CIVIL AERONAUTICS BOARD

WASHINGTON, D. C.

CIVIL AIR REGULATIONS

PART 40.—AIR CARRIER OPERATING CERTIFICATION (INTERSTATE)

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PART 40.—AIR CARRIER OPERATING CERTIFICATION (INTERSTATE)

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40.0 Provision for issuance. Pursuant to the provisions of the Civil Aeronautics Act of 1938, as amended, empowering the Administrator of Civil Aeronautics to issue air carrier operating certificates and the Board to establish minimum safety standards for the operation of the air carrier to whom any such certificate is issued, the following regulations are prescribed for such certification of scheduled

air carriers engaged in interstate and intraterritorial air transportation as to their competency.

40.1 General minimum requirements. To be eligible for an air carrier operating certificate, an applicant shall meet and comply with the following general minimum requirements.

40.10 Economic strength. Applicant shall show economic and financial strength sufficient to establish a presumption of ability to operate the air carrier with reasonable safety as related to the service offered, for a period of at least 1 year.

40.11 Route. Applicant shall show that the route, including any alternate route, over which it proposes to operate is, or prior to operation will be, equipped with such air navigation facilities (including terminal and intermediate airports, intermediate landing fields and ground aids to air navigation) as are deemed by the Administrator to be necessary for safe operation as related to the service offered.

40.12 Aircraft. Applicant shall show aircraft certificated as provided in Part 04 of a model and number deemed by the Administrator to be necessary for safe operation as related to the service offered, the route traversed, and the operating and maintenance procedures and techniques proposed. No airplane certificated as a basic type in accordance with the requirement of § 04.75 shall be deemed adequate for use in scheduled air transportation unless, in the opinion of the Administrator, it can meet the requirement of § 04.76 over each route to be flown. Airplanes proposed for use for the carriage of passengers under these regulations shall be subject to the following requirements:

(*a*) No airplane certificated as a basic type after December 31, 1940, shall be deemed adequate for use in scheduled air transportation unless it has been certificated in accordance with the requirement of § 04.75;

(*b*) On or after January 1, 1942, no individual airplane shall be deemed adequate for use in scheduled air transportation unless, in the opinion of the Administrator, it can meet the requirement of § 04.76 over each route to be flown or unless such airplane has been used in scheduled air transportation with the approval of the Administrator prior to that date;

(*c*) No airplane shall be deemed adequate for use in scheduled air transportation after December 31, 1945, unless, in the opinion of the Administrator, it can meet the requirement of § 04.76 over each route to be flown.

40.13 Airmen. Applicant shall show certificated airmen (including both flight and ground personnel) of kind, grade and number deemed by the Administrator to be necessary for safe operation as related to the service offered, the route traversed, the aircraft used, and the operating and maintenance procedures and techniques proposed.

40.14 Operations manual. Applicant shall show an operations manual, prepared for the use of its airmen, which fully details the operating and communications methods, procedures and techniques proposed for its air carrier operations.

40.15 Maintenance manual. Applicant shall show a maintenance manual or suitable equivalent prepared for the use of its airmen and

other maintenance personnel which adequately defines the maintenance methods, proocedures and techniques proposed for its air carrier operations.

40.16 Schedules. Applicant shall show proposed schedules set up with due regard to sufficient time for the adequate servicing with fuel and oil at intermediate stops, and to prevailing winds, and on the basis of a cruising speed of the aircraft at not to exceed the specified cruising power output of the engines as operated in the aircraft.

40.2 Passenger minimum requirements (interstate). To be eligible for an air carrier operating certificate for the carriage of persons in interstate air transportation, an applicant, in addition to meeting the minimum requirements provided for in § 40.1, shall meet and comply with the following minimum requirements prescribed for the particular kind of operation proposed.

40.20 Route requirements: Visual-contact day operation.

40.200 Airway. Applicant shall show that the regular route over which the proposed operations will be conducted is, or prior to authorization will be, within the limits of a civil airway, or is otherwise deemed satisfactory by the Administrator for the operation proposed. (If applicant's proposed route does not lie within the limits of a civil airway, a petition requesting that a civil airway be designated to embrace such route may be made simultaneously with the air carrier operating certificate application.)

40.201 Airports. Applicant shall show that the airports to be used as terminals and scheduled intermediate stops are deemed adequate by the Administrator for safe air carrier operation of the type proposed.

40.202 Public protection. Applicant shall show that reasonable and adequate facilities and safety devices (including protection from revolving aircraft propellers) are provided for the protection of the public at each terminal and scheduled intermediate stop.

40.203 Intermediate fields. Applicant shall show intermediate fields, available for safe landings with the load authorized for the route or part thereof, located at not more than 100 mile intervals along the proposed route provided that at the discretion of the Administrator, intermediate fields may be permitted or required at other than 100 mile intervals.

40.204 Refueling facilities. Applicant shall show that adequate refueling facilities including equipment to test gasoline storage tanks for the presence of water and to remove any water or condensation found therein, are provided at each terminal, scheduled intermediate stop and intermediate field where refueling is contemplated.

