PART 41 - CERTIFICATION AND OPERATION RULES FOR SCHEDULED AIR CARRIER OPERATIONS OUTSIDE THE CONTINENTAL LIMITS OF THE UNITED STATES

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The following regulations are prescribed for scheduled air transportation operations conducted by air carriers between 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; or between any place in a Territory or possession and a place in any other Territory or possession of the United States; or between places within a Territory or possession; or between any place in the United States and any place outside thereof; or between any two places outside the United States.

CERTIFICATE

41.00 Issuance. An air carrier operating certificate prescribing the type of operation, the routes or airways over which such operations may be conducted, the airports which may be used, and such other specifications and restrictions 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 regulations hereinafter specified.

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

41.02 Duration. An air carrier operating certificate will continue in effect until canceled, suspended, or revoked, after which it shall be surrendered to any officer or employee of the Administrator upon request.

41.03 Nontransferability. An air carrier operating certificate is not transferable except with the written consent of the Administrator.

41.04 Display. The air carrier operating certificate must be available at the appropriate operations office for inspection by any duly authorized representative of the Administrator or Board.

41.05 Inspection. A duly 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 appropriate requirements of the Civil Air Regulations and the Civil Aeronautics Act of 1938.

PASSENGER OPERATION RULES

41.1 ROUTE REQUIREMENTS

41.10 Airport spacing. In the case of operations employing aircraft having two engines, airports adequate for the equipment used must be located so that the aircraft, when flying along the route, will at no time be at a greater distance therefrom than 45 minutes flying at normal cruising speed; except where the Administrator finds that because of the character of the terrain, the type of operation, and the type of aircraft used, adequate safety will be provided with airports spaced at greater distances.

41.11 Communications facilities. A two-way ground-to-aircraft radio communications system must be available at regular airports and such other points as are necessary to insure adequate communication between plane and ground over the entire route.

41.12 Weather reporting services. Weather reporting services must be available at regular airports and at such other points along the route as are necessary to insure sufficient weather reports prepared from observations made and released by a source acceptable to the Administrator.

41.13 Navigational facilities.

(a) Short range operation. Except in the case of a day contact operation where the characteristics of the terrain are such that navigation can be accomplished by reference to land marks, each route must be equipped with radio navigational facilities so located as to permit navigation by such facilities over the entire route. For instrument operation a facility must be so located with respect to each scheduled stop and required alternate airport as to provide adequate means for making an instrument approach. In day instrument operation such a facility is not required at an alternate used only when the weather conditions are ceiling unlimited, visibility at least 2 miles, with conditions stable or improving.

(b) Long range operation. Each regular and alternate route must be equipped with radio navigational facilities so located as to permit the obtaining of reliable radio bearings when within 100 miles of any regular or approved alternate airport and a facility must be so located with respect to each such airport as to provide adequate means for making an instrument approach: Provided, That the Administrator, at particular points, may require an increase in the above distance if found necessary in the interest of safety.

41.14 Airport lighting facilities. For night operation each scheduled stop and required alternate airport must be equipped with adequate lighting facilities.

41.2 AIRCRAFT REQUIREMENTS

41.20 General.

(a) Aircraft must be certificated and equipped in accordance with the airworthiness requirements of the Civil Air Regulations applicable to the type of operation conducted.

(b) Airplanes not certificated under the transport category requirements must have such characteristics as to permit safe operation over the routes on which such airplanes will be operated.

(c) Land aircraft operated over water beyond gliding distance from shore without the aid of power must be equipped with retractable landing gear. All aircraft so operated must be equipped with one or more suitable emergency exits.

(d) Multiengine airplanes must be so equipped that engine rotation may be promptly stopped during flight.

(e) Operations which do not comply with the requirements of this Part will be permitted to continue for the duration of the war and 12 months thereafter if the Administrator finds that such continuation is necessary to the maintenance of an established service and that it will create no undue hazard under the particular conditions existing.

41.21 Radio equipment.

(a) Each aircraft must be equipped with one type certificated radio communications system capable of maintaining communication with at least one ground station from any point on the route to be flown and capable of communication with airport traffic control towers and stations transmitting meteorological information; and one additional type certificated radio receiving system capable of receiving airport traffic control stations and stations transmitting meteorological information.

(b) If radio navigational facilities are required by the provisions of § 41.13, each aircraft must be so equipped as to provide two independent systems for navigation by such facilities. If appropriate, the navigational receiving systems required herein may be considered as meeting the requirements of paragraph (a) relative to the reception of meteorological information and airport traffic control tower communications.

(c) In the case of short range night contact or instrument operation, each aircraft, in addition to the equipment required by paragraphs (a) and (b), must be equipped with one type certificated receiving system for the reception and visual indication of 75 megacycle marker beacon facilities or an adequate alternate method of determining position over designated fixes.

(d) In the case of long range operation, each aircraft, in addition to the equipment required by paragraphs (a), (b), and (c), must be equipped with one type certificated radio communications system having sufficient power output to communicate with at least one ground station from any point on the route flown and capable of communication with airport traffic control stations.

41.22 First-aid and emergency equipment. Each aircraft must be equipped with a conveniently accessible first-aid kit adequate for the type of operation involved. Aircraft scheduled over routes requiring flights for 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 must 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 for short distances over open water and the Administrator finds in each case that such equipment is not necessary. In addition, all aircraft operated for long distances over water must be equipped with life rafts and such additional

emergency equipment as may be required by the Administrator.

41.24 Oxygen apparatus.

(a) Aircraft not having pressurized cabins and 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 must be equipped with effective oxygen apparatus and an adequate supply of oxygen available for the use of the operating crew. Such aircraft must 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.

(b) Unless oxygen is supplied in accordance with paragraph (a), aircraft having pressurized cabins shall not be operated with a pressure within the cabin less than that corresponding to a pressure altitude of 10,000 feet. Aircraft having pressurized cabins and operated at altitudes in excess of 18,000 feet above sea level must be equipped with an adequate emergency supply of oxygen available for the use of the flight crew.

41.25 Instruments and equipment required for continuance of flight. If any of the required instruments or equipment in an aircraft becomes unserviceable in flight, a landing must be made either at the nearest suitable landing area or at the next point of intended landing whichever, in the opinion of the pilot, is the safest procedure. If the equipment specified below for the type of operation indicated is in serviceable condition, flight may continue as scheduled to the nearest point where repairs or replacements can be made. The items listed are required for all types of operation unless otherwise specified:

(a) one airspeed indicator and one sensitive type altimeter (contact operation); two airspeed indicators and two sensitive type altimeters (instrument operation),

(b) one magnetic compass,

(c) a tachometer for one engine, one fuel pressure gauge with warning indicator, one oil pressure gauge with warning indicator, and one oil temperature or cylinder temperature gauge for each engine,

(d) a manifold pressure gauge for one engine,

(e) two approved type portable fire extinguishers and a fire extinguishing system to serve each engine compartment,

(f) one landing gear position indicator or equivalent facility, if equipment includes a retractable landing gear,

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

(h) two of the following three units of radio equipment:

(1) one transmitter for two-way communication,
(2) one receiver for two-way communication,
(3) one receiver capable of receiving navigational signals.

