{s_0} is determined.)**

42.1–1 *Flight time (FAA interpretations which apply to sec. 42.1).* This is construed to mean from "block to block."

(Published in 14 F. R. 7032, Nov. 22, 1949, effective upon publication; amended effective June 15, 1957.)

42.1–2 *Twilight (FAA interpretations which apply to sec. 42.1).* The twilight referred to in this section is deemed to mean civil twilight. "The duration of civil twilight is the interval in the evening from sunset until the time when the center of the sun is 6 degrees below the horizon; or the corresponding interval in the morning between sunrise and the time at which the sun was still 6 degrees below the horizon." [3]

(Published in 14 F. R. 7032, Nov. 22, 1949, effective upon publication; amended effective June 15, 1957.)

42.2 *Deviation authority.*

(a) Contrary provisions of this part notwithstanding,

(1) The Administrator may, upon application by an appropriately certificated air carrier conducting, or intending to conduct, operations pursuant to a contract with the military services (primary contractor), or an appropriately certificated air carrier conducting operations for the military services pursuant to a subcontract with a primary contractor, authorize such air carrier to deviate from the applicable provisions of this part, subject to any terms and conditions that the Administrator shall find are necessary in the interest of safety: *Provided,* That the Department of Defense certifies to the Administrator that the subject operation is essential to the national defense and requires the requested deviation: *And provided further,* That the granting of a deviation shall not be based upon an economic advantage or convenience to either the air carrier or the government, or both.

(2) The Administrator may, upon application by an appropriately certificated air carrier, authorize an air carrier proposing to conduct operations under conditions of an emergency necessitating the transportation of persons or supplies for the protection of life or property, to deviate from any provision of this part to the extent that the Administrator finds that a deviation from this part is necessary for the expeditious conduct of such operations.

(b) Any deviation authority granted by the Administrator pursuant to this section shall be limited to those military contract operations certified by the Department of Defense as essential to the national defense, or operations conducted under conditions of an emergency as determined by the Administrator and shall not be applicable to any other type of operation.

(c) The Administrator shall, in any authorization granted pursuant to this section, specify the terms, conditions, and limitations of the authorization for the deviation and each air carrier shall, in the conduct of these operations, comply with such terms, conditions, and limitations.

(d) Grants of deviation authority issued pursuant to this section may be terminated at any time by the Administrator.

(e) Authorized deviations now in existence shall be continued in effect in accordance with their terms and conditions until 90 days after the effective date of this amendment, or upon their stated expiration date, whichever shall first occur, unless reissued pursuant to this section.

Certificate Rules

42.5 *Certificate issuance.*

(a) *General.* An air carrier operating certificate, describing the operations authorized and prescribing such operating specifications and limitations as may be reasonably required in the interest of safety, shall be issued by the Administrator to a properly qualified citizen of the United States possessing appropriate economic authority granted by the Board pursuant to Title IV of the Federal Aviation Act of 1958, as amended, who is capable of conducting

[3] Tables of Sunrise, Sunset, and Twilight, supplement to the American Ephemeris, 1946, issued by the Nautical Almanac Office, United States Naval Observatory. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

the proposed operations in accordance with the applicable requirements hereinafter specified. Application for a certificate, or application for amendment thereof, shall be made in a manner and contain information prescribed by the Administrator. No person subject to the provisions of this part shall operate in air transportation without, or in violation of the terms of, an air carrier operating certificate.

[NOTE: The inspection and processing by the FAA of an application for an air carrier operating certificate where large aircraft are to be used may require up to 60 days from the date of filing. An applicant should consider this in planning his operations.]

[(Amendment 42-43, published in 27 F.R. 8424, Aug. 23, 1962, effective Aug. 23, 1962.)]

(b) ***Exceptions.*** **Whenever upon investigation the Administrator finds that the general standards of safety required for air carrier operations require or permit a deviation from any specific requirement of this part, he may issue an air carrier operating certificate or amendment providing for such deviation.**

42.5–1 *Appropriate economic authority (FAA interpretations which apply to sec. 42.5 (a)).* The term "appropriate economic authority" as used in section 42.5 (a) means economic authority from the Board to engage in the air carrier operations for which the air carrier operating certificate is issued.

(Published in 18 F. R. 1719, Mar. 27, 1953, effective Apr. 15, 1953.)

42.5–2 *Application for an Irregular Air Carrier Operating Certificate (FAA rules which apply to sec. 42.5).*

(a) Application for an irregular air carrier operating certificate will be made in triplicate on form ACA–1602, provided for this purpose by the Administrator. The application form may be obtained by contacting the local inspector. When the requirements, as prescribed in this part, have been met, the applicant should present his application to the local inspector and arrange for inspection of his flight equipment and all ground facilities.

(b) Where inspection of the applicant indicates that he is capable of conducting the proposed operation in accordance with applicable requirements, an irregular air carrier operating certificate will be issued, together with operations specifications, which become a part thereof, and will specify the carriage of passengers, cargo, or both; the category and class of aircraft (e. g. airplane single engine land); and the flight conditions under which operations are authorized (e. g. VFR (Day), VFR (Night), IFR (Day), IFR (Night)).

(Published in 14 F. R. 7032, Nov. 22, 1949, effective Nov. 22, 1949; amended effective June 15, 1957.)

42.5–3 *Application for amendment (FAA rules which apply to sec. 42.5).* Application for amendment of existing operations authorizations listed in the Operations Specifications shall be made on form ACA–1014, Operations Specifications, available at the local district office. On the face (blank side) of the form, the air carrier should list all the operations for which authorization is desired; i. e., show operations for which approval is requested and omit the operations no longer desired or for which he is no longer qualified. The air carrier should also complete the upper half of the back of the form and submit the signed original and four copies to the local inspector.

(Published in 14 F. R. 7033, Nov. 22, 1949, effective Nov. 22, 1949; amended effective June 15, 1957.)

42.5–4 *Application for overseas and international authorization (FAA rules which apply to sec. 42.5).* Application for overseas and international authorization shall be made to the local inspector in the following manner:

(a) An applicant desiring to engage in overseas and international air transportation shall so indicate in the space provided on form ACA–1602.

(b) The following information must be attached to the application:

(1) List of foreign areas for which operations specifications are desired.

(2) Points between which operations are contemplated.

(3) Type of activity; e. g., cargo, passengers, or a combination of both, etc.

(4) Statement to the effect that diplomatic clearances have been or will be obtained prior to departure either directly or through State Department channels for entry into, or flight over, all of the foreign countries involved. (Indicate which and duration.)

(5) Arrangements which the company has completed or contemplates for the servicing and maintenance of aircraft and equipment abroad.

(6) An outline of the method by which control will be exercised by company head-

42.11–2 *Listing of small aircraft (FAA interpretations which apply to sec. 42.11).* See appendix B.

(Published in 19 F. R. 1602, Mar. 25, 1954, effective Apr. 1, 1954.)

42.12 *Fire prevention requirements.* All airplanes used in passenger service, powered by engines rated at more than 600 horsepower each for maximum continuous operation shall comply with the applicable fire prevention requirements of Part 4b of this subchapter in effect on or after November 1, 1946, except that fire detectors of the heat type shall be acceptable in lieu of smoke detectors for installation in Class "B" and "C" cargo compartments: *Provided,* That if the Administrator finds that in particular models of existing airplanes literal compliance with specific items of these requirements might be extremely difficult of accomplishment and that such compliance would not contribute materially to the objective sought, he may accept such measures of compliance as he finds will effectively accomplish the basic objectives of these regulations.

42.13 *Engine rotation.* Multiengine aircraft having any engine rated at more than 480 h. p. for maximum continuous operation shall be so equipped that the rotation of each such engine can be stopped promptly in flight, except that for turbine engine installations means for completely stopping the rotation need be provided only if the Administrator finds that rotation could jeopardize the safety of the aircraft.

