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CIVIL AERONAUTICS ADMINISTRATION
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Nonscheduled Air Carrier Certification And Operation Rules

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Civil Aeronautics Manual 42

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INTRODUCTORY NOTE

This manual contains material interpreting and explaining nonscheduled air carrier requirements as specified in Civil Air Regulations, Part 42.

It should be understood that equipment, procedures, and operating requirements which can be shown to be the equivalent of those set forth in this manual will be acceptable to the Administrator of Civil Aeronautics. Any procedure or operation requirement determined and shown to be inapplicable to a particular nonscheduled air carrier operation may be suitably modified on request. This manual will be revised from time to time as equally acceptable equipment, procedures, operating requirements, new interpretations, or the need for additional explanation are brought to the attention of the Administrator of Civil Aeronautics.

Each section of this manual is arranged and numbered to correspond with the section in Civil Air Regulations, Part 42, pertaining to the same subject, and the pertinent section of the Civil Air Regulations appears at the head of the interpretative material, which is printed in larger type.

A form which may be used conveniently in maintaining a record of subsequent revisions will be found on page 14.

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Nonscheduled Air Carrier Certification and Operation Rules

42.0 AIR CARRIER OPERATING CERTIFICATE

42.00 Certificate required. No person shall operate as an air carrier without an air carrier operating certificate issued by the Administrator, or in violation of the terms of any such certificate.

Self explanatory.

42.01 Issuance. An air carrier operating certificate, describing the nonscheduled operations authorized and prescribing 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 citizen of the United States 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 in the manner and contain the information prescribed by the Administrator.

See Section 42.9 of Civil Air Regulations for definition of air carrier.

Application for nonscheduled air carrier operating certificate will be made on application Form ACA–1602 provided for this purpose by the Administrator. The application form may be obtained by contacting the local CAA inspector. Upon meeting the requirements prescribed, the applicant should present his application to his local inspector and arrange for inspection of his equipment and facilities.

After inspection and demonstration by the applicant that he is capable of conducting the proposed operation in accordance with applicable requirements, a nonscheduled air carrier operating certificate will be issued, together with operations specifications which will become a part thereof, and will specify the carriage of passengers, cargo, or both, and the type and class of aircraft for the following types of operations: CFR (day), CFR (night), IFR (day), IFR (night).

Application for amendment of existing operations specifications shall be made on Forms ACA–1014, *Operations Specifications, provided by the Administrator* and shall contain the information prescribed thereon, and will be processed through the local CAA inspector.

Holders of nonscheduled operating certificates shall give notice of any change in location of their main bases of operations or maintenance. This notice shall be addressed in writing, through the local inspector, to the Civil Aeronautics Administration office responsible for the issuance of the certificates under which they are operating.

Application for foreign authorization shall be made to the local inspector in the following manner:

Nonscheduled air carriers making original application for a nonscheduled operating certificate and desiring to engage in foreign air transportation shall make application for foreign and international operations specifications in the space provided on Form ACA–1602. One additional copy of application is to be submitted.

The following information must be attached to the application:

1. List of foreign areas for which operations specifications are desired.
2. Names and addresses, together with certificate numbers and ratings of each crew member to be employed in foreign operations.
3. Manufacturer and description of aircraft, together with registration numbers.
4. Points between which operations are contemplated.

5. Type of activity; e. g., cargo, passengers, or a combination of both, etc.

6. 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.)

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

8. An outline of the method by which control will be exercised by company headquarters over operations outside the continental United States or its Territories. (In lieu thereof, when a single aircraft and individual are involved, appropriate addresses in foreign countries through which the operator may be reached by normal communication channels.)

Nonscheduled air carriers possessing nonscheduled operating certificate, who desire to amend such certificate to include foreign operations, shall make application on Form ACA–1602 and submit same to their local CAA inspector, together with the information required above.

Any operator or pilot contemplating foreign flight should be well acquainted with the airports of entry, fields to be visited, navigational facilities available, air laws, public health, customs, and any other requirements established by the country or countries into which operation is to be conducted.

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

Self explanatory.

