UNITED STATES OF AMERICA
FEDERAL AVIATION AGENCY
WASHINGTON, D. C.

Civil Air Regulations Amendment 40-21
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PART 40—SCHEDULED INTERSTATE AIR CARRIER CERTIFICATION AND OPERATIONS RULES

Approval of Air Carrier Training Programs; Qualification of Pilots Other Than Pilots in Command; Proficiency Checks for Pilots Other Than Pilots in Command

The Federal Aviation Agency published as a notice of rule making (24 F.R. 5246) and circulated as Civil Air Regulations Draft Release No. 59-3, dated June 25, 1959, a proposal to amend Part 40 of the Civil Air Regulations to require: (1) FAA approval of air carrier training programs; (2) appropriate aircraft ratings for pilots serving as other than pilots in command; and (3) more specific initial training and recurrent proficiency checks for pilots serving as other than pilots in command.

Interested persons have been afforded an opportunity to participate in the making of this amendment and due consideration has been given to all relevant matter presented. Because of the importance of this amendment, each portion thereof has been evaluated in the light of such comments.

1. *FAA approval of air carrier training programs.* The air carriers commenting on this portion of the proposal expressed strong opposition to it. Briefly, the air carriers contend that the present regulatory scheme for the establishment of methods and procedures for crew member training programs has been adequate and that no justification has been shown for requiring FAA approval of such programs. The FAA is unable to agree with these contentions.

It must be emphasized that the training program is one of the most important factors in the safety of air carrier operations. The quality and scope of such programs are the key to insuring that all crew members are competent to perform their duties with the high degree of skill expected and required in air carrier operations. Under the provisions of the present regulation, the air carriers are given discretion in establishing "adequate" or "appropriate" training, or "training as necessary." As a result some air carriers have prepared and are administering excellent training programs. However, others have not achieved the minimum safety objective sought by the training requirements of §§ 40.280 through 40.289. While the methods and procedures employed by the various air carriers in their training programs may differ to fit the particular operation of each air carrier, each training program must provide a uniform and minimum standard of flight and ground training necessary for safety in air transportation. Experience in the administration of the present regulations shows that this standard can only be achieved by FAA approval of each training program.

Accordingly, because of the vital importance which the air carrier training program has to safety in air carrier operations, each air carrier subject to this part will be required to obtain approval of its training program by a representative of the Administrator.

This final regulation will not alter the responsibility which each air carrier has at present for the preparation and administration of its training program. However, each air carrier will be required to submit its training program, and subsequent changes thereto, to the FAA for prior approval.

2. *Initial training qualifications of pilots other than pilots in command.* The complexity of modern aircraft and the operational demands of today's navigation, communication, and air traffic control systems require a high level of skill and competance for air carrier copilots. Many of the functions which are required of the copilot, particularly with respect to emergency procedures, must be performed properly or the safety of the flight may be seriously affected. In addition, in the event that the pilot in command becomes incapacitated during flight, the copilot must possess adequate knowledge and skill to fly the aircraft safely to a destination.

In order to properly determine the ability of the copilot to operate a particular type of aircraft, it was proposed in Draft Release 59-3 to provide for the issuance of appropriate aircraft type ratings for all pilots serving as other than pilots in command. However, upon reevaluation of the original proposal in the light of comments received, it appears that the objective of the original proposal can be achieved without requiring pilots serving other than as pilots in command to obtain an appropriate aircraft type rating, provided adequate flight training for those pilots who serve as second in command is provided in the initial and recurrent training requirements of this part and is part of the training program approved by the Administrator.

Accordingly, the original proposal has been modified in this regulation by omitting the aircraft type rating requirement. In lieu of a type rating, this regulation prescribes in § 40.282(c) certain minimum maneuvers and procedures in which it is considered necessary that pilots serving as second in command be proficient, and requires that they receive instruction and practice in such maneuvers and procedures during initial flight training.

