Federal Aviation Agency

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Civil Aeronautics Manual 40

Scheduled Interstate Air Carrier Certification and Operation Rules

Supplement No. 6, CAM 40 dated Sept. 15, 1959 **Dec. 1, 1961**

SUBJECT: Revisions to CAM 40.

This supplement is issued to incorporate into CAM 40 Civil Air Regulations Amendments 40–30, 40–31, and 40–32, and Special Civil Air Regulation No. SR–448A.

Amendment 40–30 deleted the landing flare requirements contained in section 40.200(d). It was issued September 15, 1961, to become effective September 21, 1961.

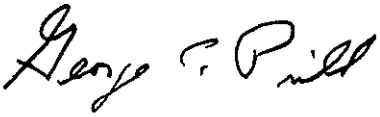
Amendment 40–31 concerns the boarding of air carrier aircraft by persons appearing to be intoxicated. It was issued October 17, 1961, to become effective November 21, 1961.

Amendment 40–32 concerns the carriage of cargo in passenger compartments. It was issued November 27, 1961, to become effective January 2, 1962.

Special regulation SR–448A concerns precautions to prevent hijacking of aircraft and interference with crewmembers in the performance of their duties. This regulation was issued October 9, 1961, to become effective October 13, 1961, and supersedes Special Civil Air Regulation No. SR–448.

New or revised material is enclosed in black brackets on the pages submitted with this supplement, except Special Civil Air Regulation No. SR–448A and the pages in the addendum containing the preambles of amendments 40–30, 40–31, and 40–32.

Remove the following pages:	*Insert the following new pages:*
V and VI	V and VI
IX and X	IX and X
41 and 42	41 through 42–1
45 and 46	45 and 46
71 and 72	71 through 72–1
209	209 and 210
P–31	P–31 through P–34



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Flight Standards Service.

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bromide or any other toxic extinguishing agent is employed, provisions shall be made to prevent the entrance of harmful concentrations of fluid or fluid vapors into any personnel compartment either due to leakage during normal operation of the airplane or as a result of discharging the fire extinguisher on the ground or in flight when a defect exists in the extinguishing system. If a methyl bromide system is provided, the containers shall be charged with dry agent and shall be sealed by the fire-extinguisher manufacturer or any other party employing satisfactory recharging equipment. If carbon dioxide is used, it shall not be possible to discharge sufficient gas into personnel compartments to constitute a hazard from the standpoint of suffocation of the occupants.

40.138 *Extinguishing agent container pressure relief.* Extinguishing agent containers shall be provided with a pressure relief to prevent bursting of the container due to excessive internal pressures. The discharge line from the relief connection shall terminate outside the airplane in a location convenient for inspection on the ground. An indicator shall be provided at the discharge end of the line to provide a visual indication when the container has discharged.

40.139 *Extinguishing agent container compartment temperature.* Precautions shall be taken to assure that the extinguishing agent containers are installed in locations where reasonable temperatures can be maintained for effective use of the extinguishing system.

40.140 *Fire-extinguishing system materials.* All components of fire-extinguishing systems located in designated fire zones shall be constructed of fireproof materials, except for connections which are subject to relative motion between components of the airplane, in which case they shall be of flexible fire-resistant construction so located as to minimize the possibility of failure.

40.141 *Fire-detector systems.* Quick-acting fire detectors shall be provided in all designated fire zones and shall be sufficient in number and location to assure the detection of fire which may occur in such zones.

40.142. *Fire detectors.* Fire detectors shall be constructed and installed in such a manner as to assure their ability to resist without failure, all vibration, inertia, and other loads to which they may normally be subjected. Detectors shall be unaffected by exposure to oil, water, or other fluids or fumes which may be present.

40.143 *Protection of other airplane components against fire.* All airplane surfaces aft of the nacelles in the region of one nacelle diameter on both sides of the nacelle center line shall be constructed of fire-resistant material. This provision need not be applied to tail surfaces lying behind nacelles unless the dimensional configuration of the airplane is such that the tail surfaces could be affected readily by heat, flames, or sparks emanating from a designated fire zone or engine compartment of any nacelle.

40.150 *Control of engine rotation.* All airplanes shall be provided with means for individually stopping and restarting the rotation of any engine in flight, except that for turbine engine installations means for completely stopping the rotation need be provided only if the Administrator finds that rotation could jeopardize the safety of the airplane.