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

The operating certificate and the operations specifications need not be displayed but must be readily available at the principal base of operation for inspection on request.

Copies of the air carrier operating certificate and operations specifications shall be included in the manual required by section 42.42 of Civil Air Regulations.

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

Self explanatory.

42.1 AIRCRAFT REQUIREMENTS

42.10 General. Aircraft must be certificated in accordance with the airworthiness requirements of the Civil Air Regulations, and shall be of a type and class which the Administrator finds safe for the service offered.

Irrespective of the basis for certification, all aircraft in passenger service possessing engine(s) rated at more than 600 hp. (each) for maximum continuous operation shall comply with the following; except that, if the Administrator finds that in particular models of existing aircraft 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:

(a) §§ 04.075 and 04.3824 (a) of the Civil Air Regulations as amended September 20, 1946,

(b) at the first major fuselage overhaul subsequent to January 1, 1947, but in any case not later than January 1, 1948, §§04.38210, 04.38230, 04.3824 (b), (c), and (d), 04.38251, and 04.38252 of the Civil Air Regulations as amended September 20, 1946,

(c) at the first major wing center-section overhaul subsequent to January 1, 1947, but in any case not later than September 1, 1947, §§ 04.4113, 04.4211, 04.4231 (c), 04.425 through 04.4251, 04.4320, 04.4321, 04.433, 04.434, 04.441 and subsections, 04.470 through 04.472, 04.49 through 04.4902, 04.491 (a) and (c), and 04.4910 through 04.493 of the Civil Air Regulations as amended September 20, 1946.

At least one aircraft (owned or leased), which is properly equipped and certificated for the type or types of operations to be engaged in must be provided. If the aircraft utilized in

such operations are not owned by the applicant, a copy of the leasing agreement covering their use shall be made available to the inspector at the time of the initial inspection and such other inspections as may be conducted.

Single-engine aircraft rated at more than 600 h. p., maximum except take-off, and multi-engine aircraft in which each engine is rated at more than 600 h. p., maximum except take-off, are required to comply with (a), (b) and (c) of this section.

(a) The Administrator has prepared detailed instructions (in the form of safety regulation releases) relating to heat conditions, test procedures, and specific materials to be used.

(b) and (c) It is recommended that information concerning details of installations, etc., be obtained from the manufacturer of the aircraft.

42.11 Oxygen apparatus. 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.

Self explanatory.

42.12 Emergency equipment. Aircraft to be 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 floation 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.

If operations which require emergency procedures are conducted, the operator shall develop in chapter 6 of his manual those following pertinent subjects which may be necessary for the type of operation conducted: Location of emergency equipment in the aircraft; instructions regarding emergency exits of the aircraft and the proper assignment of personnel and passengers to stations during ditching or crash landings, as well as procedures for abandoning aircraft; instructions regarding the care and method of donning and adjusting or utilizing emergency equipment; and instructions and requirements relative to air, sea, and land rescue equipment, such as—

1. Life vests,
2. Life rafts,
3. Emergency sustenance kits,
4. Life raft repair kits,
5. Emergency signaling equipment—kites, balloons, mirrors, etc.,
6. Emergency communications equipment and radio procedures.

Life rafts, when required, shall be equipped with water supply, sea anchors, oars, sail, hand bilge pump, repair kit, plugs, CO_2 inflation bottle, bailing bucket, hand knives, police whistle, flares, 40-foot cord, sea marker dye, mirrors, fishing kit, survival book, flashlight, compass, match container, cotton gloves, mosquito head nets, water stills, sunburn ointment, and other items appropriate to the area over which the flight is conducted.

For the purposes of this manual, any over-water operation by a single-engine aircraft, outside of gliding distance from land; or any over-water operation by a multiengined aircraft, more than 50 miles from land, will require emergency floatation equipment.

Equipment which may be required or needed in other areas may include mosquito bars, crash tools, pyrotechnic pistols, appropriate rations (tropical or frigid), hand axe or machete, bed roll, blankets, smoke grenades, jungle medical kits, aerosol sprayer, extra first-aid kits, water supply, arctic suits, boots, etc., arctic first-aid kits, snowshoes, and skis, etc., and firearms.