The term "second in command" is used in this regulation in order to identify more precisely those pilots who perform the traditional functions of a copilot, as distinguished from the pilot in command and other pilots. In this respect, this regulation amends current § 40.261(c) to make it clear that where the air carrier is authorized to operate under instrument conditions or operates aircraft of more than 12,500 pounds maximum

*(Except as otherwise provided in §40.290)

certificated weight, the minimum pilot crew shall consist of a pilot in command and a pilot designated as second in command. An appropriate definition of "second in command" is added by this regulation. In keeping with these changes, an appropriate amendment is also being made to § 40.301.

It is considered that pilots qualifying to serve on airplanes other than as pilot in command or as second in command should, in the interest of safety, be required to receive the flight training specified in § 40.282(a) and demonstrate their ability to take off and land each type of airplane in which they are to serve, in addition to accomplishing the other training requirements provided in §§ 40.280 and 40.281. Accordingly, such a requirement is prescribed in this regulation.

3. *Proficiency checks for pilots other than pilots in command.* In order to make certain that all pilots serving as second in command are initially proficient and continue to maintain their proficiency to pilot and navigate, and to perform their duties on, aircraft to which they are assigned for duty, it was proposed in Draft Release 59–3 to require proficiency checks to be given such pilots prior to their initial assignment to duty and twice each 12 months thereafter by a check pilot or a representative of the Administrator.

As indicated in the draft release, the present method of having the second in command checked by the pilot in command during daily operations is not an adequate method by which the continued proficiency of the second in command can be determined. Although the air carriers were opposed to this requirement, the Agency remains firm in its belief that in order to make certain that all pilots serving as second in command are initially proficient and continue to maintain such proficiency, they must be given a proficiency check by a designated check pilot or a representative of the Administrator. However, upon reconsideration of the original proposal in the light of comments received, the Administrator has concluded that an adequate level of safety will be maintained if such proficiency checks are given only once each 12 months to pilots serving as second in command. Accordingly, such requirements are reflected in this amendment.

In Draft Release 59–3, it was proposed to include in the proficiency check at least the takeoffs and landings and other flight maneuvers generally covered in § 40.282(a). However, the original proposal is being modified by this amendment to provide that the proficiency check for a pilot serving as second in command shall include an oral or written equipment examination, and at least the procedures and flight maneuvers specified in the new § 40.282(c).

Comment received indicated that interested persons opposing Draft Release 59–3 believed the proposal would require copilots to acquire and demonstrate the same level of proficiency as is presently required of pilots in command. The Administrator wishes to make it clear that identical proficiency standards will not be required for such pilots. Under the provisions of Part 40, a pilot assigned to perform copilot duties as second in command is required to hold a commercial pilot certificate and instrument rating, whereas a pilot in command is required to hold the higher rating of an airline transport pilot certificate with appropriate aircraft type ratings. In view of the difference in the certification requirements, pilots serving as second in command will not be held to the high degree of skill required of a pilot in command. However, they will be required to demonstrate that they possess the knowledge and skill to perform their duties as a copilot safely and efficiently, and to navigate and pilot the airplane to which they are assigned safely to a destination in the event the pilot in command becomes incapacitated during flight.

This final regulation is so drafted as to permit the air carriers to use the flight crew method of training and checking pilots. Air carriers utilizing this method have found that it has economic advantages over the method of training and checking crew members individually and is an effective method of standardizing training. Although initial flight training and some proficiency check maneuvers will make it necessary in the interest of safety for the check pilot to occupy one of the pilot positions, it appears that many maneuvers can be conducted safely using the flight crew concept of training and checking pilots.

This regulation is being made effective January 1, 1961. This effective date will allow air carriers subject to Part 40 sufficient time in which to obtain FAA approval of their training programs and to accomplish the initial demonstration check of pilots other than pilot in command required by this amendment. However, each air carrier will be required to submit its training program to the FAA for approval not later than May 1, 1960.

Although compliance with the requirements prescribed in this regulation may result in some additional costs to the air carriers, it appears that such costs are outweighed by the considerations of safety involved.

In consideration of the foregoing, the Federal Aviation Agency hereby amends Part 40 of the Civil Air Regulations (14 CFR Part 40, as amended) as follows:

1. By adding a definition to § 40.5 to read as follows:

§ 40.5 Definitions.

