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THE UNITED STATES OF AMERICA
CIVIL AERONAUTICS AUTHORITY
WASHINGTON, D. C.

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At a session of the Civil Aeronautics Authority
held at its office in Washington, D. C. on
the 17th day of May, 1940.

Acting pursuant to the authority vested in it by the Civil Aeronautics Act of 1938, particularly sections 205 (a), 601 and 604 of said Act, and finding that its action is desirable in the public interest and is necessary to carry out the provisions of, and to exercise and perform its powers and duties under said Act, the Civil Aeronautics Authority hereby amends the Civil Air Regulations as follows:

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| AMENDMENT NO. 51 OF THE CIVIL AIR REGULATIONS | REVISING THE QUALIFICATIONS FOR, AND THE RULES GOVERNING THE OPERATION OF, AIR CARRIERS |

Effective June 1, 1940, the Civil Air Regulations are amended as follows:

1. By amending section 40.201 to read as follows:

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

2. By amending section 40.2611 (b) to read as follows:

"40.2611 (b). Each first pilot within the 6 months immediately precedng 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 one year and shall be presented to an inspector of the Authority upon request. The requirements prescribed in this section may be met by two or more first pilots flying together, provided each complies with such requirements.

3. By amending section 40.2615 (f) to read as follows:

"40.2615(f). Each first pilot shall be familiar with the aircraft, and shall demonstrate to an authorized air carrier inspector of the Authority, or to a check pilot of the air carrier duly authorized by the Authority, 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."

4. By amending section 40.271 to read as follows:

"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 one hour after sunset and one hour before sunrise."

5. By amending section 40.2810 (a) to read as follows:

"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."

6. By amending section 40.2811 (b) to read as follows:

"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."

7. By amending section 40.291 to read as follows:

"40.291 Air carrier operation skill. Applicant shall

demonstrate to the satisfaction of the Authority 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 Authority may deem necessary."

8. By amending section 40.3611 (b) to read as follows:

"40.3611 (b). Same as § 40.2611 (b)."

9. By amending section 40.3810 (a) to read as follows:

"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."

10. By amending section 40.3811 (b) to read as folows:

"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."

11. By amending section 61.551 to read as follows:

"61.551 Location. One or more aircraft dispatchers shall be located at such points as may be deemed necessary by the Authority to insure the safe operation of the air carrier."

12. By amending section 61.7103 to read as follows:

"61.7103 Clearance and preparation. A clearance form shall be properly prepared for each flight between specified clearance points. Such form shall be signed by the first pilot and by the authorized aircraft dispacher or, by duly authorized station personnel of the air carrier after receiving current authority from the authorized aircraft dispatcher, only when the first pilot and the dispatcher both believe the flight may be made with safety. A load manifest form shall be properly prepared and signed for each flight by the personnel of the air carrier who are charged with the duty of supervising the loading of the aircraft and the preparation of the load manifest forms. The aircraft when loaded as shown on the load manifest form shall not exceed the center of gravity limits or maximum allowable weight limits set forth in the aircraft certificate for the particular aircraft. The original copies of both forms shall be given to the first pilot and duplicate copies shall be kept in the station file for a period of at least 30 days."

13. By amending section 61.71082 (c) to read as follows:

"61.71082 (c). During night operation at least one beacon on the course shall be visible from the aircraft at all times, unless otherwise specifically authorized by the Authority."

14. By striking section 61.7114 and inserted in lieu thereof the following new section:

"61.7114 Flight equipment. An air carrier shall not dispatch an aircraft in air transportation unless the equipment required by the Civil Air Regulations for the particular type of operation involved, is installed in such aircraft and in serviceable condition and, if any part of such equipment becomes unserviceable in flight, a landing shall be made either at the nearest suitable landing area where a safe landing may be made or, at the next point of intended landing, whichever in the opinion of the pilot and dispatcher is the safest procedure: Provided, That the aircraft dispatcher in control of the flight may dispatch or authorize the operation of such aircraft in air transportation to the nearest point where repair or replacement of such equipment can be made if the equipment specified below for the particular type of operation involved is installed in such aircraft and in serviceable condition:

(a) Visual-contact day operation.