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

(a) CFR (day)

(1) air-speed indicator,
(2) sensitive altimeter adjustable for change in barometric pressure,
(3) magnetic direction indicator,
(4) tachometer for each engine,
(5) oil pressure gage for each engine using pressure system,
(6) temperature gage for each liquid-cooled engine,
(7) oil temperature gage for each air-cooled engine,
(8) manifold pressure gage, or equivalent, for each altitude engine,
(9) fuel gage indicating the quantity of fuel in each tank,
(10) position indicator, if aircraft has retractable landing gear or flaps,
(11) two-way radio communications system when aircraft is operated in airport traffic zones,
(12) certificated safety belts for all passengers and members of the crew,
(13) in passenger service, in addition to fire detecting and fire extinguishing equipment necessitated as a result of compliance with § 42.10 (b) and (c), a minimum of two hand fire extinguishers of an approved type with an approved extinguishing agent, one of which installed in the crew compartment, others readily accessible to the passengers. Such additional hand fire extinguishers as the Administrator finds necessary for compliance with § 42.10 (b). In cargo service, fire extinguisher(s) adequate for the aircraft,
(14) source of electrical supply, sufficient to operate all radio and electrical equipment,
(15) one spare set of fuses or three spare fuses of each magnitude,
(16) first-aid kit adequate for the crew and passengers.

(b) CFR (night) and IFR

(1) instruments and equipment specified in paragraph 42.13 (a),
(2) set of certificated forward and rear position lights,
(3) at least one electric landing light,
(4) certificated landing flares as follows, if the aircraft is operated beyond a 3-mile radius from the center of the airport of take-off:

Maximum authorized weight of aircraft	*Flares*
3,500 pounds or less	5 class-three or 3 class-two
3,500 pounds to 5,000 pounds	4 class-two
above 5,000 pounds	2 class-one, or 3 class-two and 1 class-one

If desired, flare equipment specified for heavier aircraft may be used.

(5) two-way radio communications system and navigational equipment appropriate to the ground facilities to be used,
(6) gyroscopic rate-of-turn indicator,
(7) bank indicator,
(8) clock with a sweep-second hand,
(9) generator of adequate capacity,
(10) one set of instrument lights,
(11) one gyro direction indicator,
(12) one outside air temperature gage easily readable from the pilot's position,
(13) one carburetor temperature gage or equivalent approved device,
(14) if vacuum system is used, a vacuum gage on the instrument panel installed in lines leading to air-driven gyroscopic instruments.

Aircraft utilized in nonscheduled passenger operation shall be equipped with suitable seat and approved safety belt for each passenger carried.

It should be noted that the equipment listed above for nonscheduled air carrier operations includes certain items of equipment which are in addition to that required by C. A. R. Part 43 for comparable operation.

For day IFR operation, compliance with light and flare requirements is not necessary.

Radio equipment used in nonscheduled air carrier transportation for communications and navigation whenever instrument flight is authorized should be type certificated by the Admin-

istrator and adequate for the operation. In the event such radio equipment is not type certificated, approval for its use may be granted after inspection has determined safety and adequacy for the operation involved.

No instrument flight is authorized into an airport located in a traffic control area unless the aircraft has suitable equipment in proper working order and the pilot is competent and able to maintain satisfactory communication with airway traffic control and accomplish an authorized instrument approach and let-down and comply with holding and stacking requirements during congested traffic conditions.

A minimum of two fire extinguishers are required in single-engine aircraft rated at more than 600 h. p., maximum except take-off, and multiengine aircraft in which each engine is rated at more than 600 h. p., maximum except take-off. Other aircraft certificated under provisions of this part shall have adequate fire-extinguisher protection.

Operation of aircraft shall not be conducted unless aircraft is in airworthy condition and all instruments and equipment necessary for the flight are operative.

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

Pilot's check list shall be prepared and maintained in the pilot's compartment, shall be legible during hours of daylight and darkness under the light conditions of the cockpit; in addition, a pilot's check list for all types of aircraft used shall be placed in the operations manual.

