FEDERAL AVIATION AGENCY
BUREAU OF FLIGHT STANDARDS
Washington 25, D. C.

April 14, 1961

CIVIL AIR REGULATIONS DRAFT RELEASE NO. 61-7

SUBJECT: Qualification and Training Requirements for Pilots Other Than Pilots in Command

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The Bureau of Flight Standards of the Federal Aviation Agency has under consideration an amendment to Parts 40, 41, and 42 of the Civil Air Regulations. The reasons therefor are set forth in the explanatory statement of the attached proposal which is being published in the Federal Register as a notice of proposed rule making.

The Bureau of Flight Standards desires that all persons who will be affected by the requirements of this proposal be fully informed as to its effect upon them and is therefore circulating copies in order to afford interested persons ample opportunity to submit comments as they may desire.

Because of the large number of comments which we anticipate receiving in response to this draft release, we will be unable to acknowledge receipt of each reply. However, you may be assured that all comment will be given careful consideration.

It should be noted that comments must be submitted in duplicate to the Docket Section of the Federal Aviation Agency, and in order to insure consideration must be received by June 22, 1961.

Oran Bakke
Director,
Bureau of Flight Standards

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FEDERAL AVIATION AGENCY

BUREAU OF FLIGHT STANDARDS

/14 CFR Parts 40, 41, 42/

/Regulatory Docket No.719; Draft Release No. 61-7/

NOTICE OF PROPOSED RULE MAKING

Qualification and Training Requirements for Pilots Other Than Pilots in Command

Pursuant to the authority delegated to me by the Administrator (14 CFR 405.27), notice is hereby given that there is under consideration a proposal to amend Parts 40, 41, and 42 of the Civil Air Regulations as hereinafter set forth. Since the proposed amendments are substantially the same for all three parts, only the proposed changes to Part 41 are set forth in detail.

Interested persons may participate in the making of the proposed rules by submitting such written data, views, or arguments as they may desire. Communications should be submitted in duplicate to the Docket Section of the Federal Aviation Agency, Room B-316, 1711 New York Avenue, N.W., Washington 25, D. C. All communications received by June 22, 1961, will be considered by the Administrator before taking action on the proposed rules. The proposal contained in this notice may be changed in the light of comments received. All comments submitted will be available for examination by interested persons in the Docket Section when the prescribed date for return of comments has expired.

Civil Air Regulations Amendments 40-21, 41-28, and 42-23, which became effective January 1, 1961, concern (1) approval of air carrier training programs, (2) qualification of pilots other than pilots in command, and (3) proficiency checks for pilots other than pilots in command. The primary purpose of these regulatory changes was to make certain that each crew-

member and dispatcher used by an air carrier would be adequately trained and qualified to perform his assigned duties. By prescribing specific training requirements and proficiency checks for pilots designated to act as second in command of the airplane, the Federal Aviation Agency sought to insure that each pilot utilized at the flight controls would possess adequate knowledge and skill to perform all the duties and functions associated with the flight station he occupies.

In implementing these new requirements, questions arose which indicate a need for some clarification of the regulations concerning the training, qualification, and proficiency checks of pilots, particularly the second in command and additional pilots assigned to the flight crew. In addition, certain other revisions are necessary to accomplish the purposes sought by Amendments 40-21, 41-28, and 42-23.

Section 41.52(b) provides that no air carrier shall schedule a pilot in command or second in command to serve as such unless, within the preceding 90 days, he has made at least three takeoffs and three landings in the airplane of the particular type on which he is to serve. This rule has resulted in numerous misunderstandings and questions concerning the applicability of recent experience requirements to additional pilots assigned to crews consisting of three or more pilots. In some cases, such additional pilots are required for the purpose of complying with flight time limitations, and should be qualified to relieve other pilots at the flight controls during any phase of flight. On other occasions, an air carrier may assign additional pilots to the crew for purposes other than compliance with the minimum requirements of the Civil Air Regulations,

and may or may not elect to utilize such pilots at the flight controls during takeoffs or landings. In order to insure that each pilot so utilized has had recent experience, and at the same time avoid imposing an unnecessary requirement upon other additional pilots, the amendment proposed herein would require all pilots who serve as required flight crewmembers, or who are utilized at the flight controls during takeoffs or landings, to meet the recent experience requirements of § 41.52.

Section 41.53b(b)(1) specifies the maneuvers which must be included in the initial flight training for a pilot qualifying to serve as pilot in command or as second in command in a crew requiring three or more pilots. Section 41.53b(b)(1)(iii) requires, at the authorized maximum landing weight, simulated pullout from the landing and approach configurations, accomplished at a safe altitude with the critical engine inoperative or operating at zero thrust. Since the transport category performance requirements for an airplane in the landing configuration are based on all engines operating, the amendment proposed herein would require the training and practice in simulated pullouts from this particular configuration to be executed with all engines operating.