40.151 *Fuel system independence.* Airplane fuel systems shall be arranged in such manner that the failure of any one component will not result in the irrecoverable loss of power of more than one engine. A separate fuel tank need not be provided for each engine if the Administrator finds that the fuel system incorporates features which provide equivalent safety.

40.152 *Induction system ice prevention.* Means for preventing the malfunctioning of each engine due to ice accumulation in the engine air induction system shall be provided for all airplanes.

40.153 *Carriage of cargo in passenger compartments.* Cargo shall not be carried in passenger compartments except as provided in either paragraph (a) or (b) of this section.

[(a) Cargo carried aft of the foremost seated passengers shall be carried in an approved cargo bin. Approved cargo bins shall meet the minimum requirements of subparagraphs (1) through (7) of this paragraph.

[(1) The cargo bin shall be constructed to withstand the ultimate inertia forces (ultimate load forces if appropriate) applicable to the construction of the passenger seats in the airplane in which the bins are to be installed multiplied by a factor of 1.15. The combined weight of the bin and the maximum weight of cargo to be carried in the bin shall be used to determine this strength.

[(2) Each bin shall be placarded with the maximum weight permitted to be carried in the bin.

[(3) Cargo bins shall be constructed no higher than the height of the passenger seats installed on the airplane in which the bin is to be used.

[(4) Each bin shall be secured to the seat tracks or otherwise attached to the floor structure in such a manner that its attachments will withstand the same forces that the attachments of the passenger seats in the airplane are required to withstand.

[(5) Each bin shall be located in the passenger compartment so as not to restrict access to or use of any emergency or regular exit, or restrict the use of the aisle in the passenger compartment.

[(6) Each bin shall be fully enclosed and constructed of material which is at least flame resistant.

[(7) Each bin shall be provided with suitable safeguards within the bin to prevent the cargo from being displaced under emergency landing conditions.

[(b) Cargo carried forward of the foremost seated passengers shall be carried either in approved cargo bins as specified in paragraph (a) of this section, or in accordance with the following requirements:

[(1) It shall be properly secured by means of safety belts or other tiedowns possessing sufficient strength to eliminate the possibility of shifting under all normally anticipated flight and ground conditions;

[(2) It shall be packaged or covered in a manner to avoid possible injury to passengers;

[(3) It shall not impose any load on seats or floor structure which exceed the structural load limitation for those components;

[(4) It shall not be loaded in any position which restricts the access to or use of any required emergency or regular exit or the use of the aisle in the passenger compartment; and

[(5) It shall not be loaded in any position which obscures the passengers' view of the "seat belt" and "no smoking" signs, unless an auxiliary sign or some other means for proper notification of passengers is provided.

[(Amendment 40-32, published in 26 F.R. 11354, Dec. 1, 1961, effective Jan. 2, 1962.)]

40.153—1 [Deleted]

(Published in 18 F.R. 6617, October 17, 1953, effective January 1, 1954; amended in 18 F.R. 8611, December 22, 1953, effective January 1, 1954.) [Deletion published in 26 F.R. 11354, December 1, 1961, effective January 2, 1962.]

Instruments and Equipment for all Operations

40.170 *Aircraft instruments and equipment for all operations.*

(a) Instruments and equipment required by sections 40.171 through 40.232 shall be approved and shall be installed in accordance with the provisions of the airworthiness requirements applicable to the instruments or equipment concerned.

(b) The following provisions apply to air-speed limitations, air-speed indicators, and related information:

(1) Air-speed limitations and related information contained in the Airplane Flight Manual and pertinent placards shall be expressed in the same units as used on the air-speed indicator.

(2) When more than one air-speed indicator is required, all such indicators shall be calibrated to read in the same units.

(3) When an air-speed indicator is calibrated in statute miles per hour, a readily usable means shall be provided for the flight

crew to convert statute miles per hour to knots.

(4) On and after April 1, 1956, all air-speed indicators shall be calibrated in knots, and all air-speed limitations and related information contained in the Airplane Flight Manual and pertinent placards shall be expressed in knots.