In addition to the above, one of the radio navigational systems required by § 41.21(b); if navigational facilities on the route are required by § 41.13 (day contact),

(i) all radio equipment required by these regulations (night contact and instrument),

(j) forward position and tail lights, two landing lights, one set of instrument lights, and two landing flares each rated for at least 3-minute duration (night operation),

(k) fuel quantity indicators indicating the amount of fuel in each tank to be used for the remainder of the flight (night contact and instrument),

(l) an electrically heated pitot tube serving each pilot's airspeed indicator (night contact and instrument),

(m) one gyroscopic rate-of-turn indicator combined with a bank indicator, one artificial horizon indicator, and one gyro direction indicator (night contact and instrument),

(n) one outside air temperature gauge with indicating dial in cockpit and one carburetor air temperature indicator or equivalent approved device (night contact and instrument),

(o) 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 artificial horizon indicators and the gyro direction indicator (night contact and instrument),

(p) one clock with sweep-second hand (night contact and instrument),

(q) one spare set of fuses (night contact and instrument), and

(r) one safety belt for each person aboard.

41.26 Airplane certification limitations.

(a) Airplanes certificated as a basic type after June 30, 1942, must be certificated in accordance with the transport category requirements of Part 04 and meet the requirements of § 41.27 over each route to be flown.

(b) Airplanes used after December 31, 1947, must have been certificated in accordance with the transport category requirements of Part 04 and meet the requirements of § 41.27 over each route to be flown.

41.27 Operating limitations on airplanes certificated under transport category requirements. In operating any airplane certificated in accordance with the provisions of § 04.75-T, the restrictions of §§ 41.270 to 41.2731, inclusive, must be observed unless deviations therefrom are specifically authorized by the Administrator on the ground that a peculiarity of the particular circumstances of a particular case makes a literal observation of the restrictions unnecessary for safety in that case.

In determining compliance with these provisions the data obtained in testing the airplane for type certification may be applied, by interpolation or by computation of the effects of changes in specific variables, to conditions differing from those for which specific tests were made, where such interpolations or computations will give results substantially equaling in accuracy the results of a direct test.

41.270 General limitations.

(a) Airplanes shall be operated only from airports at altitudes within the altitude range for which maximum take-off weights have been determined and set forth in the airplane operating manual and shall be dispatched only to airports of intended destination, or to airports specified as alternates, which are at altitudes within the range for which maximum landing weights have been determined and set forth in the airplane operating manual.

(b) The weight of an airplane at take-off must not exceed the certificated maximum take-off weight for the altitude of the airport from which the take-off is made.

(c) The gross weight at take-off must be such that, allowing for the consumption of the amount of fuel which would normally be consumed in flight to the intended destination, the weight on arrival at the destination will not exceed the certificated maximum landing weight for the altitude of the field of intended destination.

41.271 Take-off limitations to provide for engine failure. Take-offs shall be made only from such fields, in such directions, and under such gross weight limitations that the following conditions are fulfilled as shown by the performance data determined under § 04.7532-T and set forth in the airplane operating manual:

(a) From any point on the take-off up to the time of attaining the critical-engine-failure speed set forth in the airplane operating manual it must be possible to bring the airplane to a safe stop within the landing area, as shown by the accelerate-and-stop distance data.

(b) If the critical engine should fail at any instant after the airplane attains the critical-engine-failure speed, it must be possible to proceed with the take-off and attain a height of 50 feet, as indicated by the take-off path data, before passing over the end of the take-off area. Thereafter it must be possible to clear all obstacles either by at least 50 feet vertically, as shown by the take-off path data, or by at least 200 feet horizontally within the airport boundaries and 300 feet horizontally after passing beyond such boundaries.

In determining the allowable deviation of the flight path, in order to avoid obstacles, it is assumed that the airplane is not banked before reaching a height of 50 feet, as shown by the take-off path data, and that the maximum bank thereafter does not exceed 15°.

(c) In applying the requirements of paragraphs (a) and (b) correction must be made for any appreciable gradient of the take-off surface. Take-off data based on still air may be corrected to allow for the effect of a favorable wind which is equal to not more than 50 per cent of the component along the take-off runway due to the reported wind condition.

41.272 En route limitations. An airplane shall be dispatched only under such conditions that in progressing along the intended route, with the weight of the airplane progressively reduced by the anticipated consumption of fuel and oil, the maximum one-engine-inoperative operating altitude, as defined in § 04.7513-T and as set forth in the airplane operating manual, will at all times exceed by at least 1,000 feet the altitude of the highest ground or obstruction within 10 miles on either side of the intended route. Where special air navigational facilities provide for close and specific identification of an obstruction or of high ground extending for less than 20 miles along the route, the maximum lateral distance from the intended route up to which such obstruction or high ground must be taken into account may be reduced to 5 miles.

41.273 Landing distance limitations.

(a) An airplane must be dispatched only under such conditions that it would be possible, as shown by the still-air landing data obtained in § 04.7533-T and set forth in the airplane operating manual, at a weight corresponding to the maximum weight expected to exist at the time of arrival at the airport of intended destination, and under standard air conditions for the altitude of such airport, to bring the airplane to rest from a point 50 feet directly above the intersection of the obstruction clearance line (as defined in § 41.2731) and the landing surface, within a total distance not in excess of 60 per cent of the effective length of the landing area (as defined in § 41.2731) most suitable for landing in still air.

obstruction clearance line with the landing surface, and maintaining a distance of 500 feet from the center line thereafter.

41.28 Maintenance.

41.280 Maintenance organization. The air carrier is responsible for the continuous airworthiness of all aircraft, engines, propellers, and appliances. It is responsible for the proper maintenance of adequate facilities, the adequacy and competence of maintenance personnel, and for the preparation of such maintenance reports as are required by the Administrator.

41.281 Alterations and repairs. Aircraft, engines, propellers, and appliances must be altered or repaired only in conformity with the procedures and, in so far as they apply, the methods provided for in Part 18. Reports of such alterations or repairs must be submitted promptly to the Administrator.

41.282 Inspection. An inspection organization shall be maintained which is responsible for determining that all maintenance conforms to at least the minimum standards prescribed by the Civil Aeronautics Administrator as to workmanship, methods employed, and materials used. Each inspector must hold a valid mechanic certificate and rating for the type of inspection involved.

41.284 Maintenance manual. The air carrier shall prepare and maintain a manual for the use and guidance of maintenance personnel which contains full information pertaining to the repair and service of flight equipment and clearly outlines the responsibilities of maintenance personnel. It must be in a form approved by the Administrator and furnished to all persons designated by the Administrator or Board. All copies in the hands of designated company personnel must be kept up to date.