* * * * *

Second in command. Second in command means a pilot other than the pilot in command who is designated by the air carrier to act as second in command of an airplane.

2. By amending § 40.261(c) to read as follows:

§ 40.261 Composition of flight crew.

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(c) Where the air carrier is authorized to operate under instrument conditions or operate airplanes of more than 12,500 pounds maximum certificated weight, the minimum pilot crew shall consist of two pilots, one of whom shall be designated as pilot in command and the other as second in command.

§ 40.282 [Amendment]

3a. By adding a new sentence at the end of § 40.282(a) to read as follows: "A pilot qualifying to serve as other than pilot in command or as second in command shall demonstrate to a representative of the Administrator or to a check pilot his ability to take off and land each type of airplane in which he is to serve."

b. By adding a new paragraph (c) to § 40.282 to read as follows:

(c) Flight training for a pilot qualifying to serve as second in command shall include flight instruction and practice in at least the following maneuvers and procedures:

(1) In each type of airplane to be flown by him in scheduled operation:

(i) Assigned flight duties as second in command, including flight emergencies,

(ii) Taxiing,

(iii) Takeoffs and landings,

(iv) Climbs and climbing turns,

(v) Slow flight,

(vi) Approach to stall,

(vii) Engine shutdown and restart,

(viii) Takeoff and landing with simulated engine failure,

(ix) Conduct of flight under simulated instrument conditions, including instrument approach at least down to circling approach minimum and missed-approach procedures.

(2) Conduct of flight under simulated instrument conditions, utilizing all types of navigation facilities and the letdown procedures used in normal operations. Except for those approach procedures for which the lowest minimums are approved, all other letdown procedures may be given in a synthetic trainer which contains the radio equipment and instruments necessary to simulate other navigational and letdown procedures approved for use by the air carrier.

§ 40.289 [Amendment]

5a. By amending § 40.289(b) by deleting the last sentence and inserting in lieu thereof a new sentence to read as follows: "Where the check of the pilot in command or second in command requires actual flight, such check shall be considered to have been met by the checks accomplished in accordance with §§ 40.302 and 40.305, respectively."

b. By amending § 40.289(c) by deleting the last sentence.

7. By adding a new § 40.290 to read as follows:

§ 40.290 Approval of training program.

The training program established under the provisions of §§ 40.280 through 40.289 by the air carrier shall meet with the approval of an authorized representative of the Administrator: *Provided,* That the curriculum of such training program shall be submitted in appropriate form to an authorized representative of the Administrator not later than May 1, 1960.

8. By amending § 40.300(b) to read as follows:

§ 40.300 Qualification requirements.

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(b) Check airmen shall certify as to proficiency of all pilots being examined, as required by §§ 40.302, 40.303, and 40.305, and such certification shall become a part of the airman's record.

9. By amending § 40.301 to read as follows:

§ 40.301 Pilot recent experience.

No air carrier shall schedule a pilot in command or second in command to serve as such in scheduled air transportation unless within the preceding 90 days he has made at least 3 takeoffs and 3 landings in the airplane of the particular type on which he is to serve.

10. By amending § 40.305 to read as follows:

§ 40.305 Proficiency check; second in command.

(a) An air carrier shall not utilize a pilot as second in command until he has satisfactorily demonstrated to a check pilot or a representative of the Administrator his ability to pilot and navigate airplanes to be flown by him and to perform his assigned duties. Thereafter, he shall not serve as second in command unless each 12 months he successfully completes a similar pilot proficiency check. 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 § 40.282(c)(1). The pilot proficiency check may be demonstrated from either the right or left pilot seat.

(b) Subsequent to the initial pilot proficiency check for the second in command, an approved course of training in an airplane simulator which meets the requirements of § 40.302(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 the proficiency check in accordance with the requirements of § 40.302(b) will also meet the requirements of this section.

The provisions of this amendment shall become effective January 1, 1961, except as otherwise provided in § 40.290.

(Secs. 313(a), 601, 604, 605, 72 Stat. 752, 775, 778; 49 U.S.C. 1354, 1421, 1424, 1425)

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JAMES T. PYLE,
Acting Administrator.

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