(c) The following instruments and equipment shall be in operable condition prior to take-off, except as provided in section 40.391(b) for continuance of flight with equipment inoperative:

(1) Instruments and equipment required to comply with airworthiness requirements under which the airplane is type certificated and as required by the provisions of section 40.110 and sections 40.150 through 40.153.

as emergency exits, such means shall be a chute or equivalent device suitable for the rapid evacuation of passengers. During flight time this means shall be in a position for ready use: *Provided,* That the requirements of this paragraph do not apply to emergency exits over the wing where the greatest distance from the lower sill of the exit to the wing surface does not exceed 36 inches.

(f) *Interior emergency exit marking.*

(1) After May 31, 1957, all passenger emergency exits, their means of access, and their means of opening shall be marked conspicuously. The identity and location of emergency exits shall be recognizable from a distance equal to the width of the cabin. The location of the emergency exit operating handle and the instructions for opening shall be marked on or adjacent to the emergency exit and shall be readable from a distance of 30 inches by a person with normal eyesight.

(2) After August 31, 1957, in all passenger-carrying airplanes, for night operations, a source or sources of light, with an energy supply independent of the main lighting system, shall be installed to illuminate all passenger emergency exit markings. Such lights shall be designed to function automatically in a crash landing and to continue to function thereafter and shall also be operable manually, or shall be designed only for manual operation and also to continue to function following a crash landing. When such lights require manual operation to function, they shall be turned on prior to each night take-off and landing.

40.173-1 *Hand fire extinguishers for crew, passenger, and cargo compartments (FAA interpretations which apply to sec. 40.173(b)).* Approved extinguishers are extinguishers which have been approved by the Administrator or by the Underwriters Laboratories (UL), the Factory Mutual Laboratories (FML), or any other agency which may be deemed qualified by the Administrator in accordance with section 4b.18.

(Published in 18 F.R. 8612, December 22, 1953, effective January 1, 1954.)

40.174 *Seats and safety belts for all occupants.* A seat and an individual safety belt are required for each passenger and crew member, excluding infants, who are in other than a recumbent position during take-off and landing. One safety belt only is required in a berth for one or two persons in a recumbent position during take-off and landing. During flight between take-off and landing, one safety belt is sufficient for two persons occupying a multiple lounge or divan seat.

40.175 *Miscellaneous equipment for all operations.* All airplanes shall have installed the following equipment:

(a) If protective fuses are used, spare fuses of a number approved for the particular airplane and appropriately described in the air carrier manual.

(b) Windshield wiper or equivalent for each pilot station.

(c) A power supply and distribution system capable of producing and distributing the load for all required instruments and equipment using an external power supply in the event of failure of any one power source or component of the power distribution system: *Provided,* That the Administrator may authorize the use of common elements in the power distribution system when he finds that such elements are so designed as to be reasonably protected against malfunction. Engine-driven sources of energy when used, shall be on separate engines.

(d) Means for indicating the adequacy of the power being supplied to required flight instruments.

(e) Two independent static pressure systems, so vented to the outside atmospheric pressure that they will be least affected by air flow variation, moisture, or other foreign matter, and so installed as to be airtight except for the vent. When a means is provided for transferring an instrument from its primary operating system to an alternate system, such means shall include a positive positioning control and shall be marked to indicate clearly which system is being used.

(f) Means for locking all companionway doors which separate passenger compartments from flight crew compartments. Keys

for all doors which separate passenger compartments from other compartments having emergency exit provisions shall be readily available to all crew members. Any door which is the means of access to a required passenger emergency exit shall be placarded to indicate that it must be open during takeoff and landing. All doors which lead to compartments normally accessible to passengers and which are capable of being locked by passengers shall be provided with means for unlocking by the crew in the event of an emergency.

(g) For seaplanes only, anchor light or lights, a warning bell for signaling when not under way during fog conditions, and an anchor adequate for the size of the seaplane.

40.175–1 *Power supply and distribution systems (FAA interpretations which apply to sec. 40.175(c)).*

(a) Aircraft having a power supply and distribution system which meets the requirements of sections 4b.606 (a), (b), and (c); 4b.612(e); 4b.622 (a) and (b); 4b.623; 4b.625; 4b.650(b) of this subchapter are deemed to have met the requirements of section 40.175(c).

(b) The use of common elements in the electrical power distribution system which do not meet the requirements of paragraph (a) of this section will be approved under the provisions of section 40.175(c) if their record of reliability is such that failure is improbable.[6]

(Published in 20 F.R. 4291, June 18, 1955, effective July 1, 1955.)