Check lists developed by the manufacturer, military services, or the operator will be considered satisfactory, providing the following steps are covered:

Pre-starting,
Starting engines,
Warm up engines,
Taxiing,
Run up engines,
Take off,
Climb,
Cruising,
Prior to descent,
After landing,
Stopping engines.

It is recommended that in all multiengine equipment, a one-engine inoperative check list and an emergency check list be available in cockpit for pilot's reference after encountering difficulty which may cause one or more engines to become inoperative. It is further recommended that all aircraft having retractable gear and flaps also have check lists prepared for emergency use in event of failure.

42.15 Maintenance. All aircraft shall be maintained in airworthy condition and all repairs, alterations, and overhauls shall be performed in accordance with Part 18.

It is the operator's responsibility to maintain all aircraft in an airworthy condition at all times when operated in nonscheduled air carrier operation.

All maintenance, repairs, overhauls, and alterations shall be accomplished under the supervision of a certificated airman holding the appropriate mechanic rating for the work involved.

All repairs, overhauls, and alterations shall be in accordance with materials, procedures, and standards contained in CAM 18, using proper equipment and tools for the type of work involved.

Civil Aeronautics Administration airworthiness directives and manufacturers' manuals, directives, bulletins, and notes shall be complied with as directed.

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The manufacturer's recommendations shall be used in determining the overhaul periods and requirements on engines, propellers, and other component parts and equipment, including instruments and other items installed on aircraft operating under the nonscheduled air carrier operating certificate.

Requirements of Civil Air Regulations shall be complied with in recording maintenance repairs, overhauls, and alterations accomplished on aircraft used in nonscheduled air carrier operation.

Operation of aircraft shall not be conducted unless all instruments and equipment necessary for the flight are operative.

42.150 Inspections. Aircraft must be given:

(a) an annual inspection within each 12-month period, and

(b) a periodic inspection within each 100 hours of flight time.

The annual inspection required in (a) will be accepted as one such periodic inspection.

An aircraft shall not be used in nonscheduled air carrier operation unless it has been inspected and certificated as airworthy by a representative of the Civil Aeronautics Administration within the 12 calendar months preceding such operation. Application for annual inspection shall be made on appropriate Civil Aeronautics Administration form accompanied by Periodic Inspection Report Form ACA–319, reflecting the inspection accomplished immediately prior to submitting the aircraft for inspection.

The periodic inspection required within each 100 hours of flight time shall be accomplished by or under the direct supervision of certificated mechanics with appropriate ratings. Civil Aeronautics Administration Form ACA–319 shall be used in recording the results of the periodic inspection and shall contain the mechanic's recommendations as to the airworthiness condition of the aircraft. The current Form–319 shall be kept with the aircraft log books. When aircraft is to be away from its base of operation, the current log books or approved operating sheet and current inspection report (Form 319) shall accompany the aircraft.

Manufacturers' approved maintenance and inspection reports may be used in lieu of Civil Aeronautics Administration Form ACA–319.

In lieu of a complete inspection at any one time, the operator may develop a progressive periodic inspection system and report form designed to assist in accomplishing periodic inspection on a progressive basis. Such a system shall be proved to be satisfactory to the Administrator.

The periodic inspection required at the time of annual inspection may be recorded on the inspection report form prepared by the operator. However, a complete inspection of the aircraft shall be made immediately prior to submission of the aircraft for annual inspection.

Unless the size and/or character of the aircraft or other conditions beyond control of the operator are such as to make it impracticable to do so, all periodic inspections shall be carried out in a properly lighted and heated (if climatic conditions so require) shop or hangar. When hangars are used for this purpose, sufficient clear space shall be provided to enable a proper and adequate inspection to be conducted.

42.2 PILOT RULES

42.20 First pilot.

(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) Preflight action. Prior to commencing a flight the pilot shall familiarize himself with the latest weather reports issued by the United States Weather Bureau pertinent to the flight 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) Maps and flight equipment. The pilot shall have in his possession in the cockpit proper flight and navigational facility maps, 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) Check and control test. Immediately prior to take-off the pilot shall check the items specified in the check-off list and in addition 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.

