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CIVIL AERONAUTICS BOARD
WASHINGTON, D. C.

August 11, 1945

CIVIL AIR REGULATIONS DRAFT RELEASE NO. 58

SUBJECT: Suggested new Part 42 of the Civil Air Regulations - Nonscheduled air carrier certification and operation rules.

With this Draft Release the Civil Aeronautics Board is distributing copies of a proposed new Part 42 of the Civil Air Regulations in order that anyone interested may offer comment and express support or objection to particular provisions. The new Part would provide for the issuance of operating certificates and establish rules governing the operations of nonscheduled air carriers.

Safety rules governing nonscheduled air carriers engaged in interstate, foreign, and overseas operations have been under consideration by the staffs of the Administrator and the Board since 1940, but due to wartime conditions they have been held in abeyance until recently, pending the resumption of more normal civil aircraft operations. Within the past year the Board has held public hearings in order that proper determination could be made as to the need for economic and safety regulations for this type of operation. The Civil Aeronautics Act of 1938 requires that any person engaging in nonscheduled air carrier operations in interstate, foreign, and overseas commerce must hold an air carrier operating certificate. In view of the marked increase in commercial aviation operations it now appears appropriate to provide the rules for the issuance of such certificates and the rules for operating thereunder.

During the development of this proposed Part many recommendations for rules and operating procedures were received. A number of these proposals differ materially from those contained in the new Part. To obtain your comments and to focus attention upon certain points upon which comment is particularly desired, this Draft Release includes some of these recommendations as possible substitutions for particular provisions of the proposed Part.

As an aid in bringing comment into comparable and readily usable form, you are asked to identify your comment by specific reference to the numbered sections of the Part and to the lettered sections of the Draft Release. Any additional comment which you wish to make concerning matters not covered or specific suggestions you may have about the proposed new Part will be welcomed.

(A) (42.00 Issuance of operating certificate.)

Shall the regulations provide that the operating certificate list the types of Service and Operations Ratings as follows:

(a) Service
  (1) Cargo,
  (2) Passenger,
  (3) Cargo and passenger.

(b) Types of operations
  (1) CFR day - land,
  (2) CFR night - land,
  (3) IFR day - land,
  (4) IFR night - land,
  (5) CFR day - water,
  (6) CFR night - water,
  (7) IFR day - water,
  (8) IFR night - water.

(B) Shall the use of single engine equipment be limited to

(1) Operation within 500 miles of the operating base when equipped with engines having less than 100 horsepower?

(2) Operation within 25 miles from the operating base when operating at night, unless each occupant is equipped with a parachute or such operation is confined to a lighted airway or within 25 miles of a lighted airport?

(3) Operation under CFR unless all occupants are equipped with parachutes?

(C) Shall pilot time flown in other than commercial operation be counted against the maximum allowable pilot hours specified in § 42.21?

(D) Shall the carrier be required to use pilots with the experience required by § 42.22, only when the flight is 500 miles or more from the operating base? (This would authorize commercial pilots with less experience to be used for flights of less than 500 miles.)

(E) Shall the carrier be required to use pilots who have had at least 50 hours of flying over water out of sight of land when engaging in overwater type of operation?

(F) Shall pilots operating aircraft more than 500 miles from the operating base be required to meet the first class physical standards prescribed in Part 29 within each 6-month period?

(G) Shall the carrier be required to have a second pilot on an aircraft when the first pilot is required to fly more than 8 hours during any consecutive 24-hour period?

(H) Shall the carrier be limited to a particular operating area determined by the general character of the terrain adjacent to the base airport, the type of aircraft, and the navigational aids available?

(I) Shall the carrier be required to have its own ground radio communications facilities and to limit its operations within the area where these facilities are available?

After the receipt of the written comments and on a schedule to be announced, the Board will hold such meetings as the comment received indicates are desired, to discuss any important differences of opinion. Soon thereafter the regulations will be adopted in such form as may then appear appropriate.

Comments on the proposed new Part are earnestly desired from all interested parties. Replies should be addressed to the Civil Aeronautics Board, Commerce Building, Washington 25, D.C., and mailed so as to be received in Washington not later than October 1, 1945.

/s/ Fred A. Toombs
Fred A. Toombs
Secretary

August 2, 1945

PART 42 - NONSCHEDULED AIR CARRIER CERTIFICATION AND OPERATION RULES (Proposed)

42.0 Certificate.
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The following regulations are prescribed for nonscheduled air carrier operations in interstate, overseas, or foreign air transportation.

42.0 CERTIFICATE

42.00 Issuance. An air carrier operating certificate prescribing the type of nonscheduled operation and such operating specifications and limitations as may be reasonably required in the interest of safety will be issued by the Administrator to a properly qualified applicant who demonstrates that he is capable of conducting the proposed operations in accordance with the applicable requirements hereinafter specified. Application for a certificate or application for amendment thereof shall be made upon a form prescribed and furnished by the Administrator.