1. One airspeed indicator.
2. One altimeter.
3. One tachometer for each engine.
4. One oil pressure gauge for each engine.
5. One oil temperature gauge for each engine.
6. One manifold pressure gauge for each engine.
7. One safety belt for each person aboard.
8. Two approved type portable fire extinguishers.

9. One landing gear position indicator or equivalent facility.

10. One first aid kit.

11. One magnetic compass.

12. One fixed fire extinguisher in each engine compartment.

13. One or more storage batteries of sufficient capacity to operate all radio and electrical equipment.

14. Two of the following units of radio equipment:

    One transmitter for two-way communication;
    One receiver for two-way communication;
    One radio range receiver.

15. If such aircraft is a multi-engine aircraft it may be operated with any one of the units of equipment in Items 3, 5 or 6 above inoperative: Provided, That in the case of Item 5 a cylinder temperature gauge in serviceable condition is installed on the same engine the inoperative oil temperature gauge is installed.

(b) Visual-contact night operation.

1. All equipment required for visual-contact day operation.

2. Forward position and tail lights.

3. Two landing lights.

4. Two three minute landing flares.

5. One set of instrument lights.

6. One electrical generator sufficient to operate all electrical and radio equipment.

(c) Instrument or over-the-top day operation.

1. All equipment required for visual-contact day operation.

2. A fuel quantity indicator to show the amount of fuel in each of at least two fuel tanks.

3. One additional airspeed indicator.

4. An electrically heated pitot tube for each airspeed idicator.

5. One rate of climb indicator.

6. One gyroscopic rate of turn indicator combined with a bank indicator.

7. One artificial horizon indicator.

8. One directional gyrocompass.

9. Two sensitive type altimeters.

10. One outside air temperature gauge with indicating dial in cockpit.

11. One clock with sweep second hand.

12. One vacuum gauge installed in lines leading to the rate of turn and artificial horizon indicators and the directional gyrocompass

13. One carburetor ice indicator if the deicing equipment required manual manipulation.

14. All of the radio equipment required by the Civil Air Regulations for instrument type of operation.

15. One spare set of fuses.

(d) Instrument or over-the-top night operation.

1. All equipment required for visual-contact night and instrument or over-the-top day operation."

15. By striking sections 61.7113, 61.7700 and 61.7701 and inserting in lieu thereof the following new section:

"61.7700 Icing conditions. No air carrier or employee thereof shall dispatch or operate an aircraft in air transportation into any known or probable icing conditions unless the aircraft is equipped with approved propeller and wing deicing equipment adequate to assure the safety of the flight under the particular conditions to be encountered. When an icing

condition is encountered in flight the pilot shall, if possible, immediately notify his company radio ground station of such fact and the company shall immediately relay such information to the nearest office of the United States Weather Bureau in accordance with § 61.733."

16. By amending section 61.7802 to read as follows:

"61.7802 Manipulation of controls. No person, other than a first or second pilot, shall manipulate the controls of an air carrier aircraft while in scheduled flight: Provided, That at the discretion of the first pilot such restriction shall not apply to authorized inspectors of the Authority or to properly qualified company personnel or to properly qualified personnel of other air carriers."

17. By amending section 61.7803 to read as follows:

"61.7803 Pilots' compartment. The door or doors between the pilots' compartment and the passenger compartment shall be kept closed when the aircraft is in flight. No person shall be admitted to such pilots' compartment while the aircraft is in scheduled flight except, at the discretion of the first pilot, of employee authorized by the operator, any of the personnel of the Authority or other technical personnel authorized by the Authority, or, for the purpose of route or equipment qualification and familiarization, an airman of another air carrier authorized by both air carriers for such purpose."

By the Authority:

/s/

Paul J. Frizzell
Secretary

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