Section 41.53b(c) specifies the maneuvers and procedures that must be included in the initial flight training for a pilot qualifying to serve as second in command in a crew requiring two pilots. The training requirements for additional pilots assigned to serve in crews that consist of three or more pilots are set forth in § 41.53b(a). However, this section does not specify the required maneuvers and procedures, which has caused some misunderstanding about the flight training required for pilots other

than the pilot in command or second in command. In order to make sure that each pilot utilized at the flight controls is adequately trained to perform his assigned duties, § 41.53b(c), as proposed herein, would require each additional pilot qualifying to serve as a required pilot flight crewmember, or as a pilot at the flight controls during takeoffs or landings, to be trained in the same maneuvers and procedures now required for the second in command of a two-pilot crew. In addition, a new § 41.53b(d) is proposed which would specify the maneuvers and procedures required for the initial training of all other additional pilots, who may be utilized at the flight controls during any phase of flight except takeoff or landing. Pilot flight training would not be required for assigned crewmembers who, although they possess pilot certificates, are not required pilot flight crewmembers and are not utilized as pilots at the flight controls.

Section 41.53g(b) requires each air carrier to check the competence of each crewmember and dispatcher at least once each twelve months. In the case of the pilot in command or second in command, this requirement may be met by flight proficiency checks accomplished in accordance with other sections of Part 41. Since the amendments proposed herein would require periodic flight proficiency checks for other pilots qualifying to serve in the crew, it is proposed to permit the use of these flight checks also to meet the requirements of § 41.53g(b). In addition, the proposed amendments would permit competence checks of crew members and dispatchers to be given at any time during the month preceding or following the month in which they become due.

Section 41.53j(b)(1) requires, among other things, a proficiency check of the pilot in command each six months. The second in command of a crew requiring three or more pilots is required to meet the same qualification standards as the pilot in command, and to accomplish the same proficiency check. However, the proficiency check for such second in command must now be accomplished only once each twelve months. Since the second in command of a crew requiring three or more pilots is expected to possess adequate knowledge and skill to perform the same functions as the pilot in command, the amendment proposed herein would require that he accomplish a proficiency check each six months. In addition, the proposed amendment would clarify the requirement for an initial proficiency check to be accomplished in each type of airplane to be flown by the pilot.

Section 41.53k(a) requires initial and recurrent proficiency checks for the second in command. Questions have been raised as to the applicability of this rule to additional pilots assigned to serve in flight crews consisting of three or more pilots. In order to make sure that each pilot utilized at the flight controls is proficient in the performance of his assigned duties, § 41.53k(a), as proposed herein, would require each additional pilot qualifying to serve as such to accomplish a proficiency check each twelve months. The proficiency check for a required pilot flight crewmember, or for a pilot to be utilized at the flight controls during takeoffs or landings, would include the maneuvers and procedures specified in § 41.53b(c)(1). The check for a pilot to be utilized at the flight controls during en route operations only would include the maneuvers and procedures proposed in § 41.53b(d)(1) herein. As in the case of

Amendment 41-28, satisfactory proficiency checks accomplished prior to the date this amendment is adopted would be acceptable in meeting the requirement for initial proficiency checks in each type of airplane, if such checks included all the required maneuvers and procedures, and were given by a check pilot or a representative of the Administrator.

Section 41.122 provides that, with certain exceptions, only a "qualified" pilot of the air carrier may manipulate the flight controls during scheduled flight. Section 41.134 provides that "required" flight crewmembers when on flight deck duty will remain at their respective stations. While no amendments to these two sections are proposed at this time, the specific recent experience, training, and flight check requirements proposed herein should clarify the qualification requirements for pilots who may be utilized at the pilot stations and manipulate the flight controls during various phases of flight.

In consideration of the foregoing, it is proposed to amend Parts 40, 41, and 42 of the Civil Air Regulations as follows:

1. By amending § 41.52 of Part 41 to read as follows:

41.52 Recent experience. A pilot shall not be utilized at the flight controls of an airplane during takeoffs or landings, or scheduled to serve as one of the pilot flight crewmembers required by this part, unless he has made at least three takeoffs and three landings in an airplane of the same type within the preceding 90 days.