(e) 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, requires immediate decision and action. He may in such situations, deviate from prescribed methods, procedures, or minimums to the extent required by considerations of safety and shall, when practicable, keep the proper control station fully informed regarding the progress of the flight. When such emergency authority is exercised the pilot shall file a report of such deviation with the Administrator.

(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.

(a) The pilot is in full charge and responsible for—

1. Safe and efficient conduct of the operation to which assigned.
2. Proper performance of duties by other members of the flight crew.
3. Proper supervision of all personnel during flight, including passengers.
4. Compliance with all Civil Air Regulations and requirements of operations specifications attached to the nonscheduled air carrier operating certificate.
5. Utilizing only landing areas which are of sufficient size and in proper condition to permit take-offs and landings with the aircraft and load involved with a reasonable margin of safety.

(b) The pilot is responsible for—

1. The exercise of good judgment and discretion in preparation of clearances and for the planning of flight.
2. Reporting in sufficient time to permit reading of pilot bulletins, current airways notices, studying weather forecasts and reports, and other items incident to preflight preparation.
3. Departures made from locations where weather facilities are not readily available in that, as soon after take-off as possible, he shall obtain, while in flight, this information by radio.
4. Load position, stowage of cargo, and tie-down conditions.
5. Passenger seating and use of safety belts.
6. Sufficient fuel and oil aboard and such other items as may be necessary for the safety of the flight (such as de-icer fluid, etc.).
7. Ascertaining that a daily preflight inspection has been accomplished to determine airworthiness of the aircraft prior to dispatch and recorded in aircraft log or upon a form provided for the purpose.

(c) The pilot is responsible for—

1. Having an adequate and current set of maps relative to the route or routes to be flown, Flight Information Manual, and Airman's Guide, together with proper pilot kit, including navigation computer or calculator.

(d) The pilot is responsible for—

1. Testing radio equipment and such instruments as may be ground-checked to ascertain that they are working satisfactorily.
2. Full utilization of pilot's check list.

(e) The pilot—

1. In such emergency shall file written report with the Administrator at the conclusion of the flight or in any event no later than 48 hours after the action has been taken.
2. Shall be fully informed relative to the following:
   Instruction prepared by the company covering full discussion of the problems

relative to the safety of dumping fuel in order to reduce load for landing as compared to landing with excess weight aboard for the particular type of aircraft concerned.

The company instructions relative to wheel-up landings, also the hazards of runway landings or turf landings under such conditions.

Full and proper instructions relative to the utilization of full-feathering propellers when installed on the particular type of aircraft.

42.21 Flight time limitations. A pilot may not fly more than 10 hours in any 24 consecutive hours without an intervening period of at least 8 hours during which he is relieved of all duty with the carrier.

In computing the flight time limitations for a pilot, it is also considered that the same limitations apply to copilots.

Flight time limitations shall be computed, covering the time the aircraft starts take-off and effects landing, and does not include ground time either taxiing or awaiting cargo or passengers.

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 class rating for the aircraft in which he is to serve, and for:

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

(2) Day flight IFR, 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,

(3) Night flight CFR or IFR, 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.

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

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

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

The operator shall maintain, in satisfactory form and make available to the inspector, information relative to qualifications of first pilots and second pilots. These records shall be brought up to date at periods not to exceed 30 days. At the time of initial application, the inspector shall review this information prior to making recommendations relative to granting of the certificate.

If instrument off-airway operation is authorized, the pilots to be utilized shall demonstrate that they are capable of navigating along a predetermined flight path over a predetermined route without deviating more than 5 degrees or more than 5 miles either side (whichever is least) from a straight line drawn between the station of departure and the next station of arrival.

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 5 take-offs and landings to a full stop in the same type and class of aircraft, 2 of which must have been in the same make and model. He shall not serve during the hours of darkness unless he has made at least 5 take-offs and landings to a full stop during the hours of darkness within the preceding 90 days.

(b) Instrument flight. A first pilot shall not pilot an aircraft under instrument flight rules unless within the preceding 6 months he has had a minimum of 6 hours of instrument flight time, at least 2 hours of which shall have been acquired by actual flight in the overcast while on an instrument flight plan filed with the appropriate traffic control center.