42.01 Compliance. All operations must be conducted in accordance with the specifications of the air carrier operating certificate and the rules contained in this Part.

42.02 Duration. An air carrier operating certificate will continue in effect until canceled, suspended, revoked, or a termination date is set by the Board, after which it shall be surrendered to the Administrator upon request.

42.03 Display. The air carrier operating certificate must be available at the principal operations office for inspection by an authorized representative of the Administrator or Board.

42.04 Inspection. An authorized representative of the Administrator shall be permitted at any time and place to make inspections or examinations to determine the operator's compliance with the Civil Air Regulations.

42.1 AIRCRAFT REQUIREMENTS

42.10 General.

(a) Aircraft must be certificated in accordance with the airworthiness requirements of the Civil Air Regulations.

(b) Multiengine aircraft shall be:

(1) equipped so that engine rotation may be promptly stopped in flight,

(2) capable, with any one engine inoperative, of maintaining 100 feet per minute climb at 5,000 feet above sea level.

(c) Single engine land aircraft, except for take-off and landing, shall not be operated over water beyond safe power-off gliding distance from shore.

(d) Single engine sea aircraft, except for take-off and landing, shall not be operated over land beyond safe power-off gliding distance from open water.

(e) Single engine aircraft shall not be operated at night or under instrument flight rules, except under conditions specified in the air carrier operating certificate.

(f) After December 31, 1947, single engine aircraft shall not be flown at night or under instrument flight rules.

42.11 Oxygen apparatus.

(a) Aircraft operated at an altitude exceeding 10,000 feet above sea level continuously for more than 30 minutes or at an altitude exceeding 12,000 feet above sea level for any length of time shall be equipped with effective oxygen apparatus and an adequate supply of oxygen available for the use of the operating crew. Such aircraft shall also be equipped with an adequate separate supply of oxygen available for the use of passengers when operated at an altitude exceeding 12,000 feet above sea level.

42.12 Emergency equipment. Aircraft flown long distances over uninhabited terrain must carry such additional emergency equipment as the Administrator designates for the particular operation involved. All aircraft operated over water shall be equipped with life preservers or flotation devices readily available for each person aboard and with a Very pistol or equivalent signal equipment, except that this requirement will not apply when such operations consist only of landings, take-offs, or flights of short duration over water where the Administrator finds that such equipment is not necessary. In addition, all aircraft operated for long distances over water shall be equipped with a sufficient number of life rafts to accommodate adequately all occupants, and such additional emergency equipment as may be required by the Administrator.

42.13 Required instruments and equipment. The following instruments and equipment for the type of operation specified shall be installed.

(a) CFR (day)

(1) instruments and equipment specified in § 43.30 (a),

(2) one fire extinguisher and on multiengine aircraft, a fire extinguishing system to serve each engine compartment,

(3) one or more storage batteries or other source of electrical supply, sufficient to operate all radio and electrical equipment necessary for the flight,

(4) two-way radio communications system and navigational equipment appropriate to the ground facilities to be used,

(5) 3 spare fuses for each capacity used in the aircraft, or 25 per cent of the number of each capacity, whichever is greater,

(6) first-aid kit adequate for the type of operation involved.

(b) CFR (night)

(1) instruments and equipment specified in §§ 42.13 (a) and 43.30 (b),

(2) 1 set of instrument lights,

(3) an electrically heated pitot tube serving each pilot's air-speed indicator,

(4) one sensitive type altimeter,

(5) one gyro rate-of-turn indicator combined with bank indicator,

(6) one gyro direction indicator,

(7) one outside air temperature gauge with indicating dial in pilot compartment,

(8) one carburetor temperature gauge or equivalent approved device,

(9) one clock with sweep-second hand,

(10) if vacuum system is used, one vacuum gauge with warning indicator on the instrument panel installed in lines leading to the rate-of-turn and gyro direction indicator.

(c) IFR

(1) instruments and equipment specified in §§ 42.13(b) and 43.30(c),

(2) 1 additional radio receiver with direction finder,

(3) 1 additional sensitive type altimeter.

42.14 Maintenance. The air carrier shall provide maintenance facilities, personnel, and an inspection system adequate to maintain all aircraft in an airworthy condition. All repairs, alterations, and overhauls shall be performed in accordance with Part 18. The air carrier may contract for maintenance with an appropriately rated certificated repair agency.

42.2 PILOT REQUIREMENTS

42.20 First pilot rules.

(a) Pilot in command. The first pilot is in command of the aircraft at all times during flight and is responsible for the safety of persons and goods carried and for the conduct and safety of members of the crew.

