UNITED STATES OF AMERICA
CIVIL AERONAUTICS BOARD
WASHINGTON, D. C.

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Civil Air Regulations Amendment 41-10
Effective: January 1, 1954
Adopted: December 23, 1953

ELIMINATION OF THE REQUIREMENT FOR CERTIFICATION IN THE TRANSPORT CATEGORY AFTER DECEMBER 31, 1953, AND ESTABLISHMENT OF NONTRANSPORT CATEGORY OPERATING LIMITATIONS

This amendment to Part 41 of the Civil Air Regulations eliminates the requirement for certification in the transport category after December 31, 1953, and establishes nontransport category operating limitations to become effective on July 1, 1954.

Section 41.26(c) of Part 41 currently states that after December 31, 1953, all aircraft operating under this part shall comply with the transport category certification requirements of either Part 4a or 4b and with the operating limitations prescribed in this part for transport category airplanes. This requirement was intended to remove from the scheduled air transportation such aircraft types as the Douglas DC-3 and the Lockheed L-18 after this date unless recertificated in the transport category. This provision was also contained in Part 40 of the Civil Air Regulations. In view of the safety record of the DC-3 and L-18 and their continued use in scheduled passenger operation, the Board, in revised Part 40, permitted the continued operation of these airplanes but required that they comply with certain performance operating limitations based on the nontransport category performance limitations that presently appear in Part 42.

In view of the action taken with respect to these airplanes in revised Part 40, this regulation permits operation of nontransport category airplanes under Part 41 after December 31, 1953, but at the same time prescribes the same performance operating limitations that are prescribed in revised Part 40. Since it is estimated that the affected air carriers will require about six months to implement these operating limitations for these aircraft, the operating limitations will not become effective until July 1, 1954. This will permit continued operation of these aircraft under present conditions until that date.

Interested persons have been afforded an opportunity to participate in the making of this regulation, and due consideration has been given to all relevant matter presented. Since this regulation imposes no immediate additional burden on any person, it may be made effective without prior notice.

In consideration of the foregoing, the Civil Aeronautics Board hereby amends Part 41 of the Civil Air Regulations (14 CFR, Part 41, as amended) effective immediately:

1. By amending § 41.26 (b) (1) to read as follows: "Retain their present airworthiness certification status and meet the requirements of § 41.36 except that until July 1, 1954, these aircraft may be operated in accordance with such operating limitations as the Administrator finds will provide a safe relation between the performance of the aircraft and the dimensions of airports and terrain; or"

2. By deleting § 41.26 (c).

3. By adding new §§ 41.36, 41.36a, 41.36b, 41.36c, and 41.36d to read as follows:

41.36 Nontransport category airplane operating limitations. In operating any nontransport category airplane in passenger service on or after July 1, 1954, the provisions of §§ 41.36a through 41.36d shall be complied with, unless deviations therefrom are specifically authorized by the Administrator on the ground that the special circumstances of a particular case make a literal observance of the requirements unnecessary for safety. Prior to that date such airplanes shall be operated either in accordance with §§ 41.36a through 41.36d or in accordance with such operating limitations as the Administrator determines will provide a safe relation between the performance of the airplanes and the airports to be used and the areas to be traversed. Performance data published or approved by the Administrator for each such nontransport category airplane shall be used in determining compliance with the provisions of §§ 41.36a through 41.36d.

41.36a Take-off limitations. No take-off shall be made at a weight in excess of that which will permit the airplane to be brought to a safe step within the effective length of the runway from any point during the take-off up to the time of attaining 105 percent of minimum control speed or 115 percent of the power-off stalling speed in the take-off configuration, wichever is the greater. In applying the requirements of this section:

(a) It may be assumed that take-off power is used on all engines during the acceleration;

(b) Account may be taken of not more than 50 percent of the reported wind component along the take-off path if opposite to the direction of take-off, and account shall be taken of not less than 150 percent of the reported wind component if in the direction of the take-off;

(c) Account shall be taken of the average runway gradient when the average gradient is greater than 1/2 percent. The average runway gradient is the difference between the elevations of the end points of the runway divided by the total length;

(d) It shall be assumed that the airplane is operating in the standard atmosphere.

41.36b En route limitations; one engine inoperative.

(a) No take-off shall be made at a weight in excess of that which will permit the airplane to climb at a rate of at least 50 feet per minute with the critical engine inoperative at an altitude of at least 1,000 feet above the elevation of the highest obstacle within 5 miles on either side of the intended track or at an altitude of 5,000 feet, whichever is the higher: Provided, That in the alternative an air carrier may utilize a procedure whereby the airplane is operated at an altitude such that, in event of an engine failure, the airplane can clear the obstacles within 5 miles on either side of the intended track by 1,000 feet, if the air carrier can demonstrate to the satisfaction of the Administrator that such a procedure can be used without impairing the safety of operation. If such a procedure is utilized, the rate of descent for the appropriate weight and altitude shall be assumed to be 50 feet per minute greater than indicated by the performance information published or approved by the Administrator. Before approving such a procedure, the Administrator shall take into account, for the particular route, route segment, or areas concerned, the reliability of wind and weather forecasting, the location and types of aids to navigation, the prevailing weather conditions, particularly the frequency and amount of turbulence normally encountered, terrain features, air traffic control problems, and all other operational factors which affect the safety of an operation utilizing such a procedure.

(b) In applying the requirements of paragraph (a) of this section, it shall be assumed that:

(1) The critical engine is inoperative;

(2) The propeller of the inoperative engine is in the minimum drag position;

(3) The wing flaps and landing gear are in the most favorable positions;

(4) The operative engine or engines are operating at the maximum continuous power available;

(5) The airplane is operating in the standard atmosphere;

(6) The weight of the airplane is progressively reduced by the weight of the anticipated consumption of fuel and oil.

41.36c Landing distance limitations; airport of intended destination. No take-off shall be made at a weight in excess of that which, allowing for the anticipated weight reduction due to consumption of fuel and oil, will permit the airplane to be brought to a stop within 60 percent of the effective length of the most suitable runway at the airport of intended destination.

(a) This weight shall in no instance be greater than that permissible if the landing were to be made:

(1) On the runway with the greatest effective length in still air, and

(2) On the runway required by the probable wind, taking into account not more than 50 percent of the probable headwind component and not less than 150 percent of the probable tailwind component.

(b) In applying the requirements of this section it shall be assumed that:

(1) The airplane passes directly over the intersection of the obstruction clearance plane and the runway at a height of 50 feet in a steady gliding approach at a true indicated air speed of at least 1.3 V_{S_0};

(2) The landing is made in such a manner that it does not require any exceptional degree of skill on the part of the pilot;

(3) The airplane is operating in the standard atmosphere.

41.36d Landing distance limitations; alternate airports. No airport shall be designated as an alternate airport in a dispatch release unless the airplane at the weight anticipated at the time of arrival at such airport can comply with the requirements of § 41.36c: Provided, That the airplane can be brought to rest within 70 percent of the effective length of the runway.

(Sec. 205 (a), 52 Stat. 984; 49 U.S.C. 425 (a). Interpret or apply secs. 601-604, 52 Stat. 1007-1010, as amended; 49 U.S.C. 551-554, 62 Stat. 1216)

By the Civil Aeronautics Board:

/s/ M. C. Mulligan

M. C. Mulligan
Secretary

(SEAL)

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