It is to be noted that two of the required five take-offs and landings are to be in the same make and model aircraft instead of one within 50 percent of the rated horsepower as required by C. A. R. 43.680.

It shall be the responsibility of the operator employing the pilot to maintain records relative to recent flight experiences and to assign to flights only such pilots as are qualified under this regulation.

It shall be the operator's responsibility to determine that each pilot employed in instrument operation is competent to accomplish authorized instrument approach and let-down at all airports into which such pilots are dispatched under instrument conditions.

It shall be the operator's responsibility to determine that each pilot is familiar with the equipment and is capable of obtaining maximum performance of the aircraft during emergency operating conditions (such as one-engine inoperative climb, maneuverability, and landing characteristics).

When pilots are unable to fly, actually and not by simulation, in the overcast on an instrument flight plan for at least a period of 2 hours as required by this regulation, the pilot shall have a total of 8 hours instrument flight time, all of which shall be in aircraft under simulated instrument conditions.

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 50 percent of the total flight time, or he may log all the flight time during which he is the sole manipulator of the controls.

Self explanatory.

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 instrument conditions.

Instrument flight time is not construed to include over-the-top operation while the aircraft may be flown by reference to the horizon.

42.3 FLIGHT OPERATION RULES

42.30 Manifest. The Administrator may require a flight manifest form for each flight if he finds it necessary for the safe operation of a type and class of aircraft or a particular type of operation. This form shall show the distribution in the aircraft of the total pay load carried, and must be signed by the pilot or other authorized person charged with the duty of loading the aircraft. The pilot shall retain the original manifest until he has completed the flight and the air carrier must keep a copy available for inspection for at least 90 days at the principal operations office.

All aircraft requiring a loading schedule shall have a manifest, under this regulation. The manifest shall include at least the following information:

1. Company or organization name,
2. Date of flight,
3. Flight or trip number,
4. Departure point,
5. Aircraft make, model, and registration number,
6. Pilot's name,
7. Loading location and weight,
   - Crew,
   - Gasoline,
   - Oil,
   - Passengers,
   - Cargo,
   - Ballast (if any);
8. Aircraft weights,
   - Empty, gross, useful;
9. Aircraft C. G. limits,
10. C. G. of aircraft as loaded,
11. Signature of pilot or authorized loading officer.

42.31 Flight record. A flight record for each flight beyond 25 miles from the airport or landing area of

origin shall be kept for a period of 12 months at the principal operations office, and shall contain the following information:

(a) date and type of flight—CFR (day or night), IFR, or combination,
(b) aircraft make, model and NC number,
(c) names of pilot and crew,
(d) point of departure,
(e) point of destination,
(f) route to be followed and intended stops en route,
(g) estimated time of arrival at destination,
(h) amount of fuel on board (in hours of cruising consumption),
(i) names and addresses of passengers carried.

Such flight record is in addition to the flight plan required by paragraph 60.250 for IFR flight in control areas.

When passengers and/or cargo are picked up at points other than where the principal operations office is located, the first pilot shall, before starting flight, complete the records required by Civil Air Regulations 42.31 and 42.30 (if required) and cause them to be mailed to the principal operations office.

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.

In the event that IFR instruments or equipment become inoperative, regulation 42.32 is interpreted to mean that if CFR instruments are operative, the flight may be started or continued under CFR conditions.

If any required instrument or equipment, having functions which are not compensated, becomes inoperative during an instrument flight, a landing must be made at the first airport where proper facilities to permit a safe landing are available or, if conditions permit, the flight may be continued under day CFR.

42.33 Fuel supply.

(a) Flight under contact flight rules (CFR). A flight shall not be started unless the aircraft carries sufficient fuel and oil, considering the wind and other weather conditions forecast, to fly to the next point of intended landing and thereafter for a period of at least 30 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 to:

(1) complete the flight to the point of first intended landing, and thereafter,
(2) fly to the alternate airport, and thereafter,
(3) fly at normal cruising consumption for a period of 45 minutes.

Self explanatory.