42.14 *Minimum performance requirements for all aircraft.* Except as otherwise provided in this part, no air carrier shall use any aircraft unless it meets such operating limitations as the Administrator determines will provide a safe relation between the performance of the aircraft and the airports to be used and the areas to be traversed. In determining compliance with the applicable airworthiness requirements and operating limitations, a weight and balance control system approved by the Administrator based upon average, assumed, or estimated weights may be utilized.

42.14–1 *Takeoff performance limitations for large aircraft (FAA rules which apply to sec. 42.14).* Whenever large aircraft are utilized in cargo operation, the following takeoff performance limitations shall apply:

(a) Transport category airplanes shall be operated in compliance with the provisions of sections 42.70 (b), 42.71 (b), and 42.72.

(b) Nontransport category airplanes shall be operated in compliance with the provisions of section 42.81 and shall meet the en route one-engine inoperative climb requirement of section 42.82 at an altitude of 1,000 feet above the airport from which the takeoff is being made. The pertinent performance limitations data published under sections 42.80–1, 42.80–2, 42.80–3, 42.80–4, 42.80–5, 42.80–7 and 42.80–8 shall be used in determining compliance with section 42.81.

(Published in 18 F. R. 766, Feb. 6, 1953, effective Feb. 15, 1953.)

42.15 *Airplane certification requirements for large airplanes used in passenger operations.*

(a) *Airplanes certificated on or before June 30, 1942.* Airplanes certificated as a basic type on or before June 30, 1942, shall either:

(1) Retain their present airworthiness certification status and meet the requirements of section 42.80, or

(2) Comply with either the performance requirements of sections 4a.737–T through 4a.750–T of this subchapter or the performance requirements of sections 4b.110 through 4b.125 of this subchapter and in addition shall meet the requirements of sections 42.70 through 42.78: *Provided,* That should any type be so qualified all airplanes of any one operator of the same or related types shall be similarly qualified and operated.

(b) *Airplanes certificated after June 30, 1942.* Airplanes certificated as a basic type after June 30, 1942, shall be certificated as transport category airplanes and shall meet the requirements of section 42.70.

42.16 *Aircraft limitations for IFR and land aircraft overwater operations.* When passengers are carried, no air carrier shall use any aircraft under IFR weather conditions or

any land aircraft in overwater operations except as follows:

(a) *IFR operations.* Aircraft shall be multiengine with fully functioning dual controls and shall meet the appropriate en route operating limitations of section 42.74 or section 42.82.

(b) *Overwater operations.* Land aircraft shall be multiengine and shall meet the appropriate en route operating requirements of section 42.74 or section 42.82, unless the overwater operation consists only of takeoffs and landings or the aircraft is flown at such an altitude that it can reach land in the event of power failure.

42.16–1 *En route performance limitations (FAA policies which apply to sec. 42.16(b)).* Performance data applicable to this section are published under section 42.80.

(Published in 15 F. R. 83, Jan. 10, 1950, effective Jan. 1, 1950; amended in 18 F. R. 1719, Mar. 27, 1953, effective Apr. 15, 1953.)

[*42.17 Proving tests for large aircraft.*

[(a) A type of aircraft not previously proved for use in air carrier operation shall have at least 100 hours of proving tests, in addition to the aircraft certification tests, accomplished under the supervision of an authorized representative of the Administrator. As part of the 100-hour total, at least 50 hours shall be flown in en route operation and at least 10 hours shall be flown at night.

[(b) A type of aircraft which has been previously proved for use in air carrier operation shall be tested for at least 50 hours, of which at least 25 hours shall be flown in en route operation, unless deviations are specifically authorized by the Administrator on the ground that the special circumstances of a particular case make a literal observance of the requirements of this paragraph unnecessary for safety, when the aircraft:

[(1) Is materially altered in design, or

[(2) Is to be used by an air carrier who has not previously proved such a type.

[NOTE: A type of aircraft will be considered to be materially altered in design when the alterations include, but are not necessarily limited to: (a) Installation of powerplants other than the powerplants of a type similar to those with which the aircraft is certificated; (b) major alteration to the aircraft or its components which materially affects the flight characteristics.

[(c) During proving tests only those persons required to make the test and those designated by the Administrator shall be carried. Mail, express, and other cargo may be carried when approved.]

[(Added by Amendment 42-40, published in 27 F.R. 5391, June 7, 1962, effective July 9, 1962.)]

Aircraft Equipment

42.21 *Basic required instruments and equipment for aircraft.* The following instruments and equipment acceptable to the Administrator for the type of operations specified shall be installed and in serviceable condition in all aircraft, except that the Administrator may permit or require different instrumentation or equipment for turbine-powered aircraft to provide equivalent safety:

(a) *VFR (day).* For day VFR flight the following is required:

(1) Air-speed indicator,

(2) Altimeter,

(3) Magnetic direction indicator,

(4) Tachometer for each engine,

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

(6) Coolant temperature gauge for each liquid-cooled engine,

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

(8) Manifold pressure gauge or equivalent when required for the proper operation of the engine,

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

(10) Position indicators for retractable landing gear and flaps: *Provided,* That the Administrator may approve operation of aircraft of less than 12,500 pounds maximum certificated takeoff weight without a position indicator for flaps in the event he finds that the position of the flaps is readily determinable either by direct visual inspection from the cockpit or by other adequate means,

(11) An approved seat and an approved safety belt for each occupant. 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,

(12) In passenger service, a minimum of two approved hand-type fire extinguishers, one of which is installed in the pilot compartment, the other accessible to the passengers and ground personnel, unless the aircraft is so designed that the fire extinguisher in the pilot compartment is directly available to passengers and ground personnel, in which case only one fire extinguisher is required; in cargo service, fire extinguisher or extinguishers adequate for the aircraft,

(13) Source of electrical energy sufficient to operate all radio and electrical equipment installed,

(14) One spare set of fuses or 3 spare fuses of each magnitude,

(15) Effective July 1, 1956, a means shall be provided for each reversible propeller on airplanes equipped with reversible propellers, which will indicate to the pilots when the propeller is in reverse pitch. Such means may be actuated at any point in the reversing cycle between the normal low pitch stop position and full reverse pitch. No indication shall be given at or above the normal low pitch stop position. The source of indication shall be actuated by the propeller blade angle or be directly responsive to the propeller blade angle,

(b) *VFR (night).* For night VFR flight the following is required:

(1) Instruments and equipment specified in paragraph (a) of this section,

ued competence of each crewmember and to insure that each possesses adequate knowledge of and familiarity with all new equipment and procedures to be used by him.

[(b) Each air carrier shall, as a part of the training program, check the competence of each crewmember each 12 months with respect to procedures, techniques, and information essential to the satisfactory performance of his duties. The competence check may be given at any time during the month preceding or following the month in which it becomes due. The effective date of the check, if given within the preceding or following month, shall be the same as if given within the month in which it became due. Where the check of the pilot in command or second in command requires actual flight, such check shall be considered to have been met by the checks accomplished in accordance with sections 42.44 (a) (2) and 42.44 (a) (3), respectively.]

(c) The appropriate instructor, supervisor, or check airman shall certify as to the proficiency demonstrated, and such certification shall become a part of the individual's record.

(Amendment 42–23, published in 24 F.R. 9773, Dec. 5, 1959, effective Jan. 1, 1961; [Amendment 42–41, published in 27 F.R. 7674, Aug. 3, 1962, effective Aug. 3, 1962.)]

42.45g *Approval of training programs.* The training program established by the air carrier under the provisions of sections 42.45 through 42.45f shall meet with the approval of an authorized representative of the administrator: *Provided*, That the curriculum of such training program shall be submitted in appropriate form to an authorized representative of the Administrator not later than May 1, 1960.