41.2840 Changes. Any extention made in any overhaul, check, or inspection period must have the written approval of the Administrator. Other changes in the maintenance manual may be made without the prior approval of the Administrator, if such changes are not inconsistent with any Federal regulation, the air carrier operating certificate, or safe maintenance practice.

41.285 Training program. The air carrier must provide for the proper and periodic instruction of all maintenance personnel, particularly in connection with the introduction into service of new or unfamiliar equipment.

41.286 Records. Current records shall be kept of the total time in service, the time since last overhaul, and the time since last inspection on all aircraft components, engines, propellers, and, where practicable, on instruments, equipment, and accessories.

(b) For every anticipated condition of wind velocity and direction and the corresponding landing direction required at the airport of intended destination by the ground handling characteristics of the airplane type involved, the ratio of landing distance to effective length of landing area must not be greater than that as specified in paragraph (a), after allowing for the effect on the landing path and roll of not more than 50 per cent of the favorable wind component due to a particular wind condition.

(c) If the requirement of paragraph (a) can be met, but the requirement of paragraph (b) cannot be fully met, at an airport of intended destination, a flight to such airport may be dispatched if at least one approved alternate airport is designated in the flight plan at which the requirements of paragraphs (a) and (b) of this section, as modified by § 41.2730 and the requirements of §§ 41.4051 and 41.4052 are met.

41.2730 Landing distance at alternate fields. The conditions of § 41.2731 will apply with respect to alternate airports specified in the flight plan, except that in the case of alternate airports the landing distance as defined in that section shall not exceed 70 per cent of the effective length of the landing area.

41.2731 Definition of effective length of landing area. The effective length of the landing area is the distance from the point where the obstruction clearance line, as defined below, intersects the landing surface to the far end of the landing area.

The obstruction clearance line is a line drawn tangent to or clearing all obstructions showing in a profile of the approach area as defined below. The obstruction clearance line is further limited by having a slope to the horizontal of 1/20 as it approaches the landing area.

The approach area, as used in this section, shall be an area symmetrical about a center line coinciding with and prolonging the center line of the runway, except that where there is a multiplicity of parallel runways or a large area continuously available for landing, the center line of the approach area shall coincide with the most probable landing path for instrument approaches. The approach area shall be considered as extending longitudinally from the landing area out to the most remote obstacle touched by the obstruction clearance line, assuming the center line of the approach area in plan view to be straight for at least 1,500 feet from the intersection of the obstruction clearance line with the landing surface, and thereafter continuing in a path consistent with the instrument approach procedures for the airport in question, or, where such procedures are not specified, consistent with turns of at least 4,000 feet in radius; and as extending laterally to a distance of 200 feet on either side of its center line at the point of intersection of the obstruction clearance line with the landing surface, with this distance increasing uniformly to 500 feet on either side of the center line of the area at a longitudinal distance of 1,500 feet from the intersection of the

obstruction clearance line with the landing surface, and maintaining a distance of 500 feet from the center line thereafter.

41.28 Maintenance.

41.280 Maintenance organization. The air carrier is responsible for the continuous airworthiness of all aircraft, engines, propellers, and appliances. It is responsible for the proper maintenance of adequate facilities, the adequacy and competence of maintenance personnel, and for the preparation of such maintenance reports as are required by the Administrator.

41.281 Alterations and repairs. Aircraft, engines, propellers, and appliances must be altered or repaired only in conformity with the procedures and, in so far as they apply, the methods provided for in Part 18. Reports of such alterations or repairs must be submitted promptly to the Administrator.

41.282 Inspection. An inspection organization shall be maintained which is responsible for determining that all maintenance conforms to at least the minimum standards prescribed by the Civil Aeronautics Administrator as to workmanship, methods employed, and materials used. Each inspector must hold a valid mechanic certificate and rating for the type of inspection involved.

41.284 Maintenance manual. The air carrier shall prepare and maintain a manual for the use and guidance of maintenance personnel which contains full information pertaining to the repair and service of flight equipment and clearly outlines the responsibilities of maintenance personnel. It must be in a form approved by the Administrator and furnished to all persons designated by the Administrator or Board. All copies in the hands of designated company personnel must be kept up to date.

41.2840 Changes. Any extention made in any overhaul, check, or inspection period must have the written approval of the Administrator. Other changes in the maintenance manual may be made without the prior approval of the Administrator, if such changes are not inconsistent with any Federal regulation, the air carrier operating certificate, or safe maintenance practice.

41.285 Training program. The air carrier must provide for the proper and periodic instruction of all maintenance personnel, particularly in connection with the introduction into service of new or unfamiliar equipment.

41.286 Records. Current records shall be kept of the total time in service, the time since last overhaul, and the time since last inspection on all aircraft components, engines, propellers and, where practicable, on instruments, equipment, and accessories.

41.3 AIRMAN REQUIREMENTS

41.30 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 the members of the crew.

41.31 Certification and number of pilots.

41.310 Certification.

(a) Any pilot serving as first pilot must hold a valid airline transport pilot rating showing competency to pilot aircraft in which he is to serve.

(b) Any pilot serving as second pilot in an aircraft requiring two pilots must hold at least a commercial pilot certificate and instrument rating and must have demonstrated to an air carrier inspector of the Administrator, or to a duly authorized check pilot of the air carrier, his ability to take off and land aircraft in which he is to serve.

(c) Any pilot serving as second pilot in an aircraft requiring three or more pilots must meet the requirements of paragraph (a) of this section.

(d) Any pilot serving in a pilot capacity as other than first or second pilot must meet the requirements of paragraph (b) of this section.

41.311 Number of pilots required. The number of pilots required will be based upon the type of operation and the type of aircraft involved.

41.32 Pilot route competency.

41.320 Requirements for pilot route qualification.

(a) A first pilot who has not hitherto qualified to serve as such over any route or who has served as first pilot for less than 12 months must have made, as a pilot member of the crew, at least four trips over the route on which he will operate within the 12 months immediately preceding qualification for the route. One of such trips must have been completed within 45 days preceding qualification and during this trip the pilot qualifying must have been accompanied by a check pilot who must certify him as qualified for the route.

(b) A first pilot who has served as such on any route for at least 12 months, in order to qualify for any other route must have made at least two one-way trips, as a pilot member of the crew without passengers, or one one-way trip as second pilot and one one-way trip accompanied by a check pilot within the 12 months immediately preceding qualification. In either case one trip must have been completed within 60 days preceding qualification,

and a check pilot must certify him as qualified for the route.

(c) In complying with the requirements of paragraphs (a) and (b) the pilot must demonstrate his ability to satisfactorily accomplish the approved approach and departure procedures at each regular airport. In the case of alternates such demonstration may be by other means approved by the Administrator.

(d) In the case of a new regular, provisional, or refueling and holding airport on any route, a first pilot otherwise qualified and serving on the route may demonstrate his ability to accomplish the approach and departure procedures in accordance with the requirements for alternate airports if the Administrator finds that such procedure is adequate.