40.205 Radio facilities. Applicant shall show a two-way ground-to-aircraft radio telephone communication system at such terminals and at such points as may be deemed necessary by the Administrator to insure satisfactory communications over the entire route under normal operating conditions. Such system shall be independent of radio facilities provided by Federal or other governmental agencies.

40.206 Weather reporting. Applicant shall show weather reporting services at the proposed terminals and en route, adequate to insure sufficient weather reports prepared from observations made and

released by the United States Weather Bureau or by a source approved by it.

40.21 Route requirements: Visual-contact night operation.

40.210 Airway. Applicant shall meet the requirements of § 40.200 and, in addition, shall show that the proposed route is equipped with such airway beacons and obstruction lights as are deemed by the Administrator to be adequate for safe air carrier operation at night.

40.211 Airports. Applicant shall meet the requirements of § 40.201 and, in addition, shall show that the airport to be used at each proposed terminal and scheduled intermediate stop is equipped with such lighting facilities as are deemed by the Administrator to be adequate for safe air carrier operation at night.

40.212 Public protection. Same as in § 40.202.

40.213 Intermediate fields. Applicant shall meet the requirements of § 40.203 and, in addition, shall show that such intermediate fields are equipped with lighting facilities as required by § 40.211.

40.214 Refueling facilities. Same as in § 40.204.

40.215 Radio facilities. Same as in § 40.205.

40.216 Weather reporting. Same as in § 40.206.

40.22 Route requirements: Instrument or over-the-top operation.

40.220 Airway. Applicant shall meet the requirements of § 40.200 for day operation, or of § 40.210 for night operation. In addition, for either day or night operation, applicant shall show that the proposed route is equipped with such radio ranges (or equivalent facilities) projecting courses over the proposed route, as are deemed by the Administrator to be adequate for safe air carrier operation. Applicant shall also show other radio navigational aids (including radio markers) as may be deemed necessary by the Administrator.

40.221 Airports. For day operation applicant shall show that the airport to be used at each proposed route terminal, scheduled intermediate stop and alternate terminal is deemed adequate by the Administrator for the service offered. For night operation applicant shall meet the foregoing requirements and, in addition, shall show that the proposed terminal, scheduled intermediate stop, and alternate, airports are provided with such lighting facilities as are deemed by the Administrator to be adequate for safe air carrier operation at night.

40.222 Public protection. Same as in § 40.202.

40.223 Intermediate fields. Same as in § 40.203 for day operation, and as in § 40.213 for night operation.

40.224 Refueling facilities. Same as in § 40.204.

40.225 Radio facilities. Same as in § 40.205.

40.226 Weather reporting. Same as in § 40.206.

40.23 Aircraft requirements: Visual-contact day operation.

40.230 If single-engine operation over land. Applicant shall show land aircraft of model and number necessary for safe operation, or applicant may show a similar number of water aircraft if the route to be flown over is such that the aircraft can, at all times, reach open water deemed suitable by the Administrator for a safe landing in the event of complete power failure. Single-engine aircraft may be operated over

routes deemed by the Administrator to have suitable landing terrain.

40.231 If single-engine operation over water. Applicant shall show water aircraft of model and number necessary for safe operation, or applicant may show a similar number of land aircraft if the route to be flown over is such that the aircraft can, at all times, reach land deemed suitable by the Administrator for a safe landing in the event of complete power failure.

40.232 If multi-engine operation over land. Applicant shall show aircraft of a model and number necessary for safe operation. Applicant shall also show:

(*a*) That such aircraft (other than those specifically listed as in scheduled air carrier service by the applicant prior to January 1, 1935) to be used on the proposed route or part thereof are capable, with any one engine inoperative, of maintaining level flight with authorized load for the route or part thereof at an altitude of at least 1,000 feet above the highest obstruction to flight on the valley level of the route or part thereof on which the aircraft will be operated; or

(*b*) Operating procedures which, in the opinion of the Administrator, will assure that such aircraft will be capable of effecting a safe landing at an airport or other suitable area in the event of the failure of any one engine at any point on the route on which such aircraft will be operated.

40.2320 Engine rotation. On and after July 1, 1941 applicant shall show that any aircraft to be used in air transportation which have engines with maximum power ratings of 480 horsepower or more are so equipped that engine rotation may be promptly stopped during flight; and, on and after July 1, 1942, the same showing shall be made with respect to all other aircraft to be used in air transportation.

40.233 If multi-engine operation over water. Applicant shall show aircraft of model and number necessary for safe operation. Applicant shall also show that such aircraft, which are to be used on the proposed route or part thereof are capable, with any one engine inoperative, of maintaining level flight with authorized load at an altitude of at least 1,000 feet above the water. No multi-engine land aircraft shall be operated, over water, beyond gliding distance from shore without the aid of power, unless such aircraft is equipped with a retractable landing gear, with one or more suitable emergency exits located in the upper half of the fuselage, with life preservers or other adequate flotation devices readily available for each person on board, with a Very pistol and cartridges or equivalent signal equipment deemed suitable by the Administrator, and with radio equipment as required by §§ 40.253, 40.2530, and 40.2531. The requirements of flotation devices and signal equipment are not applicable where the operation over water is merely that of landings and take-offs, provided there is available marine rescue equipment deemed suitable by the Administrator.