(Amendment 42–23, published in 24 F.R. 9773, Dec. 5, 1959, effective Jan. 1, 1961, except as noted in proviso.)

42.45h *Flight crewmember qualification for large aircraft.*

(a) No air carrier shall utilize any flight crewmember, nor shall any such airman perform the duties authorized by his airman certificate, unless he satisfactorily meets the appropriate requirements of sections 42.40, 42.41, 42.43, 42.44; and 42.45 or 42.45f.

(b) Check airman shall certify as to the proficiency of the pilot being examined, as required by sections 42.43(b) and 42.44(a) and such certification shall become a part of the airman's record.

(Amendment 42–23, published in 24 F.R. 9773, Dec. 5, 1959, effective Jan. 1, 1961.)

42.46 *Logging flight time.*

(a) A pilot in command may log his total flight time.

(b) A second pilot holding an airline transport pilot certificate and rating for the aircraft flown may log the total time during which he is on duty on the flight deck.

(c) A second pilot not holding an airline transport pilot certificate and rating for the aircraft flown may log 50 percent of the total flight time during which he is on duty on the flight deck.

(d) A pilot may log as instrument flight time only such time as he is actually manipulating the controls when the aircraft is being flown solely by reference to instruments.

42.47 *Grace period for airman periodic checks.* Whenever this part requires an airman check at stated intervals, such check may be given at any time during the month preceding or following the month in which it becomes due. The effective date of the check, if given within the preceding or following month, shall be the same as if given within the month in which it became due.

42.48 *Flight time limitations for pilots on large aircraft.* The following limitations shall be applicable to pilots serving on large aircraft.

(a) *Individual pilot limitations.*

(1) A pilot may be scheduled to fly 8 hours or less during any 24 consecutive hours without a rest period during such 8 hours.

(2) A pilot shall receive 24 hours of rest before being assigned further duty when he has flown in excess of 8 hours during any 24 consecutive hours.

(3) A pilot shall be relieved from all duty for not less than 24 consecutive hours at least once during any 7 consecutive days.

(4) A pilot shall not fly as a crewmember in air carrier service more than 100 hours during any 30 consecutive days.

(5) A pilot shall not fly as a crewmember in air carrier service more than 1,000 hours in any one calendar year.

(6) A pilot shall not do other commercial flying if his total flying time for any specified period will exceed the limits of that period.

(7) Time spent in any deadhead transportation shall in no case be considered as part of a required rest period.

(b) *Aircraft having a crew of two pilots.*

(1) A pilot shall not be scheduled to fly in excess of 8 hours during any 24-hour period unless he is given an intervening rest period at or before the termination of 8 scheduled hours of flight duty. Such rest period shall equal at least twice the number of hours flown since the last preceding rest period, and in no case shall such rest period be less than 8 hours. During such rest period the pilot shall be relieved of all duty with the air carrier.

(2) A pilot shall not be on duty for more than 16 hours during any 24 consecutive hours.

(c) *Aircraft having a crew of three pilots.*

(1) A pilot shall not be scheduled for duty on the flight deck in excess of 8 hours in any 24-hour period.

(2) A pilot shall not be scheduled to be aloft for more than 12 hours in any 24-hour period.

(3) A pilot shall not be on duty for more than 18 hours in any 24-hour period.

(d) *Aircraft having a crew of four pilots.*

(1) A pilot shall not be scheduled for duty on the flight deck in excess of 8 hours during any 24-hour period.

(2) A pilot shall not be scheduled to be aloft for more than 16 hours in any 24-hour period.

(3) A pilot shall not be on duty for more than 20 hours during any 24-hour period.

42.48–1 *"Scheduled to fly," "scheduled to be aloft," and "scheduled for duty on the flight deck" (FAA interpretations which apply to sec. 42.48).* The phrases "scheduled to fly" and "scheduled to be aloft," as used in this section, refer to the estimated "block-to-block time" for a particular flight under normal operating conditions. The phrase "scheduled for duty on the flight deck," as used in this section, refers to that portion of such "block-to-block time" during which the airman is scheduled for flight duty on the aircraft.

(Published in 14 F. R. 7040, Nov. 22, 1949, effective upon publication.)

42.48–2 *Scheduled type operations (FAA policies which apply to sec. 42.48).* An operator conducting a scheduled type operation (e. g., scheduled cargo-only service, regular flights between points pursuant to a military contract, etc.) may establish flight operations schedules for a particular route or route segment in order to determine compliance with the scheduling provisions of the flight time limitations.

(Published in 21 F. R. 4312, June 20, 1956, effective July 1, 1956.)

[42.49 *Flight time limitations for flight engineers on large airplanes.* The flight time limitations prescribed in section 42.48 (a) and (b) shall apply to an airman serving as a flight engineer except that when two of more airmen serve as flight engineers in a flight crew containing three or more pilots, the flight time limitations prescribed in section 42.48(d) shall apply in lieu of those in section 42.48(b).]

[(Amendment 42–42, published in 27 F.R. 8268, Aug. 18, 1962, effective Sept. 17, 1962.)]

[42.50] *Assignment of emergency evacuation functions for each crewmember.* After May 31, 1956, each air carrier shall assign all necessary emergency functions for each crewmember to perform in the event of circumstances requiring emergency evacuation. The air carrier shall show that functions so assigned are practicable of accomplishment. These functions shall be described in the air carrier manual.

[(Amendment 42–42, published in 27 F.R. 8268, Aug. 18, 1962, effective Sept. 17, 1962.)]

Flight Operation Rules

42.51 *Pilot responsibilities.*

(a) *Pilot in command.* The pilot in command of the aircraft shall be designated by the air carrier.

(b) *Preflight action.* Prior to commencing a flight the pilot in command shall familiarize himself with the latest weather reports pertinent to the flight issued by the United States Weather Bureau or if unavailable, by the most

reliable source, and with the information necessary for the safe operation of the aircraft en route, and on the airports or other landing areas to be used, and determine that the flight can be completed with safety.

(c) *Charts and flight equipment.* The pilot in command shall have in his possession in the cockpit proper flight and navigational facility charts, including instrument approach procedures when instrument flight is authorized, and such other flight equipment as may be necessary to properly conduct the particular flight proposed.

(d) *Emergency decisions.*

(1) When required in the interest of safety, a pilot may make any immediate decision and follow any course of action which in his judgment appears necessary, regardless of prescribed methods or requirements. He shall, where practicable, keep the proper control station fully informed regarding the progress of the flight.[6]

(2) In an emergency requiring either the dumping of fuel or a landing at a weight in excess of the authorized landing weight, a pilot may elect to follow whichever procedure he considers safer.

(e) *Serviceability of equipment.* Prior to starting any flight, the pilot shall determine that the aircraft, all engines and propellers, appliances and required equipment, including all instruments, are in proper operating condition. If during the flight any such engine, propeller, appliance, or equipment malfunctions or becomes inoperative, the pilot in command shall determine whether the flight can be continued with safety. Unless he believes that flight can be continued safely, he shall hold or cancel it until satisfactory repairs or replacements are made.

(f) *Admission to flight deck of aircraft having a separate pilot compartment.* No persons, other than crewmembers, shall be admitted to the flight deck of an airplane having a separate pilot compartment except those authorized in subparagraphs (1) and (2) of this paragraph. For the purposes of this section, the Administrator shall determine what constitutes the flight deck.

(1) FAA Flight Operations and Airworthiness Inspectors and authorized representatives of the Board while in the performance of official duties shall be admitted to the flight deck.

NOTE: Nothing contained in this paragraph shall be construed as limiting the emergency authority of the pilot in command to exclude any person from the flight deck in the interest of safety.