(e) The provisions of paragraphs (a) and (b) above will not apply in the case of minor extensions or modifications of existing routes unless found necessary by the Administrator in the interest of safety.

41.321 Maintenance of pilot route qualification. A first pilot must not serve as such over a particular route unless:

(a) he has made one one-way trip as a pilot member of the crew within the preceding 12 months or,

(b) after an absence from the route of more than 12 consecutive months, he has made the qualifying trips required by § 41.320.

41.33 Maintenance of pilot technique. If within any 90-day period a first or second pilot has not made at least three take-offs and landings in aircraft of a particular make and model, such person must not thereafter serve as a first or second pilot in aircraft of that make and model in scheduled air transportation without having made at least three take-offs and landings in such aircraft with not less than one-half the maximum useful load. If he is to serve in air transportation at night at least one of the three take-offs and landings must have been made at night.

41.330 Periodic instruction. Each air carrier must provide a sufficient number of check pilots to insure that each pilot employed continues to meet the minimum requirements both with regard to route competency and technique. First pilot checks must be accomplished twice each year at intervals of not less than four months. Periodic instruction must be given all pilots. In the case of first pilots instruction must include the obtaining of optimum performance under simulated maximum authorized weight conditions with one engine inoperative and instrument approach procedures and landings under the same conditions in the make and model aircraft in which such pilots serve in scheduled air transportation. In the case of second pilots, instruction must include familiarization with the operations manual, with the types of equipment used, and with the duties of a second pilot.

41.34 Flight time limitations for pilots.

41.340 Aircraft having a crew of one or two pilots.

(a) A pilot may be scheduled to fly 8 hours or less during any 24 consecutive hours without a rest period during such 8 hours. If a pilot is scheduled to fly in excess of 8 hours during any 24 consecutive hours, he shall be given an intervening rest period at or before the termination of 8 scheduled hours of flight duty. Such rest period must equal at least twice the number of hours flown since the last preceding rest period and in no case will such rest period be less than 8 hours. During such rest period the pilot must be relieved of all duty with the air carrier.

(b) When a pilot has flown in excess of 8 hours during any 24 consecutive hours he must receive at least 18 hours of rest before being assigned any duty with the air carrier.

(c) A pilot must not fly in excess of 32 hours during any 7 consecutive days. Relief from all duty for not less than 24 consecutive hours must be provided for and given to a pilot at least once during any 7 consecutive days.

(d) A pilot must not fly as a member of the crew more than 100 hours in any one month: Provided, That the Administrator is authorized, during the present war and until 6 months after the termination thereof, to permit the maximum of 100 hours to be exceeded to the extent necessary to complete a particular flight for military purposes.

(e) A pilot must not fly as a member of the crew more than 1,000 hours in any one calendar year: Provided, That this limitation will not be effective during the present war and until 6 months after the termination thereof, and that during this period the maximum flying hours permitted in any one calendar year will be controlled by the provisions of paragraph (d) of this section.

41.341 Aircraft having two pilots and one additional flight crew member.

(a) A pilot may be scheduled to fly a total of 12 hours during any 24 consecutive hours.

(b) When a pilot has flown 20 hours or more during any 48 consecutive hours, or 24 hours or more during any 72 consecutive hours, he must receive at least 18 hours of rest before being assigned to any duty with the air carrier. In any case each pilot must be relieved from all duty for not less than 24 consecutive hours during any 7 consecutive days.

(c) A pilot must not fly as a member of the flight crew more than 120 hours in any one month or 300 hours in any consecutive 3 months: Provided, That the Administrator is authorized, during the present war and until 6 months after the termination thereof, to permit the above maximums of 120 or 300 hours

to be exceeded to the extent necessary to complete a particular flight for military purposes.

(d) A pilot must not fly as a member of the flight crew more than 1,000 hours in any one calendar year: Provided, That this limitation will not be effective during the present war and until six months after the termination thereof and that during this period a maximum of 1,200 flying hours will be permitted.

41.342 Aircraft having three or more pilots and an additional flight crew member.

(a) Flight hours must be scheduled in such a manner as to provide for adequate rest periods on the ground while the pilot is away from his base. Adequate rest quarters on the aircraft must be provided in all cases where a pilot is scheduled to fly more than 12 hours during any 24 consecutive hours.

(b) A pilot, upon return to his base from any flight or series of flights, must receive a rest period of not less than twice the total number of hours flown since the last rest period at his base and during such period will not be required to perform any duty for the company. When the required rest period exceeds 7 days, that portion of the rest period in excess of 7 days may be given at any time before the pilot is again scheduled for flight duty on any route.

(c) A pilot must not fly as a member of the flight crew more than 350 hours in any 3 consecutive months.

(d) A pilot must not fly as a member of the flight crew more than 1,000 hours in any one calendar year: Provided, That this limitation will not be effective during the present war and until six months after the termination thereof, and that during this period a maximum of 1,200 flying hours will be permitted.

41.343 Pilots not regularly assigned. A pilot not regularly assigned as a flight crew member for an entire month under the provisions of § 41.341 or 41.342 must not fly in excess of 100 hours in that month.

41.344 Deadhead transportation. The time spent in deadhead transportation to duty assignment will not be considered a part of any rest period.

41.345 Other commercial flying. A pilot must not do other commercial flying while employed by an air carrier when such flying, in addition to that in scheduled air transportation service, will exceed any flight time limitations specified herein.

41.35 Logging flight time.

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

(b) A second pilot holding an airline transport pilot rating ...icating competency to pilot the aircraft flown may log the total time ...ring which he serves as second pilot.

(c) A second pilot not holding a pilot rating indicating competency ...ilot the aircraft flown may log 50 per cent of the total flight time.

(d) Additional pilots when required, and serving as such, may log ... per cent of the total flight time. Not over 400 such hours may be accepted ...qualifying for an airline transport pilot certificate: Provided, That after ... such hours have been logged such additional pilot may log the time he is ...duty at the controls when it is certified by the pilot in command.

41.350 Logging instrument flight time. Instrument flight time may be ...ged as such by the pilot actually manipulating the controls only when the ...craft is flown solely by reference to instruments either under actual or ...perly simulated flight conditions.

41.36 Flight radio operator.

41.360 When required. A flight radio operator will be required when ...io telegraphy is used for communication with ground stations during flight. ... or more additional flight radio operators will be required when the type ...operation is such as to require additional personnel.

41.361 Certificate. Each flight radio operator must hold a valid ...ght radio operator certificate issued in accordance with the provisions of ...t____. (In preparation)

41.362 Flight time limitations. When one flight radio operator is ...uired the flight time limitations prescribed in § 41.341 apply. When two ...more flight radio operators are required the flight time limitations of ...1.342 apply.

