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

Civil Air Regulations Amendment 35-0
Effective: March 15, 1947

IT APPEARING THAT:

The proposal to adopt a new Part 35 of the Civil Air Regulations to provide certification standards for the issuance of flight engineer certificates was circulated to the air carrier industry and to the interested aviation organizations on February 15, 1946, with the request for the submission of any comments and suggestions not later than May 1, 1946; the comments submitted by interested parties have been considered by the Board and the oral comment submitted at various discussion meetings by interested persons has also been considered by the Board; it is desirable to provide for the certification of flight engineers who will serve in connection with civil aircraft as provided by the aircraft operation rules of the Civil Air Regulations.

The Civil Aeronautics Board finds that the notice and public procedure provided for in paragraphs (a) and (b) of Section 4 of the Administrative Procedure Act are unnecessary and that this regulation should become effective 90 days after the adoption date.

NOW, THEREFORE, effective March 15, 1947, the Civil Air Regulations are amended by adopting a new Part 35, Flight Engineer Certificates, to read as follows:

PART 35 - FLIGHT ENGINEER CERTIFICATES

EXPLANATORY STATEMENT OF PART 35

In accordance with the provisions of Title VI of the Civil Aeronautics Act of 1938 it is unlawful for any person to serve in any capacity as an airman in connection with any civil aircraft used in air commerce without an airman certificate authorizing him to serve in such capacity, or in violation of the terms of any such certificate. A flight engineer falls within the definition of airman as defined in that act.

The purpose of this part is to provide a means for compliance with the airman requirements of Title VI of the act with respect to the use in air commerce of those types of aircraft which require the services of flight engineers by providing the standards by which flight engineers may be certificated as airmen.

35.0 REQUIREMENTS FOR CERTIFICATE

35.00 Issuance. A flight engineer certificate will be issued to an applicant who meets the following requirements:

35.01 Age. Applicant shall be at least 21 years of age.

35.02 Citizenship. Applicant shall be a citizen of the United States or of a foreign government which grants reciprocal flight engineer privileges to citizens of the United States on equal terms and conditions with citizens of such foreign government.

35.03 Education. Applicant shall be able to read, write, speak, and understand the English language.

35.04 Physical standards. Applicant shall meet the physical standards of the second class prescribed in Part 29 of the Civil Air Regulations.

35.05 Experience. Applicant shall:

(a) have had at least 4 years of diversified practical experience in the maintenance and repair of aircraft and aircraft engines, or

(b) hold a degree in engineering from a recognized college, university, or engineering school and in addition have had at least one year of diversified practical experience in the maintenance and repair of aircraft and aircraft engines, or

(c) have had at least 200 hours of flight experience in the duties of a flight engineer, or

(d) have satisfactorily completed a course of ground and flight instruction in at least the items specified in § 35.06 which the Administrator has found adequate for the training of a flight engineer, or

(e) have had at least 200 hours as pilot in command of an aircraft having 4 engines or more.

35.06 Knowledge. Applicant shall pass a written examination on the following subjects pertaining to aircraft having 4 engines and certificated in the transport category:

(a) responsibilities and limitations of a flight engineer as specified in the Civil Air Regulations;

(b) theory of flight and elementary aerodynamics;

(c) aircraft performance and aircraft engine operation with respect to limitations;

(d) mathematical computations of engine operation and fuel consumption, including basic meteorology with respect to engine operation;

(e) aircraft loading and center of gravity computations;

(f) basic aircraft maintenance and operating procedures.

35.07 Skill. Applicant shall pass a practical test in the duties of a flight engineer during flight, on an aircraft having 4 engines and certificated in the transport category, and shall demonstrate competency with respect to:

(a) normal duties and procedures relating to aircraft, aircraft engines, propellers, and appliances;

(b) recognition of the malfunctioning of aircraft, aircraft engines, propellers, and appliances, and the taking of appropriate action thereon;

(c) emergency duties and procedures relating to aircraft, aircraft engines, propellers, and appliances.

35.1 CERTIFICATION RULES

35.10 Application. Application shall be made on a form and in the manner prescribed by the Administrator.

35.11 Duration. A flight engineer certificate shall remain in effect unless it is suspended, or revoked, or a general termination date for such certificate is fixed by the Board.

35.10 See Amendment 35.1 [illegible]

35.12 Surrender. Any flight engineer shall, upon request, deliver his certificate to the Administrator, if it has been suspended or revoked.

35.13 Reexamination. Applicants who have failed in any examination may apply for reexamination on the part failed after 30 days from the date of such failure.

By the Civil Aeronautics Board:

/s/ M. C. Mulligan

(SEAL)

M. C. Mulligan
Secretary