(2) The persons listed below may be admitted to the flight deck when authorized by the pilot in command:

(i) An employee of the Federal Government or of an air carrier or other aeronautical enterprise whose duties are such that his presence on the flight deck is necessary

[6] See section 42.94 for the report to be filed by the pilot where the authority granted by this section is exercised.

SPECIAL CIVIL AIR REGULATION NO. SR–392D

Effective: June 25, 1962
Adopted: June 22, 1962
Published: June 26, 1962
(27 F.R. 5979)

Display of Experimental Exterior Lighting Systems Approved for Use on Aircraft

Special Civil Air Regulation No. SR–392B, adopted on February 25, 1957, and superseded by SR–392C on February 3, 1962, permitted experimentation with exterior lighting systems that did not comply with the standards prescribed in the Civil Air Regulations on aircraft with standard airworthiness certificates. Several conditions were imposed to insure that the number of aircraft engaged in the experiments was reasonably limited; that the experimental exterior lights were in fact installed for bona fide experimentation; and that the results of such experimentation became generally available.

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 had under consideration the termination of SR–392B, which was then in effect, and requested comments from interested persons. However, the nature of the comments received was such that there was not sufficient time remaining, before the February 25, 1962, termination date specified in SR–392B, for their proper review and evaluation. To provide the time needed, the Agency adopted SR–392C which superseded SR–392B without revision other than extension of the termination date from February 25, 1962, to June 25, 1962.

On April 3, 1962, the Agency convened a public conference (previously announced by a notice of conference dated February 12, 1962) to give persons interested in SR–392C an opportunity to supplement their written comments with oral presentations, to make additional evidence available, and to participate in direct discussions with government-industry technical people in the aircraft lighting field.

From a study of all comments made on the issue, those who support the need for an extension of SR–392C contend essentially as follows: (1) Experimental lighting systems now operating under SR–392C are more effective than the system prescribed in the Civil Air Regulations; (2) much money and time has been invested in the experiments, which would be wasted if SR–392C were terminated; (3) extension would continue grass-roots cooperation between experienced FAA inspectors and inventors, and stimulate inventive initiatives; (4) unrestrictive field testing would insure reliability of new lighting equipment by exposing it to actual service conditions; (5) a new lighting concept cannot attract financing, or interest manufacturing management, unless its sales potential is established by flight demonstrations to prospective customers; and (6) there is no satisfactory alternative to extension of SR–392C.

(Rev. 8/17/62)

After more than 10 years of experimentation under the provisions of SR–392C and predecessor special regulations, the evidence supporting the contention that various experimental lighting systems surpass the standard system now prescribed in the Civil Air Regulations remains inconclusive. For the most part, reports submitted by experimenters contain subjective evaluations of proposed systems without the use of experimental controls to insure a valid basis for comparison. Tests and studies conducted by the Navy Department and by the Agency's National Aviation Facilities Experimental Center have not corroborated the advantages claimed by private experimenters for their respective systems.

The experiments were no doubt expensive and time-consuming, but the persons who undertook them did so voluntarily and with no assurance of success. In any case, the costs incurred in such experiments do not justify the indefinitely prolonged display of experimental lighting systems, since these systems necessarily introduce some degree of ambiguity and confusion in night operations.

Termination of SR–392C would not prevent further lighting experimentation since such experiments could still be performed under the terms of an experimental airworthiness certificate. There appears to be no reason why cooperation between FAA inspectors and inventors would necessarily diminish if further lighting experiments were conducted only on that basis.

The point that unrestricted field testing insures reliability of experimental lighting equipment is largely irrelevant since the objective of SR–392C was to facilitate experiments with new lighting concepts rather than to achieve component reliability. Components technology is not in question; and, in any case, there is no evidence that unusual problems exist. Further, reliability can be attained to a large extent by laboratory tests in a simulated environment, a practice which has worked satisfactorily in the past.

It may be true that the privileges granted by SR–392C (as opposed to the generally more restrictive terms of experimental airworthiness certificates) make it easier to finance new lighting concepts, but similar privileges are not granted to those who experiment with aircraft in other ways. This preference for one class of experimenters over all other classes has not been justified in terms of safety improvements achieved to date.

Reasonable alternatives to SR–392C are, in fact, open to experimenters. Experiments may be conducted under the terms of an experimental airworthiness certificate; and the Agency's well-equipped experimental facilities, with trained personnel, are now available for cooperative evaluation of new lighting concepts developed by inventors.

For these reasons, the Agency concludes that the arguments offered in support of an extension of SR–392C are not persuasive; and SR–392C will not be continued in effect beyond June 25, 1962. However, the Agency believes that a reasonable transition period of not less than one year should be established. This would permit 6 months for completion of experiments begun before June 25, 1962, the maximum period of experimentation permitted under SR–392C without special permission, and would allow not less than an additional 6 months for airplane modifications that may be necessitated by the termination of experimentation hereunder.

The various experiments which were conducted under the provisions of SR-392C and predecessor special regulations, although inconclusive, have, nevertheless, helped to crystallize the Agency's position on the need for revisions of the currently effective exterior lighting regulations. Therefore, a proposed rule concerning these requirements is under study by the Agency. If rule making action is initiated as a result of this study, it may ultimately affect some of the details of the lighting systems now required to be installed on aircraft. Moreover, if such rule making action is initiated it may not be completed before December 25, 1962. In such case, a requirement to accomplish the necessary modifications within one year after the termination of SR-392C, i.e., by June 25, 1963, may not provide the operator with a period of 6 months in which to accomplish the modifications, if any, required by the regulation.

In order to permit an adequate transition period for the accomplishment of any necessary modifications, this regulation permits the current experimental lighting systems to be used until June 25, 1963, or 6 months after completion of the proposed rule making action in regard to exterior lighting systems, whichever date is later. If, however, the Agency finds at the conclusion of its studies that rule making action will not be adopted an appropriate notice thereof will be issued and published in the Federal Register. In such case this regulation also permits the experimental lighting systems to be used until June 25, 1963, or 6 months after such notice is published in the Federal Register, whichever date is later.

In consideration of the foregoing, the following Special Civil Air Regulation is adopted to become effective on June 25, 1962:

Contrary provisions of the Civil Air Regulations notwithstanding, experimental exterior lighting systems which do not comply with the Civil Air Regulations, and which were installed for the purposes of experimentation on aircraft with standard airworthiness certificates under the provisions of SR-392B or SR-392C, may be displayed until:

(1) 6 months after the date of publication in the Federal Register of either

(i) revised standards adopted by the Agency for exterior lighting systems, or

(ii) a notice that rule making action to revise such standards will not be adopted by the Agency; or

(2) June 25, 1963, if later than that specified in paragraph (1).

This Special Civil Air Regulation shall remain in effect until superseded or rescinded.

SPECIAL CIVIL AIR REGULATION NO. SR-402

Effective: June 2, 1954
Adopted: March 4, 1954

Certification and Operation Rules For Star Route Air Carriers

When the nature of the terrain in particular sections of the country is such as to make surface transportation impracticable, the Postmaster General has authority under the Experimental Air Mail Act of 1938, as amended, to award contracts for the transportation of all classes of mail by airplane. The routes for which these contracts are awarded are known as "star routes" and are generally in isolated areas and of comparatively short distance. In a few instances these routes are located completely within a state.

An "air carrier" under the Civil Aeronautics Act of 1938, as amended, is defined as anyone who engages in air transportation. "Air transportation" is defined as interstate, overseas, and foreign air transportation or the transportation of mail by aircraft. Thus, a "star route" operator, including one otherwise engaged exclusively in intrastate air transportation, is an "air carrier" within the meaning of the Act.