41.363 Other flight crew members to be qualified. In all flights re-...ring only one flight radio operator, one other flight crew member must be ...able of operating the equipment in an emergency.

41.37 Flight engineer.

41.370 When required. One flight engineer, and such assistants as are ...essary, will be required when the design of the aircraft used or the type ...operation is such as to require engineer personnel.

41.371 Certificate. Each flight engineer must hold a valid flight ...ineer certificate issued in accordance with the provisions of Part____. ... preparation).

(d) the contents of the air carrier operations manual;

(e) the maximum authorized loads for the aircraft used, with respect to the route;

(f) the radio facilities in the aircraft used;

(g) the peculiarities and limitations of each radio navigational facility along the route and such additional facilities located off the route as are approved for use in obtaining fixes by means of cross bearings; and

(h) the effect of weather conditions on the radio reception by the aircraft used.

41.393 Maintenance of qualification. Each dispatcher must maintain his familiarity with the route or routes on which he dispatches aircraft.

41.394 Route qualification expiration. After 24 consecutive months of absence from dispatching duty over a route, or part thereof, a dispatcher will no longer be considered qualified to dispatch aircraft over such route.

41.4 FLIGHT OPERATION RULES

41.40 Dispatching rules.

41.400 Dispatching authorization. Flights shall be started only on the authority of an aircraft dispatcher qualified for the route. In short range operation this authority is not required for take-offs from intermediate points specified in the original clearance unless the flight is delayed more than 30 minutes at any such point or additional fuel not provided for in the original dispatch has been placed on board. In long range operation redispatch is not required unless the flight is delayed more than 6 hours.

41.401 Dispatcher duty period. A dispatcher may clear a flight only when he has been on duty at the station from which the clearance is effected for a period of time sufficient to become familiar with existing conditions. He must continue on duty until the aircraft has landed in completion of a trip, or has proceeded beyond his jurisdiction, or until he has been properly relieved by another dispatcher.

41.402 Fuel supply.

(a) Short range contact operation. An aircraft may be dispatched or take off only if it carries sufficient fuel, considering the wind and other weather conditions expected, to fly to the next point of landing specified in the clearance and thereafter for a period of at least 45 minutes at normal cruising consumption.

41.340 Aircraft having a crew of one or two pilots.

(a) A pilot may be scheduled to fly 8 hours or less during any 24 consecutive hours without a rest period during such 8 hours. If a pilot is scheduled to fly in excess of 8 hours during any 24 consecutive hours, he shall be given an intervening rest period at or before the termination of 8 scheduled hours of flight duty. Such rest period must equal at least twice the number of hours flown since the last preceding rest period and in no case will such rest period be less than 8 hours. During such rest period the pilot must be relieved of all duty with the air carrier.

(b) When a pilot has flown in excess of 8 hours during any 24 consecutive hours he must receive at least 18 hours of rest before being assigned any duty with the air carrier.

(c) A pilot must not fly in excess of 32 hours during any 7 consecutive days. Relief from all duty for not less than 24 consecutive hours must be provided for and given to a pilot at least once during any 7 consecutive days.

(d) A pilot must not fly as a member of the crew more than 100 hours in any one month: Provided, That the Administrator is authorized, during the present war and until 6 months after the termination thereof, to permit the maximum of 100 hours to be exceeded to the extent necessary to complete a particular flight for military purposes.

(e) A pilot must not fly as a member of the crew more than 1,000 hours in any one calendar year: Provided, That this limitation will not be effective during the present war and until 6 months after the termination thereof, and that during this period the maximum flying hours permitted in any one calendar year will be controlled by the provisions of paragraph (d) of this section.

41.341 Aircraft having two pilots and one additional flight crew member.

(a) A pilot may be scheduled to fly a total of 12 hours during any 24 consecutive hours.

(b) When a pilot has flown 20 hours or more during any 48 consecutive hours, or 24 hours or more during any 72 consecutive hours, he must receive at least 18 hours of rest before being assigned to any duty with the air carrier. In any case each pilot must be relieved from all duty for not less than 24 consecutive hours during any 7 consecutive days.

(c) A pilot must not fly as a member of the flight crew more than 120 hours in any one month or 300 hours in any consecutive 3 months: Provided, That the Administrator is authorized, during the present war and until 6 months after the termination thereof, to permit the above maximums of 120 or 300 hours

to be exceeded to the extent necessary to complete a particular flight for military purposes.

(d) A pilot must not fly as a member of the flight crew more than 1,000 hours in any one calendar year: Provided, That this limitation will not be effective during the present war and until six months after the termination thereof and that during this period a maximum of 1,200 flying hours will be permitted.

41.342 Aircraft having three or more pilots and an additional flight crew member.

(a) Flight hours must be scheduled in such a manner as to provide for adequate rest periods on the ground while the pilot is away from his base. Adequate rest quarters on the aircraft must be provided in all cases where a pilot is scheduled to fly more than 12 hours during any 24 consecutive hours.

(b) A pilot, upon return to his base from any flight or series of flights, must receive a rest period of not less than twice the total number of hours flown since the last rest period at his base and during such period will not be required to perform any duty for the company. When the required rest period exceeds 7 days, that portion of the rest period in excess of 7 days may be given at any time before the pilot is again scheduled for flight duty on any route.

(c) A pilot must not fly as a member of the flight crew more than 350 hours in any 3 consecutive months.

(d) A pilot must not fly as a member of the flight crew more than 1,000 hours in any one calendar year: Provided, That this limitation will not be effective during the present war and until six months after the termination thereof, and that during this period a maximum of 1,200 flying hours will be permitted.

41.343 Pilots not regularly assigned. A pilot not regularly assigned as a flight crew member for an entire month under the provisions of § 41.341 or 41.342 must not fly in excess of 100 hours in that month.

41.344 Deadhead transportation. The time spent in deadhead transportation to duty assignment will not be considered a part of any rest period.

41.345 Other commercial flying. A pilot must not do other commercial flying while employed by an air carrier when such flying, in addition to that in scheduled air transportation service, will exceed any flight time limitations specified herein.

41.35 Logging flight time.

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

(b) A second pilot holding an airline transport pilot rating indicating competency to pilot the aircraft flown may log the total time during which he serves as second pilot.

(c) A second pilot not holding a pilot rating indicating competency to pilot the aircraft flown may log 50 per cent of the total flight time.

(d) Additional pilots when required, and serving as such, may log 50 per cent of the total flight time. Not over 400 such hours may be accepted as qualifying for an airline transport pilot certificate: Provided, That after 400 such hours have been logged such additional pilot may log the time he is on duty at the controls when it is certified by the pilot in command.

41.350 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.

41.36 Flight radio operator.

41.360 When required. A flight radio operator will be required when radio telegraphy is used for communication with ground stations during flight. One or more additional flight radio operators will be required when the type of operation is such as to require additional personnel.