40.2330 Engine rotation. On and after July 1, 1941, applicant shall show that any aircraft to be used in air transportation which have engines with maximum power ratings of 480 horsepower or more are so equipped that engine rotation may be promptly stopped during

flight; and, on and after July 1, 1942, the same showing shall be made with respect to all other aircraft to be used in air transportation.

40.234 **Number of aircraft.** Applicant shall show aircraft, certificated as provided in § 04.53, of a number sufficient to permit the maintenance of all schedules proposed, as provided for in § 40.16.

40.235 **Radio equipment.** Applicant shall show that each aircraft is equipped with an approved two-way radiotelephone having sufficient power to permit communication, under normal operating conditions, with at least one ground station used or to be used by the applicant on the regular or alternate route, and capable of communication with other aircraft of the applicant in flight. In addition, each aircraft shall be provided with at least one radio receiving system capable of receiving radio range signals and weather broadcasts. On and after July 1, 1938, such receiving system shall include an approved audio filter system with suitable switching arrangements to be used in connection with the reception of simultaneous radio range and voice broadcasts, *provided, however*, that such audio filter system will not be required if the airway or route traversed is not equipped with simultaneous type radio range stations.

40.236 **Hangar facilities.** Applicant shall show hangar or other facilities adequate for the proper maintenance of the aircraft, engines, equipment and parts.

40.237 **Shop facilities.** Applicant shall show shop facilities (including facilities for servicing, repair, and overhaul) adequate for the proper maintenance of all aircraft, engines and equipment used.

40.238 **Inspection and overhaul organization and procedures.** Applicant shall show inspection and overhaul organization, procedures and techniques adequate for the proper maintenance of all aircraft, engines and equipment used.

40.24 **Aircraft requirements: Visual-contact night operation.**

NOTE.—Single-engine aircraft may not be used in night operation with passengers.

40.240 **If operation over land.** Applicant shall show multi-engine land aircraft, which meet the flight performance requirements of § 40.232, and of a number necessary for safe operation as provided for in § 40.234.

40.241 **If operation over water.** Applicant shall show multi-engine land aircraft, which meet the flight performance and equipment requirements of § 40.233, and of a number necessary for safe operation as provided for in § 40.234.

40.242 **Number of aircraft.** Same as in § 40.234.

40.243 **Radio equipment.** Same as in § 40.235.

40.244 **Hangar facilities.** Same as in § 40.236.

40.245 **Shop facilities.** Same as in § 40.237.

40.246 **Inspection and overhaul organization and procedures.** Same as in § 40.238.

40.25 **Aircraft requirements: Instrument or over-the-top operation.**

NOTE.—Single-engine aircraft may not be used in an instrument or over-the-top operation with passengers.

40.250 **If operation over land.** Applicant shall show multi-engine aircraft of model and number necessary for safe operation. Applicant shall also show:

(*a*) That such aircraft (other than those specifically listed as in scheduled air carrier service by the applicant prior to January 1, 1935) to be used on the proposed route, or part thereof, are capable, with any one engine inoperative, of maintaining level flight, with authorized load for the route or part thereof, at an altitude equivalent to 1,000 feet above the highest part of the terrain on the proposed instrument course of the route, or part thereof; or

(*b*) Operating procedures which, in the opinion of the Administrator, will assure that such aircraft will be capable of effecting a safe landing at an airport or other suitable area in the event of the failure of any one engine at any point on the route on which such aircraft will be operated.

40.2500 Engine rotation. On and after July 1, 1941, applicant shall show that any aircraft to be used in air transportation which have engines with maximum power ratings of 480 horsepower or more are so equipped that engine rotation may be promptly stopped during flight; and, on and after July 1, 1942, the same showing shall be made with respect to all other aircraft to be used in air transportation.

40.251 If operation over water. Same as in § 40.241.

40.252 Number of aircraft. Same as in § 40.234.

40.253 Radio equipment. Same as in § 40.235 and, in addition, applicant shall show that there is installed in each aircraft to be used in instrument or over-the-top operation (during day or night) over the proposed route, or part thereof, one additional separate radio receiving system capable of receiving radio range signals and weather broadcasts. Such receiver system shall normally operate from the main source of electrical supply of the aircraft but, in event of failure of the normal power source, shall be capable of being switched to operate from an independent power source. This system shall include an independent power source capable of operating such receiver continuously for a period of at least 4 hours. It is also required that such receiver operate from an independent antenna or from either of two antennas. Two sets of headphones shall be carried in the aircraft at all times.