While "star route" air carriers are exempted from certain areas of the Board's economic jurisdiction, they are subject to the Board's safety jurisdiction over air carriers. However, presently effective Parts 40 and 42 of the Civil Air Regulations apply to air carriers when engaged in interstate air transportation, but are not applicable to "star route" air carriers who are engaged only in intrastate transportation of mail. In view of the fact that the Civil Aeronautics Act requires each air carrier to have an air carrier operating certificate, it is necessary to make provision in the Civil Air Regulations for the issuance of this certificate to these "star route" air carriers.

This Special Civil Air Regulation provides air carrier certification and operation rules for all carriers engaged in carriage of mail pursuant to "star route" contracts. In view of the fact that these air carriers generally operate small planes and carry out relatively small operations, it appears desirable that they be certificated and comply with the provisions of Part 42 which are also applicable to air taxi operators. Thus, under this regulation, these air carriers are required to be certificated in accordance with Part 42 and to comply with the provisions of Part 42. Since it will require a certain amount of time to accomplish this certification, this regulation will become effective in ninety days.

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

In consideration of the foregoing, the Civil Aeronautics Board hereby makes and promulgates the following Special Civil Air Regulation, effective June 2, 1954:

Persons engaged in the carriage of mail by aircraft pursuant to "star route" contracts awarded under the Experimental Air Mail Act of 1938, as amended, shall, for such operations, be certificated in accordance with and comply with the provisions of Part 42 of the Civil Air Regulations.

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NOTE: Page 139 follows. Pages 137 and 138 were deleted by Supplement No. 7, dated August 17, 1962.

SPECIAL CIVIL AIR REGULATION NO. SR–411B

Effective: June 30, 1962
Adopted: June 29, 1962
Published: July 4, 1962
(27 F.R. 6321)

Operation of Certain Transport Category Airplanes in Cargo Service at Increased Zero Fuel and Landing Weights

The Federal Aviation Agency published as a notice of proposed rule making (27 F.R. 3890) and circulated as Civil Air Regulations Draft Release No. 62–18 dated April 19, 1962, a proposed Special Civil Air Regulation to permit certain transport category airplanes to be operated in cargo service at increased zero fuel and landing weights. The proposed regulation was intended to supersede Special Civil Air Regulation No. SR–411A, which contains a termination date of June 30, 1962.

Trial operations of cargo airplanes (Douglas DC–6A) at increased weights were first authorized in waivers issued by the Civil Aeronautics Board to individual air carriers. The first such waiver was issued on July 21, 1954. The weights involved were the zero fuel weights (i.e., the maximum weight of the airplane with no disposable fuel and oil, which has the effect of limiting the weight of the fuselage contents) and the structural landing weight. The weight increases were limited to not more than 5 percent of the zero fuel weight approved for passenger operations, and their use was made contingent upon certain findings by the Administrator of Civil Aeronautics and upon certain conditions of operation, inspections, and reporting. Authorization of the trial operations was predicated on the premise that such operations could eventually lead to the establishment of a sound basis for differentiating between standards for passenger and cargo air carrier operations. Based upon the trial operations under the waivers, the Board determined that a more extensive background of operating experience was necessary. This led to the promulgation of Special Civil Air Regulation No. SR–411 (20 F.R. 4765) which permitted any number of any type of transport category airplane to be operated by any air carrier at increased weights in cargo service.

From the data submitted by the operators in accordance with SR–411, the Board concluded that the scope of operations under SR–411 had been such that substantiation of the conditions for these operations for inclusion in the regulations on a permanent basis would entail a long-range program. The Board, therefore, extended the trial operations by adopting SR–411A on June 28, 1957 (22 F.R. 4684), with a termination date of June 30, 1962.

SR–411A is applicable to airplanes certificated under the transport category airworthiness requirements effective before March 13, 1956. The applicability was so limited because the Board believed it advisable to gain

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some experience wtih the airplanes certificated under the provisions of Part 4b effective on and after March 13, 1956, at the normal transport category weights before permitting such airplanes to operate at increased weights. In arriving at this conclusion, the Board took into consideration the new concept of structural design requirements as well as other related changes in these requirements which were introduced in Part 4b on March 13, 1956.

As the preambles to both SR–411 and SR–411A indicated, the purpose in permitting the trial operation of transport category airplanes in cargo service at the arbitrary increased zero fuel and landing weights was to determine through operating experience whether the conditions governing the trial operations would provide a sound basis for establishing future standards for airplanes in cargo operations at increased weights. During the approximately seven years that these trial operations have been conducted, a substantial amount of data has been amassed concerning the airplanes approved for operation under these Special Civil Air Regulations.

The data submitted and the operating experience gained under SR–411 and SR–411A indicate that the airplanes approved for and operated at the increased weights can continue to be operated at such increased weights under certain conditions without adverse effect upon the safety of such airplanes. The inspection reports submitted by the operators under SR–411 and SR–411A have not indicated any serious structural difficulties resulting from operation at the increased weights. The service history of these airplanes with respect to fatigue cracks and other damage is similar to that for airplanes of the same type operated in passenger service. Furthermore, cargo operators have expressed a need to continue operation of these airplanes at the increased weights in their cargo operations. Therefore, Draft Release 62–18 proposed to extend the provisions of SR–411A indefinitely to the types of airplanes that have been qualified and operated at such weights. However, the proposal did not specify the particular models of the various types approved for increased weights under SR–411 and SR–411A. Furthermore, it has subsequently been determined that the L–1649A airplane as modified under supplemental type certificate SA 4–1402 has been approved for operation and has been operated under the provisions of SR–411A. While the application for the type certificate for this airplane was filed in 1955, the manufacturer elected to comply with the later requirements of Part 4b rather than those in effect at the time of his application for type certificate. Subsequently, a supplemental type certificate was issued covering a modification to this airplane based on a demonstration of compliance with the requirements in effect on the date of the application for the type certificate for the airplane. Since this modified airplane was certificated in accordance with the provisions of Part 4b, effective prior to March 13, 1956, it is included in the airplanes permitted to be operated under the terms of this special regulation.

One of the comments received in response to Draft Release 62–18 expressed opposition to the proposed indefinite extension of SR–411A on the grounds that there should be one set of safety standards for the design and operation of all transport category airplanes without regard as to whether the airplane is used for the carriage of cargo or passengers. In this respect, it should be noted that the airplanes covered under this

regulation are the airplanes which have been operated for the carriage of cargo at the increased weights without any adverse effect on safety, and that the special inspections conducted by the operators have not indicated any serious structural problems with respect to these airplanes operated at the increased weights as compared with airplanes operated in passenger operations. Furthermore, this regulation requires operators to continue these special inspections. Consequently, the Agency does not believe that it would be justified in arbitrarily terminating the authorization to operate such airplanes at the increased weights.

On the other hand, the majority of the comments received in response to Draft Release 62–18 concurred in the proposed regulations and at the same time recommended that various airplanes other than those covered in the proposal be permitted to operate in cargo service at the arbitrary increased weights. Numerous and detailed arguments have been presented in support of these recommendations for broadening the scope of the proposal. However, these recommendations require consideration of matters which go beyond the scope of the proposed regulation, and there is not sufficient time remaining prior to the expiration of SR–411A for the necessary evaluation of such matters. Therefore, the regulation is being adopted substantially as proposed and further study will be given to such recommendations insofar as they might indicate a need for additional rule making action on this matter.

In view of the foregoing, the special regulation set forth hereinafter permits only those airplane types and models which were approved for trial operations under SR–411 and SR–411A to be used in the carriage of cargo with the arbitrary increased weights.