41.361 Certificate. Each flight radio operator must hold a valid flight radio operator certificate issued in accordance with the provisions of Part___. (In preparation)

41.362 Flight time limitations. When one flight radio operator is required the flight time limitations prescribed in § 41.341 apply. When two or more flight radio operators are required the flight time limitations of § 41.342 apply.

41.363 Other flight crew members to be qualified. In all flights requiring only one flight radio operator, one other flight crew member must be capable of operating the equipment in an emergency.

41.37 Flight engineer.

41.370 When required. One flight engineer, and such assistants as are necessary, will be required when the design of the aircraft used or the type of operation is such as to require engineer personnel.

41.371 Certificate. Each flight engineer must hold a valid flight engineer certificate issued in accordance with the provisions of Part___. (In preparation).

41.372 Qualification for operation. Each flight engineer must be familiar with the model aircraft to which he is assigned and must be competent to repair or to supervise repairs to all of the major components of the aircraft, engines, propellers, and accessories.

41.373 Flight time limitations. When one flight engineer is required, the flight time limitations prescribed in § 41.341 apply. When two or more flight engineers are required, the flight time limitations prescribed in § 41.342 apply.

41.374 Other flight crew members to be qualified. In all flights requiring the use of only one flight engineer, one other flight crew member must be capable of performing the duties of such engineer in an emergency during flight.

41.38 Flight navigator.

41.380 When required. On all flights where celestial navigation is necessary the first pilot and one other member of the flight crew must hold a flight navigator certificate issued in accordance with the provisions of Part____ (In preparation).

41.381 Logging flight time as pilot. A flight navigator serving as such and holding a commercial or higher class pilot certificate may credit 50 per cent of the total flight time logged as navigator, but not in excess of 400 hours, toward a higher class pilot certificate.

41.382 Flight time limitations. The flight time limitations prescribed in § 41.342 apply.

41.39 Dispatcher.

41.390 Number and location. The air carrier must provide an adequate number of certificated aircraft dispatchers located at such points as may be necessary to insure safe operations.

41.391 Certificate. Each dispatcher must hold a valid aircraft dispatcher certificate issued in accordance with the provisions of Part 27.

41.392 Qualification for route. Each dispatcher within six months immediately preceding his qualification for a route must have made at least one trip over the route on which he is to serve prior to dispatching any aircraft. In addition he must be familiar with:

(a) the prevailing weather phenomena peculiar to the route;

(b) the sources of weather information available;

(c) all phases of the air carrier operation over the route;

(d) the contents of the air carrier operations manual;

(e) the maximum authorized loads for the aircraft used, with respect to the route;

(f) the radio facilities in the aircraft used;

(g) the peculiarities and limitations of each radio navigational facility along the route and such additional facilities located off the route as are approved for use in obtaining fixes by means of cross bearings; and

(h) the effect of weather conditions on the radio reception by the aircraft used.

41.393 Maintenance of qualification. Each dispatcher must maintain his familiarity with the route or routes on which he dispatches aircraft.

41.394 Route qualification expiration. After 24 consecutive months of absence from dispatching duty over a route, or part thereof, a dispatcher will no longer be considered qualified to dispatch aircraft over such route.

41.4 FLIGHT OPERATION RULES

41.40 Dispatching rules.

41.400 Dispatching authorization. Flights shall be started only on the authority of an aircraft dispatcher qualified for the route. In short range operation this authority is not required for take-offs from intermediate points specified in the original clearance unless the flight is delayed more than 30 minutes at any such point or additional fuel not provided for in the original dispatch has been placed on board. In long range operation redispatch is not required unless the flight is delayed more than 6 hours.

41.401 Dispatcher duty period. A dispatcher may clear a flight only when he has been on duty at the station from which the clearance is effected for a period of time sufficient to become familiar with existing conditions. He must continue on duty until the aircraft has landed in completion of a trip, or has proceeded beyond his jurisdiction, or until he has been properly relieved by another dispatcher.

41.402 Fuel supply.

(a) Short range contact operation. An aircraft may be dispatched or take off only if it carries sufficient fuel, considering the wind and other weather conditions expected, to fly to the next point of landing specified in the clearance and thereafter for a period of at least 45 minutes at normal cruising consumption.

(b) Short range instrument or over-the-top operation. An aircraft may be dispatched or take off only if it carries sufficient fuel, considering the wind and other weather conditions expected, to fly to the next point of landing specified in the clearance; and thereafter (1) to fly to and land at the most distant alternate airport designated for that point in the clearance; and thereafter (2) to fly for a period of at least 45 minutes at normal cruising consumption.

(c) Long range operation. An aircraft may be dispatched or take off only if it carries sufficient fuel, considering the wind and other weather conditions expected, to fly to the next point of landing specified in the clearance; and thereafter (1) to fly to and land at the most distant alternate airport designated for that point in the clearance; and thereafter (2) to fly for a period of at least two hours at normal cruising consumption. An aircraft may be redispatched to return to the point of departure or to an alternate airport for that point only when such redispatch is accomplished while the aircraft has sufficient fuel to return to such point and thereafter to fly for a period of at least 2 hours at normal cruising consumption. In the case of a route approved without an available alternate for a particular stop, an aircraft dispatched to that point must carry sufficient fuel, considering wind and other weather conditions expected, to fly to that point and thereafter for at least 3 hours at normal cruising consumption. The Administrator may require fuel in excess of any of the minimums specified in this paragraph when he finds that additional fuel is necessary on a particular route in the interest of safety.

41.403 Maintenance release, load manifest, and clearance forms. All maintenance release, load manifest, and clearance forms used must be approved by the Administrator.

41.4030 Preparation of maintenance release, load manifest, and clearance forms. A maintenance release form must be prepared for each aircraft delivered by the maintenance department to the operations department. This form must be signed by personnel of the air carrier charged with the duty of supervising the maintenance of the aircraft. A load manifest form must be prepared and signed for each flight by the personnel of the air carrier charged with the duty of supervising the loading of the aircraft and the preparation of the load manifest forms. A clearance form must be prepared for each flight between specified clearance points. This form must be signed by the first pilot and by the authorized aircraft dispatcher, or by duly authorized station personnel after receiving current authority from the authorized aircraft dispatcher. The original copies of all forms will be given to the first pilot and duplicate copies kept in the station file for a period of at least 90 days.

41.404 Use of weather reports and forecasts in dispatch.

(a) Weather reports used to control flight movements must be prepared from observations made and released by a source acceptable to the Administrator.

(b) Weather reports used must be the latest reports available. Weather reports, other than off-course or on-call reports made a part of the clearance form, shall not be more than one hour and 30 minutes old at the time the aircraft departs.

(c) Weather forecasts made by the United States Weather Bureau, in the case of dispatch from points within the United States, or other sources acceptable to the Administrator, in the case of dispatch from points outside of the United States, must be taken into account.