40.2530 Radio direction finder. Applicant shall show that there is installed in each aircraft an approved radio direction finder, covering at least the frequency range of 200 to 400 kilocycles. The design of the radio direction finder shall be such as to permit its regular operation in the taking of line bearings on any station to which the direction finder may be tuned without altering the course of the aircraft. The radio direction finder shall also be provided with means to eliminate, insofar as possible consistent with the advancement of the art, that type of interference, commonly known as rain, snow, sleet, or dust static. The radio direction finder shall provide means for audible reception of radio range and weather broadcast messages. It may be installed in lieu of the emergency receiver required in § 40.253 provided that an independent power source equal to that described therein for such receiver is employed on either the radio range receiver required therein or on this radio direction finder.

40.2531 Radio anti-static antenna. Applicant shall show that there is installed in each aircraft an approved radio antenna system, which has for its purpose the collection of radio range signals, weather

broadcast and emergency messages transmitted within the frequency range of 200 to 400 kilocycles. The design of this antenna system shall be such as to eliminate insofar as possible, consistent with the advancement of the art, that type of interference commonly known as rain, snow, sleet, or dust static. This antenna system shall be designed to operate efficiently when used in conjunction with a receiver installed aboard such aircraft which has for its primary purpose the reception of radio range signals, weather broadcast and emergency messages.

40.2532 **Marker beacon receiver.** Applicant shall show that there is installed in each aircraft an ultra-high frequency marker beacon receiving system operating on the frequency of 75 megacycles. The system shall provide means for the visual and aural indications of signals transmitted by ultra-high frequency positive-cone-of-silence and fan-type marker stations. The design of the system shall preclude, insofar as possible, erroneous patterns of the transmitted signal caused by the receiving system. Such receiving system will not be required if the airway or route traversed is not equipped with ultra-high frequency positive-cone-of-silence or fan-type marker stations.

40.254 **Hangar facilities.** Same as in § 40.236.

40.255 **Shop facilities.** Same as in § 40.237.

40.256 **Inspection and overhaul organization and procedures.** Same as in § 40.238.

40.26 Airmen requirements: Visual-contact day operation.

40.260 **Number.** Applicant shall show airmen of a number sufficient to permit the maintaining of all schedules proposed, under safe operating conditions.

40.261 **First pilots.** Applicant shall show that prior to the issuance of the air carrier operating certificate all persons employed to serve as first pilots for the air carrier meet the following minimum requirements for qualification as to aircraft and route competency.

40.2610 (*a*) Each first pilot shall be possessed of a valid airline transport pilot competency rating with specifications or ratings indicating competency to pilot aircraft of each model to be used by him in scheduled operation.

40.2611 (*b*) Each first pilot within the 6 months immediately preceding his qualification for the route, shall have made one one-way trip without passengers over the proposed route or a part thereof on which he will pilot aircraft for applicant and shall have landed at least once at each terminal, scheduled intermediate stop and intermediate field. If landings cannot be effected at each intermediate field, the pilot shall make a ground examination, or where impracticable by reason of field conditions, a visual examination from the air at a safe low altitude, of each such field on which no landing is made. The pilot shall render a written inspection report on each such field to the air carrier and, in the case of a visual examination, accompany such report with a sketch of the field setting forth its conditions, obstructions, and surrounding terrain. Such reports and sketches shall be preserved for at least 1 year and shall be presented to an inspector of the Administrator upon request. The requirements pre-

scribed in this section may be met by two or more first pilots flying together, provided each complies with such requirements.

40.2612 (*c*) Each first pilot shall have made 2 round trips, in addition to the trip required by § 40.2611 over the proposed route or part thereof on which he will pilot aircraft for applicant as first pilot, without passengers, or shall have made 3 round trips in addition to that required by § 40.2611 as second pilot, with or without passengers, within the 12 months immediately preceding his qualification for such route.

40.2613 (*d*) During these trips required by § 40.2611 and § 40.2612 the flights shall be visual-contact and the visibility shall be not less than 5 miles as observed from the aircraft.

40.2614 (*e*) Each first pilot to be qualified as to route competency with respect to an alternate route shall have complied with the provisions of §§ 40.2611 and 40.2613 as applied to such alternate route.

40.2615 (*f*) Each first pilot shall be familiar with the aircraft, and shall demonstrate to an authorized air carrier inspector of the Administrator, or to a check pilot of the air carrier duly authorized by the Administrator, satisfactory capability to maneuver such aircraft with the maximum authorized load for the route or part thereof; and, in addition, if the aircraft is multi-engined, he shall demonstrate his ability to maneuver such aircraft with said load with any one engine fully throttled either:

(1) at an altitude equivalent to 500 feet above the highest part of the terrain on the proposed route or part thereof to be flown by the pilot in air carrier service, or

(2) at the one engine inoperative service ceiling.

40.262 Second pilots. Applicant shall show that each person employed to serve as a second pilot for the air carrier is possessed of at least a valid commercial pilot competency rating and before serving as second pilot in any aircraft in scheduled air transportation service shall have demonstrated to an air carrier inspector representing the Administrator or to a check pilot of the air carrier duly authorized by the Administrator, his ability to take off and land such aircraft in which he is to serve by making at least three satisfactory take-offs and landings in each model of such aircraft. On and after July 1, 1938, each applicant for or holder of an air carrier operating certificate will be required to show that each such person is possessed of a valid instrument rating, unless possessed of a valid air-line transport pilot competency rating.