This regulation relaxes the provisions of SR–411A to the extent that it also applies to foreign air carriers operating the specified airplanes. The provisions of SR–411A were made applicable only to United States air carriers because the conditions for the trial operations required close cooperation between the manufacturer, operator, and the Civil Aeronautics Administration during the initial technical evaluation and in the inspection and reporting procedures. However, since this regulation permits the continued use of increased weights only for those type airplanes previously approved for operation under SR–411A, for which the necessary data and procedures are already available, the increased weights can now be made applicable to any foreign air carrier using airplanes of the specified types in the carriage of cargo only.

This regulation continues the requirement contained in SR–411A that airplanes used by air carriers at the increased weights be operated in accordance with the passenger-carrying transport category operating limitations of Part 40, 41, or 42, as the case may be. In addition, foreign air carriers are permitted to operate airplanes under the authority of this regulation if the country of registry of the airplanes requires such airplanes to be operated in accordance with the performance operating limitations applicable to United States air carriers or the equivalent thereof. The requirement that air carriers must operate their airplanes under the provisions of the regulation in accordance with the passenger-carrying performance operating limitations prescribed in Part 40, 41, or 42 is considered necessary in the interest of safety. Therefore, in order to insure

an equivalent level of safety for operations by foreign air carriers, it is considered appropriate to permit such carriers to operate airplanes under the authority of this regulation only on the condition that the country of registry of the airplanes requires that such airplanes be operated in accordance with the same or equivalent performance operating limitations.

This regulation also continues the requirement for special inspections, including the special inspections required prior to returning an airplane from cargo to passenger service. However, in view of the volume of data now available for the eligible airplane types, it no longer requires special reports and records be kept with respect to operations at increased weights. Based on experience gained under SR–411 and SR–411A, it is believed that intermittent cargo-passenger operations can now be permitted provided the special inspection is made each time the airplane is returned to passenger service.

This regulation contains a proviso, similar to that which appears in SR–411A, requiring a determination that any increase in the zero fuel and landing weights for the specified airplanes does not seriously affect the strength, fatigue, flutter, deformation, or vibration characteristics of such airplanes. While not proposed in Draft Release 62–18, the Agency is now of the opinion that even though such a determination has already been made for the increased weights presently authorized for the specified airplanes, such a requirement should be continued in effect to cover possible modifications to these airplanes as well as further increases in the approved weights. Since this provision merely continues in effect a provision currently applicable to the specified airplanes and imposes no additional burden on any person, notice and public procedure thereon are unnecessary for its adoption as part of this regulation.

Interested persons have been afforded an opportunity to participate in the making of this regulation, and due consideration has been given to all relevant matter presented. Since this regulation extends many of the provisions of a currently effective regulation which expires on June 30, 1962, imposes no additional burden on any person, and a delay in its effectiveness would impose a hardship on the cargo operators, good cause exists for making it effective on less than 30 days' notice.

In consideration of the foregoing, the following Special Civil Air Regulation is adopted to become effective on June 30, 1962:

Notwithstanding the applicable structural provisions of the Civil Air Regulations, any air carrier or foreign air carrier may operate, for the carriage of cargo only, the transport category airplanes specified in paragraph (1) of this regulation, at increased zero fuel and landing weights, under the conditions specified in paragraphs (2) through (6) of this regulation.

(1) Transport category airplanes certificated under the provisions of Part 4b, effective prior to March 13, 1956, as follows:

(a) DS–6A, DC–6B, DC–7B, DC–7C; and

(b) L–1049B, C, D, E, F, G, H, L–1649A when modified in accordance with supplemental type certificate SA 4–1402.

(2) The zero fuel weight (maximum weight of the airplane with no disposable fuel and oil) and the structural landing weight may be increased beyond the maximum approved in full compliance with the ap-

plicable Civil Air Regulations: *Provided,* That any increase in the zero fuel weight shall not exceed 5 percent and that the increase in the structural landing weight shall not exceed the amount, in pounds, of the increase in zero fuel weight: *And provided further,* That the Administrator finds that the increase in either such weight is not likely to reduce seriously the structural strength, that the probability of sudden fatigue failure is not noticeably increased, and that the flutter, deformation, and vibration characteristics do not fall below those required by the applicable Civil Air Regulations. All other weight limitations established in accordance with the Civil Air Regulations applicable to the type airplane shall apply.

(3) Each airplane shall be inspected in accordance with the special inspection procedures for operations at increased weights established and issued by the manufacturer of the particular type airplane and approved by the Administrator.

(4) Each airplane operated by an air carrier under this regulation shall be operated in accordance with the passenger-carrying transport category performance operating limitations prescribed in Part 40, 41, or 42. Operation of airplanes by a foreign air carrier is not permitted under the authority of this regulation unless the country of registry requires the airplanes to be operated in accordance with such performance operating limitations or the equivalent thereof.

(5) The Airplane Flight Manual for each airplane operated under the provisions of this regulation shall be appropriately revised to include the operating limitations and information required for operation with the increased weights.

(6) An airplane operated at increased weights under the provisions of this regulation shall be inspected in accordance with the special inspection procedures for return to passenger service established and issued by the airplane manufacturer and approved by the Administrator, before it is used in passenger service except as provided for the carriage of persons under Special Civil Air Regulation No. SR–432A.

This regulation supersedes Special Civil Air Regulation No. SR–411A.

SPECIAL CIVIL AIR REGULATION NO. SR-415

Effective: January 1, 1956
Adopted: December 29, 1955

Supplemental Air Carrier Certification and Operation Rules

The Board opinion which was made a part of Order No. E-9744, adopted November 15, 1955, effective January 1, 1956, explains that as a matter of new policy the Board established a new class of noncertificated air carriers designated "supplemental" air carriers who would be granted enlarged operating authority.

Accordingly, in Order No. E-9744 the Board issued a temporary exemption to all applicants named therein who held operating authority either as irregular air carriers or as irregular air transport carriers to operate within the scope of the new policy, pending final disposition of each air carrier's application for continued authorization to conduct operations as a supplemental air carrier.

At the present time, the Civil Air Regulations do not prescribe any rules to govern the operations of supplemental air carriers. The applicants named in Order No. E-9744 are conducting their operations as large irregular air carriers pursuant to the provisions of Part 42 of the Civil Air Regulations, and the Board believes that until operating experience reveals that further or different rules are necessary, supplemental air carriers should be allowed to continue their operations pursuant to Part 42.

This regulation is necessary to give effect to Order No. E-9744 and the opinion made a part thereof. Since this regulation is ancillary to said order and opinion; since it continues in effect the same rules as are presently applicable to the operators named in said order without diminution in safety standards; and since it would be contrary to the public interest not to prescribe rules to become effective on January 1, 1956, to govern the operations of such air carriers, the Board finds that notice and public procedure are impracticable and that good cause exists for making this regulation effective on less than 30 days' notice.

In consideration of the foregoing, the Civil Aeronautics Board hereby makes and promulgates the following Special Civil Air Regulation, effective January 1, 1956:

Contrary provisions of the Civil Air Regulations notwithstanding, any air carrier holding valid authority issued by the Board to perform air transportation as a supplemental air carrier in charter services and individual services, as defined in Appendix A attached to Board Order No. E-9744, shall be certificated and shall conduct such operations in accordance with the provisions of Part 42 of the Civil Air Regulations. An air carrier operating certificate presently issued by the Civil Aeronautics Administration to a large irregular air carrier shall, until its

stated expiration date, be valid as a supplemental air carrier operating certificate for supplemental air carrier operations, unless sooner surrendered, suspended, or revoked. Such certificate may be renewed as an air carrier operating certificate for supplemental air carrier operations.

This regulation shall remain in effect until such time as new supplemental air carrier certification and operation rules become effective, unless sooner superseded or rescinded by the Board.

NOTE: Page 155 follows. Page 153 was deleted by Supplement No. 7, dated August 17, 1962.