41.405 Weather minimums.

41.4050 Dispatch under contact flight rules, short range operation. Aircraft may be dispatched only if current weather reports and forecasts show a trend indicating that the ceilings and visibilities along the route to be flown are, and will remain, at or above the minimums required for flight under contact flight rules until the flight arrives at the next point of landing specified in the clearance.

41.4051 Instrument or over-the-top dispatch, short range operation. Aircraft may be dispatched only if the observed weather information and current weather forecasts pertaining to the next point of landing specified in the clearance show a trend indicating that the ceiling and visibility will be at or above the minimums specified when the flight is scheduled to arrive; and at least one alternate airport, meeting the minimum weather requirements for the airport when used as an alternate, is designated in the clearance.

41.4052 Dispatch, long range operation. Aircraft may be dispatched only in compliance with the following conditions:

(a) The current weather forecasts must indicate that the ceiling and visibility either at the destination or at any required alternate therefor will be, at the time the flight is estimated to arrive, at or above the approved minimums,

(b) In the case of overwater flights or any other flight where the destination has no available alternate, the current weather forecasts must also indicate that the ceiling and visibility either at the point of departure or at any required alternate therefor will be above the approved minimums at the time of arrival back to such point from any point along the route closer than the point-of-no-return.

41.406 Miscellaneous dispatching rules.

41.4060 Short range operation. Flights may be dispatched over any approved route between two terminal points.

41.4061 Long range operation. Flights may be dispatched over any track between two terminal points within the area approved by the Administrator for the operation.

41.4062 Dispatcher emergency procedure. In the event of inability to maintain two-way communication with the aircraft while it is in flight the dispatcher is responsible for notifying all other known traffic in the area of such failure, giving the last approved flight plan and the expected time of arrival at the destination.

41.4063 Icing conditions. Aircraft must not be dispatched or flown into known heavy icing conditions and may be dispatched or flown into any less serious icing condition only if the aircraft is equipped for deicing wings, propellers, and such other parts of the aircraft as are essential to safety.

41.4064 Redispatch from alternate airports. Aircraft may be redispatched from any alternate airport. In the case of an off-route alternate the return to the authorized route must be made in accordance with conditions specified by the Administrator.

41.4065 Traffic conditions. Immediately prior to departure it is the responsibility of the dispatcher, dispatching an instrument flight outside of an airway traffic control area, to ascertain from the best available information what other flights affecting the proposed flight are in progress over the route and to report this information to the first pilot.

41.41 Flight preparation and take-off rules.

41.410 Tests and checks. Before departure the first pilot is responsible for the testing or checking of each item in the check list provided for the aircraft, at the time and to the extent specified.

41.411 View of traffic. The pilot must maneuver the aircraft to a position from which incoming and outgoing aircraft can be observed until immediately prior to take-off.

41.42 Flight course and en route rules.

41.420 Continuance of flight, short range operation. No flight shall be continued toward any point to which it is cleared unless the weather minimums at alternate airports specified in the clearance remain at or above the minimums specified for each such airport when used as an alternate.

41.421 Change in clearance en route. The clearance may be amended en route by the substitution of another alternate airport within the fuel range of the aircraft, as outlined in § 41.402(b), where weather conditions are at or above the minimums for such airport when used as an alternate. If a

change in clearance is made while an aircraft is in flight, the two-way conversation must be entered in the ground station radio log. After clearance for contact flight no aircraft shall be recleared en route for instrument flight, unless all instruments and items of equipment required by § 41.25 for the type of operation are in serviceable condition.

41.422 Deviation from route. No aircraft may deviate from the route over which it is dispatched except when circumstances render such deviation necessary as a safety measure. Any deviation from the route must be explained by the pilot in a written report to the Administrator dispatched within seven days after return to his base.

41.423 Reporting unusual conditions. When an icing or other unusual meteorological condition is encountered in flight the pilot must notify his company radio ground station as soon as practicable and such information shall be relayed to all flights which may be affected.

41.424 Flight altitude rules.

41.4240 Day contact operation. Except during take-offs and landings no aircraft shall be flown at an altitude less than 500 feet above the ground or water, or within 500 feet of any mountain, hill, or other obstruction to flight, except in such cases as may be specifically approved.

41.4241 Night contact and instrument operation. Except during take-offs and landings or when operating in accordance with specific procedures for definite localities approved by the Administrator, no aircraft shall be flown at an altitude of less than 1,000 feet above the highest obstacle located within a horizontal distance of 10 miles from the center of the course intended to be flown.

41.425 Communications failure. In the event of inability to maintain two-way communication with the appropriate communications station one of the following procedures shall be observed:

(a) The aircraft may proceed provided the flight can be made in accordance with contact flight rules.

(b) A landing may be made at the nearest suitable airport at which favorable weather conditions exist.

(c) In the event weather conditions do not permit the procedures provided for in paragraph (a) or (b) the pilot may proceed according to his approved flight plan, including any amended instructions issued and acknowledged en route, maintaining his last acknowledged assigned altitude until the approach time last authorized for him, at which time a landing may be made.

41.43 Instrument approach and landing rules.

41.430 Altitude on initial approach. When making an initial approach to a radio station on instruments or on top of overcast, an aircraft must not be operated below the initial approach altitude specified for such station until arrival over the station has been definitely established.

41.431 Letting-down-through procedure. When instrument operation is authorized the standard instrument approach procedure specified for the airport must be used for letting-down-through. The procedures and minimum altitudes of flight specified shall be strictly observed.

41.432 Approach limitations. No pilot, at any airport within the continental limits of the United States, may let down below his last approved cruising altitude or continue descent when he has received United States Weather Bureau information that the measured ceiling is below, or the visibility is less than, the authorized minimums prescribed for landing at that airport.

41.44 Operations manual. The air carrier must prepare and maintain a manual for the use and guidance of operations 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 in the hands of company personnel must be kept up to date.

41.440 Changes. Any changes issued by the Administrator must 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.

41.5 MISCELLANEOUS RULES

41.500 Pilots at controls. In the case of aircraft requiring two or more pilots, two pilots must remain at the controls at all times while the aircraft in flight, 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 § 41.503.

41.501 Compliance with foreign air traffic rules and local airport rules. Pilots flying in the airspace of any foreign country must, at all times, comply with the air traffic rules of the foreign government and with local airport rules, except where any rule prescribed herein is more restrictive.

41.502 Admission to pilot compartment.

(a) No person except a member of the operating crew or an air carrier inspector of the Administrator of Civil Aeronautics may be admitted to the pilot compartment during flight unless his admission is approved by the first pilot after he has identified himself as one of the following:

(1) an employee of the Federal Government, an air carrier, or other aeronautical enterprise whose duties are such that his presence in the compartment is necessary or advantageous to the conduct of safe air carrier operations or the improvement of the safety of such operations;

Note: Federal employees who deal responsibly with matters relating to air carrier safety and such air carrier employees as pilots, dispatchers, meteorologists, communication operators, and mechanics whose efficiency would be increased by familiarity with flight conditions in the pilot compartment may be considered eligible for admission to the pilot compartment under this requirement. Employees of traffic, sales, and other air carrier departments not directly related to flight operations cannot be considered eligible unless authorized under § 41.502(a) (2).