40.263 Air carrier dispatchers. Applicant shall show that each person assuming aircraft dispatcher duties for the air carrier is familiar with the route or part thereof over which he will dispatch aircraft, the weather characteristics and phenomena peculiar to such route, the nature and peculiarities of the terrain and of obstructions to flight, the air navigation facilities available on the ground and in the aircraft, the contents of the operations manual of the proposed air carrier and the aircraft limitations specified in the certificates of the aircraft proposed for use. On and after July 1, 1938, each applicant for or holder of an air carrier operating certificate will be

required to show that each such person is possessed of a valid and appropriate air carrier dispatcher competency rating.

40.27 Airmen requirements: Visual-contact night operation.

40.270 Number. Same as in § 40.260.

40.271 First pilots. Same as in § 40.261, except that at least one one-way trip of those trips required by § 40.2612 (c) shall have been made during the period between 1 hour after sunset and 1 hour before sunrise.

40.272 Second pilots. Same as in § 40.262.

40.273 Air carrier dispatchers. Same as in § 40.263.

40.28 Airmen requirements: Instrument or over-the-top operation.

40.280 Number. Same as in § 40.260.

40.281 First pilots. Same as in § 40.261 and, in addition, applicant shall show that each first pilot, for whom instrument authorization is sought, has demonstrated to an air carrier inspector representing the Administrator, or to a check pilot of the air carrier duly authorized by the Administrator, satisfactory capability with respect to the following:

40.2810 (*a*) Familiarity with the aircraft, including demonstration of ability to maneuver such aircraft with the maximum authorized load for the route or part thereof, with any one engine fully throttled, either:

(1) at an altitude equivalent to 1,000 feet above the highest part of the terrain on the proposed instrument course of the route, or part thereof, to be flown by the pilot in air carrier service, or

(2) at the one engine inoperative service ceiling.

40.2811 (*b*) Familiarity with the route and with instruments, including demonstration of ability, under actual or simulated conditions, to fly such route solely by instruments.

40.2812 (*c*) Familiarity with procedures, including demonstration of ability to accomplish a let-down-through by instruments, according to the procedure specified in the appropriate competency letter, at one station at least, on the route, in each model of aircraft to be used by the pilot in air carrier operation. Such demonstrations as to the other stations as deemed necessary by the Administrator may be made to an air carrier inspector representing the Administrator, or to a check pilot of the air carrier duly authorized by the Administrator, under simulated conditions or by equivalent means approved by the Administrator.

40.282 Second pilots. Are required for all instrument operations and shall meet the minimum requirements of § 40.262.

40.283 Air carrier dispatchers. Same as in § 40.263.

40.29 Miscellaneous requirements.

40.290 Weather minimums. Authorization of ceiling and visibility minimums for purposes of flight clearance and for transition from instrument to visual-contact flights and vice-versa will be made by the Administrator and will be based upon the following considerations affecting the clearance and completion of the flight:

(*a*) the terrain conditions affecting the flight area necessary for the working out of an approach and let-down-through procedure, or for a climb-up-through procedure; and

(*b*) the skill and experience of dispatcher personnel; and
(*c*) the skill and experience of pilot personnel; and
(*d*) the model and maneuverability of the aircraft; and
(*e*) the obstruction to flight, considered both vertically and horizontally, in the vicinity of the landing area; and
(*f*) the quality and quantity of meteorological service and of other ground aids to flight available.

40.291 Air carrier operation skill. Applicant shall demonstrate to the satisfaction of the Administrator ability to conduct a safe operation over the entire route to be flown in air transportation. Such demonstration shall be by means of actual flights over each proposed route employing such of the proposed aircraft, airmen, and operating and maintenance procedures and techniques as the Administrator may deem necessary.

40.3 Goods minimum requirements (interstate). To be eligible for an air carrier operating certificate for the carriage of goods (including mail) in interstate air transportation, an applicant, in addition to meeting the minimum requirements provided for in § 40.1, shall meet and comply with the following minimum requirements prescribed for the particular kind of operation proposed:

40.30 Route requirements: Visual-contact day operation.

40.300 Airway. Same as in § 40.200.

40.301 Airports. Same as in § 40.201.

40.302 Public protection. Same as in § 40.202.

40.303 Intermediate fields. Same as in § 40.203.

40.304 Refueling facilities. Same as in § 40.204.

40.305 Radio facilities. Same as in § 40.205.

40.306 Weather reporting. Same as in § 40.206.

40.31 Route requirements: Visual-contact night operation.

40.310 Airway. Applicant shall meet the requirements of § 40.200 and shall show that the proposed route is provided with such obstruction lights as are deemed by the Administrator to be adequate for safe air carrier operation at night. In addition applicant shall show that the proposed route is equipped with such airway beacons as are deemed by the Administrator to be adequate for safe air carrier operation, or the applicant may show that the proposed route is equipped with such radio ranges (or equivalent facilities) projecting courses over the proposed route as are deemed adequate by the Administrator for safe air carrier operation.