(b) Control test. Immediately prior to take-off the pilot shall test the flight controls to the full limit of travel, each engine individually, at run-up r.p.m., check the engine instruments and as many as possible of the flight instruments.

(c) Preflight action. Prior to commencing a flight the first pilot shall familiarize himself with the information necessary for the safe operation of the aircraft on the airports to be used and en route.

(d) Emergency decisions.

(1) The first pilot is authorized to follow any course of action which appears necessary in emergency situations which, in the interest of safety, require immediate decision and action. He may, in such situations, deviate from

prescribed methods, procedures, or minimums to the extent required by considerations of safety. When such emergency authority is exercised the pilot shall keep the proper control station fully informed regarding the progress of the flight.

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

(e) Flight equipment. Before any flight is started the first pilot shall have readily available:

(1) current flight and navigational facility maps for the area over which the flight is to be conducted,

(2) instrument approach procedures for airports which are to be used when flight under instrument flight rules is authorized,

(3) the latest weather reports and forecasts made by the U. S. Weather Bureau or by a source approved by that Bureau when available for the area to be flown.

42.21 Flight time limitations for pilots. A pilot must not pilot aircraft in excess of:

(a) in air transportation - 36 hours in any 7-day period; 85 hours in any one month; 1,000 hours in any one year, or

(b) total commercial flying time - 100 hours in any one month; 1,200 hours in any one year.

If more than 10 hours are flown in any 24-hour period, a complete rest from flying for 18 hours must be taken.

42.22 Certification and experience.

(a) First pilot. Any pilot serving as first pilot must hold a valid commercial pilot rating with an aircraft type and airplane class rating for the aircraft in which he is to serve, and for:

(1) CFR (day) flight, he must have had at least 50 hours of cross-country flight time as pilot or copilot;

(2) Night and IFR flight, he must possess a currently effective instrument rating and have had a total of at least 500 hours of flight time as pilot or copilot including 100 hours of cross-country flight of which 25 hours shall have been during the hours of darkness and 50 hours of actual instrument flight.

(b) Second pilot. Any pilot serving as second pilot in an aircraft requiring more than one pilot must hold:

(1) for CFR (day) flights, a valid commercial pilot rating with the appropriate type and class ratings,

(2) for night and IFR flights, in addition to (1), a currently effective instrument rating.

42.23 Recent flight experience.

(a) General. No pilot shall serve as first pilot in nonscheduled air transportation unless within the preceding 90 days he has made at least 3 take-offs and landings to a full stop in the same model of aircraft and he shall not serve during the hours of darkness unless he has made at least 3 take-offs and landings to a full stop during such period within the preceding 90 days.

(b) Instrument flight. A pilot shall not pilot an aircraft under instrument flight rules unless he has had at least 6 hours of instrument flight under actual or simulated flight conditions during the preceding 6 months or until he has requalified.

42.24 Logging flight time.

(a) A first pilot may log the total flight time elapsing during his command of the aircraft.

(b) A second pilot may log the total time during which he serves as second pilot.

(c) Additional pilots when required, and serving as such, may log 50 per cent of the total flight time.

42.240 Logging instrument flight time. Instrument flight time may be logged as such by the pilot actually manipulating the controls only when the aircraft is flown solely by reference to instruments either under actual or properly simulated flight conditions.

42.3 FLIGHT OPERATION RULES

42.30 Manifest. A manifest form for each flight, except for local sightseeing flights in the vicinity of the airport, shall be signed by the pilot if the air carrier does not have other authorized personnel charged with the duty of loading the aircraft. This form shall show the distribution in the aircraft of the total pay load carried. The pilot shall retain the original manifest only and a copy shall be kept available for inspection for at least 90 days at the principal operations office.

42.31 Flight plan. A flight plan for each flight, containing at least the information required by § 60.250, shall be filed at the principal operations office. Such flight plan is in addition to the flight plan required for IFR flight in control areas and filed with the appropriate control center or tower.

42.32 Instruments and equipment serviceability. Prior to starting any flight, all instruments and equipment must be in operative condition. If any instrument or equipment becomes inoperative in flight it shall be repaired or replaced at the first airport where repairs or replacements are readily available or the flight may continue to its destination if the pilot determines that with the remaining serviceable instruments and equipment the flight can be continued with safety.

42.33 Fuel supply.

(a) Flight under contact flight rules (CFR). A flight shall not be started unless the aircraft carries sufficient fuel, considering the wind and other weather conditions expected, to fly to the next point of intended landing and thereafter for a period of at least 45 minutes at normal cruising consumption.