(2) a person whose presence in such compartment has been specifically authorized by the management of the air carrier operating the aircraft and by the Administrator.

(b) No person may occupy a seat in the pilot compartment or the companionway thereto unless such seat is securely attached to the structure of the aircraft and is provided with a safety belt which shall be kept fastened by the occupant throughout his occupancy of such seat.

(c) Unless a seat is also available for his use in the passenger compartment, no person may be admitted to the pilot compartment during flight except:

(1) air carrier inspectors engaged in checking flight operations; and

(2) certificated airmen of the air carrier and certificated airmen of another air carrier who have been authorized by the air carrier concerned and the Administrator to make specific trips over the route.

(d) An air carrier inspector of the Administrator of Civil Aeronautics must be admitted to the pilot compartment of an air carrier aircraft at any time while performing his official duty.

41.503 Manipulation of controls. No person other than a qualified pilot of the air carrier may manipulate the flight controls of an air carrier aircraft while in scheduled flight, except that at the discretion of the first pilot such restriction will not apply to other pilots as follows:

(a) authorized air carrier inspectors of the Administrator, or

(b) properly qualified pilot personnel of another air carrier if the first pilot is at one set of controls.

41.504 Maps and flight equipment. Before any flight is started the first pilot must have readily available in the aircraft appropriate and current flight and navigational facility maps, including instrument procedures when instrument flight is authorized, and such other equipment as may be necessary to properly conduct the proposed flight.

41.505 Smoking rules. No smoking will be permitted in an aircraft;

(a) while on the ground,

(b) during take-offs and landings,

(c) in the berths of sleeper planes, or

(d) otherwise unless suitable ash containers are provided.

41.506 Passenger information signs. Aircraft must be equipped with the following signs so located as to be plainly visible to passengers:

(a) "No smoking" signs located in the cabin and in individual berths,

(b) "Fasten seat belt" signs located in cabin,

(c) "Use oxygen equipment" signs located in the cabin of aircraft not having pressurized cabins when operated at altitudes in excess of 12,000 feet above sea level for any period of time, unless a competent cabin attendant is provided to care for passengers.

41.507 Marking door handles. The latched and unlatched positions of door handles shall be plainly marked.

41.508 Marking emergency exits. Emergency exits shall be clearly marked as such with luminous paint in letters not less than three-fourths of an inch high, such markings to be located either on or immediately adjacent to the pertinent exits and readily visible to passengers. The location and method of operation of the handles shall be marked with luminous paint.

41.509 Use of emergency equipment. The emergency equipment required by §§ 41.22 must be periodically inspected and tested in accordance with specifications issued by the Administrator. The crew of aircraft used in overwater flights must be drilled in "abandon ship" procedures. Passengers must be acquainted with the location of emergency exits, with emergency equipment provided for individual use, and with the procedure to be followed in the case of an emergency landing on the water.

41.510 Emergency decisions.

(a) 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. He shall submit a written report of any such deviation to the Administrator of Civil Aeronautics within seven days after the completion of the flight.

(b) 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.

41.511 Route operation proving flights. Before passengers are carried on any new route or any extension of over 100 miles of a route previously authorized, the air carrier must demonstrate his ability to conduct a safe operation by making such flights over the route as the Administrator may require in the interest of safety. When a new model aircraft is involved such proving flights must total at least 50 hours, and, if night operation is proposed, must include at least 10 hours of night flight. During these flights no passengers may be carried other than those essential to the operation. Mail, express, and cargo may be carried at the discretion of the Administrator.

41.512 Reports. Each air carrier must furnish the Administrator the following reports:

(a) A monthly operations report must be submitted on and in accordance with the form supplied or approved by the Administrator for the purpose not later than the 20th day of the next succeeding month.

(b) A mechanical interruption report must be submitted on and in accordance with the form supplied for the purpose not later than 10 days after the return of the aircraft to its operating base. Any partial or complete instrument or equipment mechanical failure which occurs during flight shall be reported. The records of such mechanical failure must be made available to any authorized representative of the Administrator or Board on request.

41.513 Irregularity report. All airmen, including flight and ground personnel, must immediately report to the operations manager any irregularity or hazard which in their opinion makes for unsafe operation. If such report is found to be justified, notice of the irregularity or hazard must be submitted to the Administrator at once.

41.514 Communication priority. Where a communications channel serves point-to-point contacts in addition to ground-to-plane, priority must be given to plane-to-ground and ground-to-plane communications.

41.515 Records. The air carrier must maintain and make available to any authorized representative of the Administrator or Board, for not less than one year from the date of flight, the records pertaining to any flight which was interrupted because of weather conditions and failed to land at the point to which it was originally cleared. Such records shall include the flight plan, flight log, clearance, and any other data necessary to complete the record of the operation.

41.99 Definitions.

(a) Route. A route is a path through the navigable airspace identified by an area on the surface of the earth, the boundaries of which are designated by the Administrator and within which boundaries flight operations approved for that route must be conducted.

(b) Short range operation. A short range operation is one which involves intermediate stops of sufficient frequency to permit the dispatch from each such stop to be based on spot weather reports or a combination of spot weather reports and forecasts.

(c) Long range operation. A long range operation is one in which the time interval between stops is of sufficient duration to require that the dispatch be based entirely on forecasts of weather expected at the intended destination and alternates.

(d) Regular airport. A regular airport is an airport used as a regular stop on a route.

(e) Provisional airport. A provisional airport is an airport approved for the purpose of providing adequate service to a community when the regular airport serving that community is not available.

(f) Alternate airport. An alternate airport is one listed in the clearance as a point to which a flight may be directed if, subsequent to departure, a landing at the point to which the flight is cleared becomes undesirable.

(g) Refueling and holding airport. A refueling and holding airport is an airport approved as a point to which flights may be cleared for refueling or holding, and reclearance to a regular airport.

(h) Check pilot. A check pilot is a pilot authorized by the Administrator to check pilots of the air carrier for familiarity with route procedures and for piloting technique.

(i) Flight crew member. The term "flight crew member" means a pilot, flight radio operator, flight engineer, or flight navigator assigned to duty on the aircraft.

(j) Crew member. The term "crew member" means any company employee assigned to duty on the aircraft.

(k) Contact operation. A contact operation is an operation conducted under contact flight rules as defined in Part 60.

(l) Instrument operation. An instrument operation is an operation conducted under instrument flight rules as defined in Part 60.

(m) Overwater flight. The term "overwater flight" as used in this Part means flight over open water at a greater distance from an airport than 45 minutes flight at normal cruising speed.

(n) Point-of-no-return. The term "point-of-no-return" means that point at which the aircraft no longer has sufficient fuel, under existing conditions, to return to the point of departure or any alternate for that point.