40.311 Airports. Same as in § 40.211.

40.312 Public protection. Same as in § 40.202.

40.313 Intermediate fields. Same as in § 40.213.

40.314 Refueling facilities. Same as § 40.204.

40.315 Radio facilities. Same as in § 40.205.

40.316 Weather reporting. Same as in § 40.206.

40.32 Route requirements: Instrument or over-the-top operation.

40.320 Airway. Applicant shall meet the requirements of § 40.200 for a proposed day operation, or of § 40.310 for a proposed night operation. In addition, for either day or night operation, applicant shall show that the proposed route is equipped with radio ranges

(or equivalent facilities) projecting courses over the proposed route, as are deemed to be adequate by the Administrator for safe air carrier operation. Applicant shall also show other radio navigational aids (including radio markers), as may be deemed necessary by the Administrator.

40.321 **Airports.** Same as in § 40.221.

40.322 **Public protection.** Same as in § 40.202.

40.323 **Intermediate fields.** Same as in § 40.203 for day operation, and as in § 40.213 for night operation.

40.324 **Refueling facilities.** Same as in § 40.204.

40.325 **Radio facilities.** Same as in § 40.205.

40.326 **Weather reporting.** Same as in § 40.206.

40.33 **Aircraft requirements: Visual-contact day operation.**

40.330 **If single-engine operation over land.** Same as in § 40.230.

40.331 **If single-engine operation over water.** Same as in § 40.231.

40.332 **If multi-engine operation over land.** Applicant shall show aircraft of model and number necessary for safe operation. Applicant shall also show:

(a) That such aircraft to be used on the proposed route or part thereof are capable, with any one engine inoperative, of maintaining level flight with the authorized load for the route or part thereof at an altitude of at least 1,000 feet above the airport at each terminal and scheduled intermediate stop on the route or part thereof on which the aircraft will be operated; or

(b) Operating procedures which, in the opinion of the Administrator, will assure that such aircraft will be capable of effecting a safe landing at an airport or other suitable area in the event of the failure of any one engine at any point on the route on which such aircraft will be operated.

40.3320 **Engine rotation.** On and after July 1, 1941, applicant shall show that any aircraft to be used in air transportation which have engines with maximum power ratings of 480 horsepower or more are so equipped that engine rotation may be promptly stopped during flight; and, on and after July 1, 1942, the same showing shall be made with respect to all other aircraft to be used in air transportation.

40.333 **If multi-engine operation over water.** Same as in § 40.233.

40.334 **Number of aircraft.** Applicant shall show aircraft, certificated as provided in § 04.52, of a number sufficient to permit the maintenance of all schedules proposed, as provided for in § 40.16.

40.335 **Radio equipment.** Same as in § 40.235.

40.336 **Hangar facilities.** Same as in § 40.236.

40.337 **Shop facilities.** Same as in § 40.237.

40.338 **Inspection and overhaul organization and procedures.** Same as in § 40.238.

40.34 **Aircraft requirements: Visual-contact night operation.**

40.340 **If single-engine operation over land.** Applicant shall show aircraft of model and number necessary for safe operation, and, in addition thereto, that the routes over which the proposed operation is to be conducted are deemed by the Administrator to have suitable landing terrain.

40.341 If single-engine operation over water. Applicant shall show aircraft of model and number necessary for safe operation. Applicant shall also show that the route to be flown over is such that the aircraft can, at all times, reach land deemed suitable by the Administrator for a safe landing in the event of complete power failure.

40.342 If multi-engine operation over land. Same as in § 40.332.

40.343 If multi-engine operation over water. Same as in § 40.233.

40.344 Number of aircraft. Same as in § 40.334.

40.345 Radio equipment. Same as in § 40.235 and, in addition, applicant shall meet the requirements of §§ 40.253, 40.2530, 40.2531 and 40.2532 if the proposed route is not equipped with airway beacons as provided in § 40.210.

40.346 Hangar facilities. Same as in § 40.236.

40.347 Shop facilities. Same as in § 40.237.

40.348 Inspection and overhaul organization and procedures. Same as in § 40.238.

40.35 Aircraft requirements: Instrument or over-the-top operation.

40.350 If single-engine operation over land. Same as in § 40.340.

40.351 If single-engine operation over water. Same as in § 40.341.

40.352 If multi-engine operation over land. Same as in § 40.332.

40.353 If multi-engine operation over water. Same as in § 40.233.

40.354 Number of aircraft. Same as in § 40.334.

40.355 Radio equipment. Same as in §§ 40.253, 40.2530, 40.2531 and 40.2532.

40.356 Hangar facilities. Same as in § 40.236.

40.357 Shop facilities. Same as in § 40.237.

40.358 Inspection and overhaul organization and procedures. Same as in § 40.238.

40.36 Airmen requirements: Visual-contact day operation.

40.360 Number. Same as in § 40.260.

40.361 First pilots. Applicant shall show prior to the issuance of the air carrier operating certificate that all persons employed to serve as first pilots for the air carrier meet the following minimum requirements for qualification as to aircraft and route competency.