(b) Flight under instrument flight rules (IFR). Sufficient fuel and oil, considering the wind and other weather conditions forecast, shall be carried:

(1) to complete the flight to the point of first intended landing, and thereafter,

(2) to fly to the alternate airport, and thereafter,

(3) to fly at normal cruising consumption for a period of 45 minutes.

42.34 Weather minimums. No flight may be started unless the current weather reports and forecasts show a trend indicating that the ceilings and visibilities at the airport of intended landing are, and will remain, at or above the minimums specified below:

(a) Contact flight operations (CFR).
(1) ceiling - 1,000 feet,
(2) visibility - 3 miles.

(b) Instrument flight operations (IFR).
(1) ceiling - 500 feet,
(2) visibility - 1 mile,
(3) alternate airport; ceiling - 1,000 feet; visibility - 3 miles.

42.35 Flight altitude rules.

(a) Day (CFR) operation. Except during take-off and landing, aircraft shall not be flown less than 500 feet from any obstacle in flight, except in such cases as may be specifically authorized.

(b) Night (CFR) or instrument (IFR) operation. Except during take-off and landing, no aircraft shall be flown at an altitude of less than 1,000 feet above the highest obstacle located within 5 miles either side of the course intended to be flown.

42.36 Icing conditions. Aircraft must not be routed or flown into known heavy icing conditions and may be flown into light or medium icing conditions only if the aircraft is equipped for deicing wings and propellers and such other parts of the aircraft as are essential to safety.

42.37 Instrument approach and landing rules. Unless otherwise instructed by a control tower or center, standard instrument approach procedures for the airport shall be used.

42.4 MISCELLANEOUS RULES

42.40 Pilots at controls. In the case of aircraft requiring two or more pilots, two pilots must remain at the controls at all times while landing and

taking off, and while the aircraft is en route, except when the absence of one is necessary in connection with his regular duties or who he is replaced by a person authorized under the provisions of §§ 42.41.

42.41 Admission to pilot compartment. In aircraft having a separate pilot compartment, no person, other than a crew member, a check pilot, an inspector of the Administrator in pursuance of official duty, or a person whose admission is approved by the first pilot, may be admitted to the pilot compartment. In the latter case, the first pilot must remain at the controls.

42.42 Airports. Airports or landing areas used must be of sufficient area so that the taking off or landing run of the aircraft will not require the use of more than 60 per cent of the effective length of the area available for taking off or landing. The effective length of the area shall be determined by making allowance for obstructions to the flight path with a 15 to 1 glide in CFR operations and a 40 to 1 glide in IFR operations.

42.43 Manual.

(a) When required by the Administrator, the air carrier shall prepare and maintain a manual for the use and guidance of operations and maintenance personnel which contains full information necessary to guide flight and ground personnel in the conduct of flight operations and to inform such personnel regarding their duties and responsibilities. It must be in a form approved by the Administrator and furnished to all persons designated by the Administrator or Board. All copies must be kept up to date.

(b) A pilot's check-off list shall be furnished for and maintained in the pilot compartment of the aircraft.

(c) Any changes required by the Administrator shall be promptly incorporated in the manual. Other changes not inconsistent with any Federal regulation, the air carrier operating certificate, or safe operating practice may be made without the prior approval of the Administrator.

42.44 Emergency flights. In the case of emergencies necessitating the transportation of persons or medical supplies, the rules contained herein regarding type of aircraft, equipment, and weather minimums to be observed will not be applicable: Provided, That within 48 hours after the pilot returns to his base he shall file a report to the Administrator setting forth the conditions under which the flight was made, the necessity therefor, and giving the names and addresses of crew and passengers.

42.45 Reports.

(a) Each carrier shall keep the following current reports with respect to all aircraft, aircraft engines, propellers and, where practicable, appliances used in air transportation:

(1) total time and service,
(2) time since last overhaul,
(3) time since last inspection, and
(4) such other data as the Administrator may deem necessary for safe operation.

(b) An annual operations report must be submitted on the form approved by the Administrator for the purpose not later than the 20th day of January of each year.

42.9 DEFINITIONS

(a) Air carrier means any citizen of the United States who undertakes, whether directly or indirectly, by a lease, or by any other arrangement, to engage in air transportation.

(b) Interstate, overseas, and foreign air transportation means the carriage by aircraft of persons or property as a common carrier for compensation or hire or the carriage of mail by aircraft in commerce between the following places: a place in any State of the United States or the District of Columbia and a place in any other State of the United States or the District of Columbia; places in the same State of the United States through the airspace over any place outside thereof; a place in any State of the United States or the District of Columbia and any place in a Territory or possession of the United States; a place in a Territory or possession of the United States and a place in any other Territory or possession of the United States; or a place in the United States and any place outside thereof; whether such commerce moves wholly by aircraft or partly by aircraft and partly by other forms of transportation.