SPECIAL CIVIL AIR REGULATION NO. SR-446A

Effective: May 25, 1962
Adopted: May 22, 1962
Published: May 25, 1962
(27 F.R. 4906)

Use of Portable Frequency Modulation (FM) Type Radio Receivers on Aircraft During Flight

In 1961, during tests conducted by the Federal Aviation Agency's Aviation Research and Development Service, it was found that radio receivers having local oscillators operating within or near the VHF omnirange (VOR) frequency band (108 to 118 Mcs.) cause interference which adversely affects the operation of an aircraft's VOR navigational system. Various types of portable radio receivers (i.e., radio receivers capable of being carried aboard an aircraft by a passenger) were used in these tests to determine which would produce interference to the VOR equipment. It was determined that the portable frequency modulation (FM) radio receiver is the only type radio receiver, which is commonly used by the general public, that would create this unwanted interference. Therefore, it was found that immediate regulatory action was necessary in order to provide adequately for safety in air commerce.

Accordingly, on May 4, 1961, the Federal Aviation Agency issued Special Civil Air Regulation No. SR-446 (26 F.R. 4011) to become effective May 25, 1961. This regulation, which will expire May 24, 1962, prohibits the operation of portable FM radio receivers during flight on all civil aircraft of the United States operated by an air carrier or a commercial operator. It also prohibits the operation of portable FM radio receivers on all other VOR-equipped civil aircraft of the United States while such VOR equipment is being used for navigational purposes. The added restriction in the case of aircraft operated by an air carrier or a commercial operator was necessary since most of these aircraft are equipped with VOR navigational equipment and it would be difficult, if not impossible, for a passenger to know when the pilot in command was depending upon this equipment for navigational purposes. In addition, although not all portable FM radio receivers utilize local oscillators which will create interference, it was necessary to make the rule applicable to all portable FM radio receivers since it would not be feasible to expect the general public, airline personnel, or air crewmembers to distinguish which will cause this interference.

The tests which disclosed the interference problems caused by FM radio receivers were not completed at the time SR-446 was issued in 1961. Therefore, to simplify revision of the rule if additional interference problems were found by the tests, SR-446 was issued as a temporary rule, ef-

fective for a one-year period. When SR–446 was issued, the Agency had intended, prior to its expiration, to incorporate the provisions of the rule into the applicable operating parts, i.e., Parts 40, 41, 42, 43, 45, and 46. However, since the final evaluation of these tests by all interested industry parties has not been completed, this action has not been taken. Accordingly, since the conditions under which SR–446 was issued still exist, it is necessary, in order to provide adequately for safety in air commerce, to extend the provisions of that rule for a period of one year.

Since this regulation extends the provisions of a currently effective regulation which expires on May 24, 1962, and a lapse in the effectiveness of the regulation would endanger safety in air commerce, I find that notice and public procedure hereon would be contrary to the public interest, and that good cause exists for making it effective on less than 30 days' notice.

In consideration of the foregoing, Special Civil Air Regulation No. SR–446 is superseded by the following Special Civil Air Regulation which is hereby adopted to become effective on May 25, 1962:

No person shall operate, nor shall any operator or pilot in command of an aircraft permit the operation of, a portable frequency modulation (FM) radio receiver on the following civil aircraft of the United States while such aircraft are engaged in flight in air commerce: (a) Aircraft operated by an air carrier or commercial operator; and (b) any other aircraft equipped with VHF omnirange (VOR) navigational equipment while such VOR equipment is being used for navigational purposes.

This special regulation supersedes Special Civil Air Regulation No. SR–446 and shall remain in effect for one year unless sooner superseded or rescinded by the Federal Aviation Agency.

better by this amended reporting procedure as the Agency will be able to disseminate to industry improved reports of hazardous conditions pertaining to aircraft systems, components, and equipment. In addition, through analysis of information developed from reports received, the Agency will be able to detect deteriorating conditions in aircraft systems, components, and equipment, and issue Airworthiness Directives and Alert Notices before such conditions reach hazardous proportions.

Interested persons have been afforded an opportunity to participate in the making of this amendment and due consideration has been given to all relevant matter presented. Since the portion of the amendment pertaining to a monthly report of chronic mechanical difficulties is minor in nature and imposes no additional burden on any person, I find that notice and public procedure hereon is unnecessary.

Amendment revised section 42.96, deleted section 42.96–1, and added a new section 42.96a

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Amendment 42–39

Illumination of Passenger Emergency Exit Markings

Adopted: Feb. 12, 1962
Effective: Mar. 20, 1962
Published: Feb. 16, 1962 (27 F.R. 1453)

The Federal Aviation Agency published as a notice of proposed rule making (26 F.R. 9241) and circulated as Civil Air Regulations Draft Release No. 61–20 dated September 21, 1961, a proposal to amend Parts 40, 41, 42, and 46 of the Civil Air Regulations to require the illumination of passenger emergency exit markings during all takeoffs and landings, day and night.

In proposing these amendments, the Agency considered several recent accidents and incidents where illumination of the emergency exits during daylight hours may have resulted in a more effective evacuation of the passengers and crew. The Civil Air Regulations as originally adopted did not require daytime use of the emergency exit lighting system. It is now considered that this additional lighting during daylight hours is necessary to provide maximum safety where the evacuation of large numbers of passengers is concerned.

The amendment adopted herein, as distinguished from that adopted in Parts 40, 41, and 46, excludes small passenger-carrying aircraft. This exclusion is consistent with the present provisions of Part 42 and Draft Release 60–13 (25 F.R. 7452) in regard to interior emergency exit markings for small aircraft.

Interested persons have been afforded an opportunity to participate in the making of this regulation and due consideration has been given to all relevant matter presented. In general, all comments received from interested persons as a result of the Agency's notice of proposed rule making were favorable to the proposal.

Amendment revised paragraph (b)(2) to section 42.24c.

Amendment 42–40

Proving Period for Large Airplanes

Adopted: May 31, 1962
Effective: July 9, 1962
Published: June 7, 1962 (27 F.R. 5391)

A notice of proposed rule making was published in the Federal Register on February 9, 1962 (27 F.R. 1219), and circulated to the industry as Civil Air Regulations Draft Release No. 62–5 dated February 5, 1962, which proposed to amend Part 42 of the Civil Air Regulations to provide for proving tests for large aircraft not previously proved for

use in air carrier operations and large aircraft which have been previously proved but which are materially altered in design or are to be used by an air carrier or commercial operator who has not previously proved the aircraft.

In general, the comments received were in favor of requiring proving tests for large aircraft and reflected endorsement of the principles of the proposal. However, there was some concern relative to the applicability of this revision to a type of an aircraft previously proved by operators other than the affected carrier, and whether or not the rule would apply to all aircraft in use before or after the effective date of the rule.

With regard to the applicability of this amendment, it is not intended to require retroactive proving periods for large aircraft placed into service by an air carrier or commercial operator prior to the effective date of this amendment. However, after the effective date of this amendment, it is intended to require proving periods for large aircraft not previously proven for use in air carrier or commercial operations and large aircraft which have been previously proven but which are materially altered in design or are to be used by an air carrier or commercial operator who has not previously proven the aircraft.

Suggestions were also made that air taxi operators and operators using aircraft under the provisions of Part 43 should be required to conduct proving flights. Since this would be the subject of a separate study it is not considered pertinent to this amendment.

In proposing this amendment, the Agency considered the fact that for a number of years proving periods for aircraft placed into service by air carriers operating under the provisions of Part 40, 41, or 46 of the Civil Air Regulations have been required in accordance with the applicable provisions of these Civil Air Regulations before being used in air carrier operations. These proving periods have been conducted under the surveillance of the Federal Aviation Agency or its predecessor agencies.