40.3610 (*a*) Each first pilot shall be possessed of at least a valid commercial pilot competency rating with specifications or ratings indicating competency to pilot aircraft of each model to be used by him in scheduled operation. Each first pilot shall also be possessed of a valid instrument rating, unless possessed of a valid airline transport pilot competency rating.

40.3611 (*b*) Same as § 40.2611 (*b*).

40.3612 (*c*) During the trip required by § 40.3611 the flight shall be visual-contact and the visibility shall be not less than 5 miles as observed from the aircraft.

40.3613 (*d*) Each first pilot to be qualified as to route competency with respect to an alternate route shall have complied with the provisions of §§ 40.3611 and 40.3612 as applied to such alternate route.

40.3614 (*e*) Same as § 40.2615 (*f*).

40.362 Second pilots. Applicant shall show that each person employed to serve as second pilot for the air carrier is possessed of at

least a valid commercial pilot competency rating and before serving as second pilot in any aircraft in scheduled air transportation service shall have demonstrated to an air carrier inspector representing the Administrator or to a check pilot of the air carrier duly authorized by the Administrator, his ability to take off and land such aircraft in which he is to serve by making at least three satisfactory take-offs and landings in each model of such aircraft.

40.363 Air carrier dispatchers. Same as in § 40.263.

40.37 Airmen requirements: Visual-contact night operation.

40.370 Number. Same as in § 40.260.

40.371 First pilots. Same as in § 40.361, except that each first pilot shall have logged at least 1.200 hours of certified solo flying time, and the trip required by § 40.3611 shall have been made between the hours of sunset and sunrise.

40.372 Second pilots. Same as in § 40.362 and, in addition, 6 months after the effective date[1] of these regulations, each applicant for or holder of an air carrier operating certificate will be required to show that each such person is possessed of a valid instrument rating, unless possessed of a valid airline transport pilot competency rating.

40.373 Air carrier dispatchers. Same as in § 40.263.

40.38 Airmen requirements: Instrument or over-the-top operation.

40.380 Number. Same as in § 40.260.

40.381 First pilots. Same as in § 40.361, except that each first pilot shall have logged at least 1,200 hours of certified solo flying time and, in addition, applicant shall show that each first pilot, for whom instrument authorization is sought, has demonstrated to an air carrier inspector representing the Administrator or to a check pilot of the air carrier duly authorized by the Administrator, satisfactory capability with respect to the following:

40.3810 (*a*) Familiarity with the aircraft, including demonstration of ability to maneuver such aircraft with the maximum authorized load for the route or part thereof; and, in addition, if the aircraft is multi-engined, a demonstration of ability to maneuver such aircraft with said load, with any one engine fully throttled either:

(1) at an altitude equivalent to 1,000 feet above the highest part of the terrain on the proposed instrument course of the route or part thereof to be flown by the pilot in air carrier service, or

(2) at the one engine inoperative service ceiling.

40.3811 (*b*) Familiarity with the route and with instruments, including demonstration of ability, under actual or simulated conditions, to fly such route solely by instruments.

40.3812 (*c*) Familiarity with procedures, including demonstration of ability to accomplish a let-down-through by instruments, according to the procedure specified in the appropriate competency letter, at one station at least, on the route, in each model of aircraft to be used by the pilot in air carrier operation. Such demonstrations as to other stations as deemed necessary by the Administrator may be made to an air carrier inspector representing the Administrator, or to a check pilot of the air carrier duly authorized by the Administrator, under simu-

[1] This date is May 31, 1938.

lated conditions or by equivalent means approved by the Administrator.

40.382 Second pilots. Same as in § 40.262.

40.383 Air carrier dispatchers. Same as in § 40.263.

40.39 Miscellaneous requirements.

40.390 Weather minimums. Same as in § 40.29, giving consideration to the fact that no passengers are being carried in this operation and providing for the most rapid progress of the art of flying.

40.391 Air carrier operation skill. Same as in § 40.291.

40.4 Passenger minimum requirements (intra-territorial). (To be supplied.)

40.5 Goods minimum requirements (intra-territorial). (To be supplied.)

40.6 Air carrier operating certificate.

40.60 Provision for issuance. An air carrier operating certificate will be issued by the Administrator to an applicant after approval of application made and proof submitted in connection therewith, and if, upon inspection and examination, said applicant is found by the Administrator to meet the general requirements prescribed in § 40.1 and the appropriate particular minimum requirements prescribed in §§ 40.2, 40.3, 40.4, and 40.5 and is, therefore, rated as competent to engage in interstate or intra-territorial air transportation, or both, for the carriage of mail, property, or passengers in scheduled operation as specified in the certificate or appended competency letters (provided in § 40.7). Air carriers which were conducting authorized operations on August 20, 1938, and which were possessed of a valid and effective Scheduled Airline Competency Certificate and appended competency letters issued by the Secretary of Commerce, shall have until the 1st day of July 1939, to apply for an air carrier operating certificate as provided in § 40.61. In the interim, operations shall be conducted according to the terms, conditions, specifications, and limitations of the Scheduled Airline Competency Certificate and appended competency letters issued by the Secretary of Commerce.