42.34 Weather minimums.

(a) Take-off. No flight may be started when the visibility is less than 1 mile or the ceiling is less than 200 feet at the point of take-off.

(b) Destination. No flight may be started unless the current weather reports and forecasts show a trend indicating that the ceiling and visibilities at the place of intended landing are, and will remain, at or above the following minimums:

(1) Contact flight operations (CFR).
  (a) ceiling—1,000 feet,
  (b) visibility—3 miles.
(2) Instrument flight operations (IFR).
  (a) ceiling—500 feet,
  (b) visibility—1 mile,
  (c) alternate airport: if airport is served by a radio directional facility, ceiling—1,000 feet, visibility—3 miles; if airport is not served by a radio directional facility, visibility 3 miles and a ceiling of 1,500 feet with broken clouds or better.

(a) Self explanatory.

(b) It is to be noted that this regulation pertains only to destination at the time of starting of flights and does not pertain to limitations at destination at time of arrival. The 500-foot ceiling specified for airport of destination under IFR is not an over-all minimum for all airports. At airports where the Flight Information Manual publication prescribes a minimum safe let-down altitude over the field higher than 500 feet, or visibility greater than 1 mile, these figures so given in the Flight Information Manual shall be used as the minimums under which clearance to such airports will be authorized. At no time shall the "minimum let-down altitude over airport" be less than 500 feet and visibility less than 1 mile as prescribed by 42.34.

Weather Information. The holder of a nonscheduled operating certificate will be responsible that pilots and dispatchers are governed by weather reports as provided by the U. S. Weather Bureau. When operations are conducted at points where U. S. weather reports are not available, the pilot or dispatcher is responsible that provisions of the Civil Air Regulations pertaining to weather minimums are complied with and that, at all times, a safe operation is conducted.

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 by the Administrator.

(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 of the aircraft in flight.

(a) Self explanatory.

(b) It is to be noted that there is a difference in the elevation required in that the altitude shall be above the highest obstacle within 5 miles and not above the terrain as previously stated in other regulations.

42.36 Icing conditions. Aircraft must not be flown into known or probable heavy icing conditions and may be flown into light or medium icing conditions only if the aircraft is equipped with an approved means for de-icing the wings, propellers, and such other parts of the aircraft as are essential to safety.

Self explanatory.

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

Standard instrument approach procedures authorized will be those contained in the Flight Information Manual publication of the Civil Aeronautics Administration.

Standard visibility minimums and minimum safe let-down altitudes will be those contained in the CAA Flight Information Manual publication. The standard visibility minimum throughout the entire continental United States is established as 1 mile, except as otherwise indicated in the CAA Flight Information Manual publication.

Traffic clearance issued by a control center or tower is an approval for the flight or portion thereof only with regard to prevention of collision between known aircraft and does not authorize pilots to violate Civil Air Regulations.

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 when he is replaced by a person authorized under the provisions of § 42.41.

In the case of aircraft certificated for a crew of two, it shall be construed that in nonscheduled air carrier operation such crew consists of two qualified pilots.

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 or a representative of the Board 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.

Self explanatory.

42.42 Manual. When the Administrator finds that the operation and type of aircraft used so requires, 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. The manual must be in a form and content approved by the Administrator, and be furnished to all persons designated by the Administrator or Board. All copies must be kept up-to-date.

All certificated, nonscheduled operators shall develop, maintain, and distribute a manual to all pilots and supervisory maintenance personnel, containing such operations maintenance instructions are are necessary for the type operations and aircraft concerned, and interpreting the operator's procedures to be followed in complying with the operations and maintenance requirements of Part 42 and CAM 42.

The manual shall be developed in loose-leaf form on standard letter-size paper. The manual shall be maintained current and contain at least the following:

When authorized CFR day only or CFR day and night:

Chapter 1—

Part 1—A copy of the operating certificate and operations specifications made part of that certificate,

Part 2—The current Airman's Guide, published by the Civil Aeronautics Administration,

Part 3—Part 42 of the Civil Air Regulations and CAM 42,

Part 4—Such other Civil Aeronautics Administration publications as may be considered necessary.