There are two primary reasons for requiring a proving period: (1) it provides the Administrator with basic information to assist him in determining that an air carrier or commercial operator can safely operate a new or different type of aircraft; and (2) it affords the air carrier or commercial operator an opportunity to acquire, first hand, the experience necessary to operate new equipment with the highest degree of safety. Proving periods are also of value since they help to familiarize the operator's personnel with the peculiarities of new or different types of aircraft with regard to operations, maintenance, servicing, and handling.

Until recently, aircraft placed into service by an air carrier or commercial operator operating under the provisions of Part 42 were not required to undergo any specific proving period. Prior to the adoption of this amendment, it was the responsibility of the Administrator to find the aircraft safe for the service offered. This determination did not pose any problem in the past since the aircraft placed in service by operators had undergone a previous proving period either when operated by a scheduled air carrier or had been proven by virtue of many years of safe and successful operation by the military services. Recently, however, newly certificated aircraft not previously proved, and previously proved aircraft which were subsequently altered in design, have been placed into service by certain supplemental and irregular operators operating under the provisions of Part 42. Prior to utilizing these aircraft in operations under the provisions of Part 42, the operators concerned conducted fairly extensive familiarization and training programs. While these programs did, to some extent, accomplish many of the objectives of the proving period, they did not fully comply with, or were not as comprehensive as, the specific proving period requirements set forth in either Part 40, 41, or 46. Accordingly, it is determined that there is a requirement for proving periods for large aircraft in Part 42.

Interested persons have been afforded an opportunity to participate in the making of this regulation (27 F.R. 1219), and due consideration has been given to all relevant matter presented.

Amendment added new section 42.17.

Amendment 42–41

Extension of Period Allowed for Compliance With the Recurrent Training Requirements of Air Carrier Training Programs	Adopted: July 30, 1962 Effective: Aug. 3, 1962 Published: Aug. 3, 1962 (27 F.R. 7674)

Paragraph (b) of section 42.45f, Recurrent training, requires that each air carrier shall, at intervals established as part of the training program, but not to exceed 12 months, check the competence of each crewmember with respect to procedures, techniques, and information essential to the satisfactory performance of his duties.

The Federal Aviation Agency has received recommendations that the time interval between competence checks of crewmembers be specified in the same manner as in section 42.44a, which permits proficiency checks to be given in the month before or following the month in which they are due. Such flexibility will simplify recordkeeping and administration of the crewmember competence check requirements of § 42.45f in the same way that the proficiency check requirements have been simplified.

The FAA has considered the foregoing recommendations and believes that the requirements with respect to the frequency of crewmember competence checks should be amended to provide the flexibility recommended.

Civil Air Regulations Draft Release No. 61–7, dated April 14, 1961, subject "Qualification and Training Requirements for Pilots Other Than Pilots in Command," proposed, among other matters, to amend Parts 40, 41, and 42 to permit the competence checks of crewmembers and dispatchers to be given at any time during the month preceding or following the month in which they become due.

No adverse comments were received with respect to this particular portion of Draft Release 61–7. Accordingly, since it will permit more efficient administration of air carrier training programs and will not adversely affect safety of the carriers' operations, it is is being adopted at this time separately from the other proposals which were included in the draft release. The phrase 'not to exceed 12 months' contained in the present regulations and in Draft Release 61–7 has been changed to 'each 12 months' to make the wording consistent with that of revised Part 41 (27 F.R. 1977), which was circulated as Draft Release 60–19 (26 F.R. 12299) prior to its adoption. The remaining proposals and the comments received thereon are being evaluated by the Agency in conjunction with comments received in response to Draft Release 61–17, "Use of Aircraft Simulators for Pilot Training and Proficiency Checks," and Draft Release 62–9, "Approval of Air Carrier Training Programs."

Interested persons have been afforded an opportunity to participate in the making of this regulation (26 F.R. 3438), and due consideration has been given to all relevant matter presented. Since this regulatory action imposes no additional burden on any person, it may be made effective on less than 30 days' notice.

Amendment revised paragraph (b) of section 42.45f.

Amendment 42–42

Flight Time Limitations for Flight Engineers on Large Airplanes	Adopted: Aug. 10, 1962 Effective: Sept. 17, 1962 Published: Aug. 18, 1962 (27 F.R. 8268)

The Federal Aviation Agency published as a notice of proposed rule making (27 F.R. 697) and circulated as Civil Air Regulations Draft Release No. 62–1 dated January 17, 1962, a proposal to amend Part 42 of the Civil Air Regulations to specify flight time limitations applicable to flight engineers engaged in other than overseas and international operations. The reasons therefor were set forth fully in the notice of proposed rule making.

The comments received in response to this draft release indicated general concurrence

with the proposal to prescribe flight and duty time limitations in Part 42 for flight engineers in addition to those currently prescribed in the air carrier operations specifications for overseas and international operations. In some instances differences of opinion were expressed with respect to the substance of the proposed rule. Some comments recommended the adoption of more stringent rules on duty time while others recommended more liberal allowances for both flight and duty times for particular operations. In addition, numerous other recommendations were made with respect to changing the flight time limitations applicable to air carrier flight crewmembers which transcended the scope of the proposal contained in Draft Release 62–1 and involved substantive changes of such a nature as to generally affect all flight and duty time limitations applicable to all flight crewmembers. The Agency has undertaken a project to review and re-evaluate all of the existing flight and duty time limitations applicable to air carrier flight crewmembers. Accordingly, all comments which were received in response to Draft Release 62–1 which concern matters beyond the scope of the proposal will be fully considered in the course of this re-evaluation.

The draft release made mention of the fact that some carriers may wish to include in the flight crew one or more airmen who are appropriately qualified to serve either as a pilot or as a flight engineer in the course of a flight. The purpose of such statement was solely to prevent any misunderstanding of these rules with regard to the flight time limitations applicable to such airmen. In view of the comments received on this subject, it is reiterated that these rules would not preclude such utilization of an airman as long as the combined total of the scheduled flight deck duty of such airman as a flight engineer and his scheduled flight deck duty as a pilot or other flight crewmember does not exceed the applicable flight time limitations.

Interested persons have been afforded an opportunity to participate in the making of this regulation (27 F.R. 687), and due consideration has been given to all relevant matter presented.

Amendment redesignated section 42.49 as section 42.50 and added a new section 42.49.

Amendment 42–43

Certificate Issuance

Adopted: Aug. 17, 1962
Effective: Aug. 23, 1962
Published: Aug. 23, 1962
(27 F.R. 8424)

As presently worded, Part 42 does not contain any provision requiring a specified time interval between the filing of an application for an air carrier operating certificate and the date of intended operation. On several recent occasions requests have been made of the Agency to complete the inspection and certification process within less time than is actually necessary to determine whether the applicant for an air carrier operating certificate for large aircraft is capable of conducting the proposed operations in accordance with the applicable provisions of this part.

Experience within the Agency has shown that in cases of applications under Part 42 involving large aircraft, as opposed to small aircraft, more time is required to enable the appropriate FAA inspectors to make the necessary inspections of the applicant's aircraft, operations, training programs, maintenance facilities, and manuals. While the Agency will continue to examine and process such applications as expeditiously as possible, it is believed desirable to have a note added to section 42.5(a) to insure that applicants are aware of the amount of time which may be required to conduct the necessary inspections and process their applications. Accordingly, a note is being added to section 42.5(a) indicating that the processing of the application may require up to 60 days from the date of filing with the appropriate FAA Air Carrier District Office.

Since this amendment is a general statement of agency practice, notice and public procedure hereon are unnecessary and it may be made effective on less than 30 days' notice.

Amendment added a note at the end of section 42.5(a).

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