40.61 Application. Application for an air carrier operating certificate shall be made to the Administrator, in the manner outlined in Form CAA 40-1.

40.610 Number of copies. Applicant shall submit at least three copies of the application duly completed and executed, and, in the discretion of the Administrator, may be required to submit a greater number, not to exceed ten.

40.611 Application to amend. When changes in, or amendments thereto, the original application are desired, the applicant shall submit one copy in addition to the number previously required for the original application, of the amended page or pages, incorporating the change or changes desired in the manner provided in § 40.61. These copies shall be submitted to the Administrator through the supervising air carrier inspector involved and shall not be effective until written approval of the Administrator has been received, except that approval may be granted by the supervising air carrier inspector for changes in pilot and dispatcher personnel.

40.612 (Unassigned)

40.613 Inspection. The applicant for an air carrier operating certificate shall offer full cooperation with respect to any inspection or

examination which may be made of said applicant upon proper demand by any authorized representative of the Administrator prior or subsequent to the issuance of such air carrier operating certificate.

40.62 **Temporary permit.** Following application made for an air carrier operating certificate, but prior to approval thereof and issuance of the certificate, a temporary air carrier operating certificate may be issued by the Administrator in order to enable the applicant to demonstrate ability to meet and comply with the minimum requirements of § 40.291 pertaining to air carrier operation skill. During such period no pay passengers shall be carried.

40.63 **Issuance.** An air carrier operating certificate will be issued in an appropriate form in accordance with the provisions of § 40.60.

40.64 **Display.** The air carrier operating certificate in its current and effective form (or a copy thereof) shall be conspicuously posted in the principal office of the air carrier where it may be readily seen, and any such certificate shall be presented for inspection upon demand of any authorized officer or employee of the Administrator or Board, or upon the reasonable request of any other person. Facsimile copies of such air carrier operating certificate may be posted for display elsewhere.

40.65 **Duration.** An air carrier operating certificate will remain effective for an indeterminate time, or until the certificate is suspended or revoked.

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

40.67 (Unassigned)

40.68 **Surrender.** Upon the suspension or revocation of an air carrier operating certificate, the holder of such certificate shall, upon request, surrender such certificate to any officer or employee of the Administrator.

40.69 **Reapplication.** An air carrier whose application for an air carrier operating certificate has been disapproved may reapply at any time.

40.7 **Air carrier competency letters.**

40.70 **Provision for issuance.** To provide for the operation of a scheduled air carrier with sufficient flexibility to meet new and constantly changing situations, six air carrier competency letters will be appended to each air carrier operating certificate by the Administrator. Such letters will establish the basis for, and set the limitations upon, the competency of the air carrier operation and will be deemed an integral part of the air carrier operating certificate. The six competency letters will be as follows:

40.700 (*a*) Service competency letter.
40.701 (*b*) Route competency letter.
40.702 (*c*) Aircraft competency letter.
40.703 (*d*) Maintenance competency letter.
40.704 (*e*) Airmen competency letter.
40.705 (*f*) Weather competency letter.

40.71 **Application.** Application for an air carrier operating certificate will constitute, without other formality, application for a competency letter of each kind.

40.710 Application to amend. Application to amend a competency letter of any kind may be made by amending the application for the air carrier operating certificate as provided for in § 40.611.

40.711 (Unassigned)

40.712 Inspection. Same as § 40.613.

40.72 Temporary letter. Following application made for an air carrier operating certificate, but prior to approval and issuance thereof, temporary competency letters may be issued for the purpose of enabling applicant to demonstrate ability to meet the requirements as to service, route, aircraft, maintenance, airmen, and weather competency, for the duration of the temporary air carrier operating certificate provided for in § 40.62.

40.73 Issuance. Upon approval of an application duly made and proofs submitted (including inspection and examination), a competency letter will be issued in an appropriate form.

40.74 Display. No competency letter need be posted for purposes of display, but all such letters shall be kept at the principal office of the holder of the certificate, unless otherwise specified by the Administrator or Board and any such letter shall be presented in its current and effective form for inspection upon demand of any authorized officer or employee of the Administrator or Board, or upon the reasonable request of any other person.

40.75 Duration. A competency letter will remain effective for an indeterminate time, or until

(*a*) the letter is superseded by a later competency letter of the same kind, or

(*b*) the letter is suspended or revoked, or

(*c*) the certificate of which it is a part is suspended or revoked.

40.76 Nontransferability. A competency letter is not transferable, except with the consent of the Administrator.

40.77 (Unassigned)

40.78 Surrender. Upon the suspension or revocation of an air carrier operating certificate, the holder of such certificate shall, upon request, surrender such certificate to any officer or employee of the Administrator.

40.79 Reapplication. An air carrier, whose application for a competency letter has been disapproved, may reapply at any time.

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