When authorized IFR day or IFR day and night:

The above material and

Part 5—In which shall be maintained the current Flight Information Manual publication of the Civil Aeronautics Administration, and also any additional instrument approach charts which may be required for a particular flight.

In the event DF procedures for letting down are to be used, appropriate procedures shall be contained in the manual.

If only one type of aircraft is operated under the nonscheduled operating certificate, a copy of the manufacturer's manuals pertaining to pilots' operating instructions shall be made a part of the manual. If more than one type or model of aircraft is operated under the certificate, the pilots' operating instructions shall be maintained in the cockpit of each aircraft.

If more than five single-engine aircraft, or any number of multiengine aircraft are operated under the nonscheduled operating certificate, the above items, together with the following listed items, shall be contained in the operations manual:

Chapter 2—Organization and company personnel,

Chapter 3—Operations instructions of the company,

Chapter 4—Maintenance instructions of the company,

Chapter 5—Accidents and emergency procedures, dumping fuel, wheel-up landings,

Chapter 6—If operations are conducted over large expanses of water areas, or uninhabited terrain, or tropical or frigid areas, specifications for emergency procedures and the character of equipment required shall be developed in this chapter.

Chapter 7—Foreign Operations.

A nonscheduled air carrier will, prior to beginning operations in or over foreign countries, direct a communication to the Office of Foreign Operations, Civil Aeronautics Administration, Washington 25, D. C. This communication shall contain a statement that the air carrier has obtained from each foreign country over or into which he intends to operate, authorization for such operations, and permission to

use specifically named airports and/or landing areas, and of the duration of such authorization and permission.

NOTE: Only one notification to CAA of intention to operate into a foreign country is required during the period for which authorization has been granted, if such authorization is in excess of one flight.

A nonscheduled air carrier will furnish the following documents where applicable to the first pilot for retention in his possession during any international flight:

Evidence of authorization from each foreign country over which or into which flight has been authorized.

A copy of the communication which has been directed to Civil Aeronautics Administration, Office of Foreign Operations, Washington 25, D. C., referred to above.

Copy of pertinent flight orders to pilot indicating routes to be flown, airports of call, instructions with respect to the servicing and maintenance of aircraft and equipment in foreign countries, and channels of communications to be employed between the company and the pilot.

NOTE: Irrespective of the number of aircraft operated, the operations manual will contain chapters 6 and 7 if operations will be such as to require them; otherwise, these chapters may be omitted.

42.43 Records. Each carrier shall keep at the operating base the following current records with respect to all aircraft, aircraft engines, propellers, and, where practicable, appliances used in air transportation:

(a) total time and service,
(b) time since last overhaul,
(c) time since last inspection, and
(d) mechanical failures.

Self explanatory.

42.44 Emergency flights. In the case of emergencies necessitating the transportation of persons or medical supplies for the protection of life or property, 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 any such flight returns to its base the air carrier shall file a report with the Administrator setting forth the conditions under which the flight was made, the necessity therefor, and giving the names and addresses of the crew and passengers.

Self explanatory.

42.45 Exemptions. An air carrier engaged in nonscheduled air carrier operations on or before August 1, 1946, may continue to engage in such nonscheduled air carrier operations without an air carrier operating certificate until such time as the Administrator shall pass upon the application for such certificate if prior to September 15, 1946, he has filed with the Administrator an application for such certificate.

Self explanatory.

42.46 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 for a particular operation or a class of operations for which an application for an air carrier operating certificate has been made, he may issue an air carrier operating certificate with appropriate changes. The Administrator shall promptly notify the Board of any deviations included in the air carrier operating certificate and the reasons therefor.

Self explanatory.

42.9 DEFINITION

Air carrier means any citizen of the United States who undertakes, whether directly or indirectly, or by a lease, or by any other arrangement 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 whether such commerce moves wholly by aircraft or partly by aircraft and partly by other forms of transportation, between any of 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 air space over any place outside thereof; places in the same Territory or possession (except the Philippine Islands) of the United States, or the District of Columbia; 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, and a place in any other Territory or possession of the United States; a place in the United States and any place outside thereof.