2. By amending § 41.53 by revising paragraph (b)(1)(iii), by revising the first sentence of paragraph (c), and by adding a new paragraph (d) to read as follows:

41.53b Initial pilot flight training. * * *

(b) * * *

(1) * * *

(iii) At the authorized maximum landing weight, simulated pullout from the approach configuration accomplished at a safe altitude with the critical engine inoperative or operating at zero thrust; and simulated pullout from the landing configuration with all engines operating.

* * * *

(c) Except for a pilot in command, or second in command in a crew requiring three or more pilots, flight training for a pilot qualifying to serve at the flight controls during takeoffs or landings, or as one of the pilot flight crewmembers required by this part, shall include flight instruction and practice in at least the following maneuvers and procedures:

* * * *

(d) Except for a pilot required to be trained in accordance with paragraph (b) or (c) of this section, flight training for a pilot qualifying to serve at the flight controls shall include flight instruction and practice in at least the following maneuvers and procedures:

(1) Assigned flight duties, including flight emergencies;

(2) Climbs and climbing turns;

(3) Slow flight;

(4) Approach to stall;

(5) Engine shutdown and restart; and

(6) Conduct of flight under simulated instrument conditions, including the use of all types of navigational facilities used in normal en route operations.

3. By amending § 41.53g to read as follows:

41.53g Recurrent training. * * *

(b) Each air carrier shall, at intervals established as a part of the training program, but not to exceed 12 months, check the competence of each crewmember and dispatcher with respect to procedures, techniques, and information essential to the satisfactory performance of his duties. The competence check may be given at any time during the month preceding or following the month in which it becomes due. The effective date of the check, if given within the preceding or following month, shall be the same as if given within the month in which it became due. Where the check of a pilot requires actual flight, such check shall be considered to have been met by appropriate proficiency checks accomplished in accordance with § 41.53j or 41.53k.

4. By amending § 41.53j by revising the title of the section and by revising paragraph (b)(1) to read as follows:

41.53j Pilot checks; pilot in command, or second in command in a crew requiring three or more pilots. * * *

(b) Proficiency check.

(1) An air carrier shall not utilize a pilot as pilot in command, or second in command in a crew requiring three or more pilots, until he has satisfactorily demonstrated to a check pilot or a representative of the Administrator his ability to pilot and navigate each type of

airplane to be flown by him. Thereafter, he shall not serve as pilot in command, or second in command in a crew requiring three or more pilots, unless each six months he successfully completes a pilot proficiency check in at least one such airplane. The proficiency check may be given at any time during the month preceding or following the month in which it becomes due. The effective date of the check, if given within the preceding or following month, shall be the same as if given within the month in which it became due. Where such pilots serve in more than one airplane type, at least every other successive proficiency check shall be given in flight in the larger airplane type.

5. By amending § 41.53k to read as follows:

41.53k Proficiency checks; other pilots.

(a) Except for a pilot qualified in accordance with the proficiency check requirements of § 41.53j(b), an air carrier shall not utilize a pilot as such until he has satisfactorily demonstrated to a check pilot or a representative of the Administrator his ability to pilot and navigate each type of airplane to be flown by him. Thereafter, he shall not serve as a pilot at the flight controls unless each 12 months he successfully completes a pilot proficiency check in at least one such airplane. The proficiency check may be given at any time during the month preceding or following the month in which it becomes due. The effective date of the check, if given within the preceding or following month, shall be the same as if given within the month in which it became due. Where such pilots serve in more than one airplane type, at least every other successive proficiency check shall be given in flight in the larger airplane type.

The pilot proficiency check shall include at least an oral or written equipment examination, and the procedures and flight maneuvers specified in § 41.53b(c)(1): Provided, That the flight proficiency check for a pilot who is not utilized at the flight controls during takeoffs or landings, or scheduled to serve as one of the pilot flight crewmembers required by this part, need include only the maneuvers and procedures specified in § 41.53b(d). The pilot proficiency check may be demonstrated from either the right or left pilot seat.

(b) Subsequent to the initial pilot proficiency check, an approved course of training in an aircraft simulator which meets the requirements of section 41.53j(b)(3), if satisfactorily completed, may be substituted at alternate 12-month intervals for the proficiency check required by paragraph (a) of this section.

(c) Satisfactory completion of a proficiency check which includes at least the maneuvers and procedures specified in § 41.53j(b) will also meet the requirements of this section.

6. By promulgating amendments to Parts 40 and 42 of the Civil Air Regulations similar to those proposed herein.

These amendments are proposed under the authority of sections 313(a), 601, 604, 605, of the Federal Aviation Act of 1958 (72 Stat. 752, 775, 778; 49 U.S.C. 1354(a), 1421, 1423, 1424, 1425).

Director,
Bureau of Flight Standards

Issued in Washington, D. C., on April 14, 1961.

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