40.176 *Cockpit check procedure.* The air carrier shall provide for each type of airplane a cockpit check procedure. This procedure shall include all items necessary for flight crew members to check for safety prior to starting engines, prior to taking off, prior to landing, and in engine emergencies. It shall be so designated as to obviate the necessity for a flight crew member to rely upon his memory for items to be checked and shall be readily usable in the cockpit of each airplane.

40.177. *Passenger information for all operations.* All airplanes shall be equipped with signs visible to passengers and cabin attendants to notify such persons when smoking is prohibited and when safety belts should be fastened. These signs shall be capable of on-off operation by the crew.

40.178 *Exterior exit and evacuation markings for all operations.* Effective January 1, 1956, exterior surfaces of the airplane shall be marked to identify clearly all required emergency exits. When such exits are operable from the outside, markings shall consist of or include information indicating the method of opening.

Instruments and Equipment for Special Operations

40.200 *Instruments and equipment for operations at night.* Each airplane operated at night shall be equipped with the following instruments and equipment in addition to those required by sections 40.171 through 40.178:

(a) Position lights;

(b) An anti-collision light for airplanes having a maximum certificated weight of more than 12,500 pounds;

(c) Two landing lights;

(d) [Deleted.]

[Amendment 40–30, published in 26 F.R. 8881, Sept. 21, 1961, effective Sept. 21, 1961.]

(e) Instrument lights providing sufficient illumination to make all instruments, switches, etc., easily readable, so installed that their direct rays are shielded from the flight crew members' eyes and that no objectionable reflections are visible to them. A means of controlling the intensity of illumination shall be provided unless it is shown that nondimming instrument lights are satisfactory;

(f) An air-speed indicating system with heated pitot tube or equivalent means for preventing malfunctioning due to icing; and

[6] As a result of surveys conducted by the CAA during March and July of 1954, it was found that by employing the standards in section 40.175–1, all aircraft in service which were subject to the provisions of this part, with the exception of a limited number of DC–3 aircraft, were acceptable from a compliance viewpoint. The DC–3 aircraft mentioned were not considered to meet the provisions of this section because a common circuit breaker is incorporated in the electric power distribution system to both ADF inverters and did not provide a means, such as individual fuses or circuit breakers, to assure continued operation in the event the common circuit breaker opened as a result of fault in either inverter or ADF system.

pilot in command may follow any course of action which he considers necessary under the circumstances. In such instances the pilot in command, to the extent required in the interest of safety, may deviate from prescribed operations procedures and methods, weather minimums, and the regulations of this subchapter.

(b) If an emergency situation arises during the course of a flight which requires immediate decision and action on the part of the aircraft dispatcher, and which is known to him, he shall advise the pilot in command of such situation. The aircraft dispatcher shall ascertain the decision of the pilot in command and shall cause the same to be made a matter of record. If unable to communicate with the pilot, the dispatcher shall declare an emergency and follow any course of action which he considers necessary under the circumstances.

(c) When emergency authority is exercised by the pilot in command or by the dispatcher, the appropriate dispatch center shall be kept fully informed regarding the progress of the flight, and within 10 days after the completion of the particular flight a written report of any deviation shall be submitted by the individual declaring the emergency to the Administrator through the air carrier operations manager.

40.361 *Reporting potentially hazardous meteorological conditions and irregularities of ground and navigational facilities.* When any meteorological condition or irregularity of ground or navigational facilities is encountered in flight, the knowledge of which the pilot in command considers essential to the safety of other flights, he shall notify an appropriate ground radio station as soon as practicable. Such information shall thereupon be relayed by that station to the appropriate governmental agency.

40.362 *Reporting mechanical irregularities.* The pilot in command shall enter or cause to be entered in the maintenance log of the airplane all mechanical irregularities encountered during flight. He shall, prior to each flight, inspect the log to ascertain the status of any irregularities entered in the log at the end of the last preceding flight.

40.363 *Engine failure or precautionary stoppage.*

(a) Except as provided in paragraph (b) of this section, when one engine of an airplane fails or where the rotation of an engine of an airplane is stopped in flight as a precautionary measure to prevent possible damage, a landing shall be made at the nearest suitable airport in point of time where a safe landing can be effected.

(b) The pilot in command of an airplane having 4 or more engines may, if not more than one engine fails or the rotation thereof is stopped, proceed to an airport of his selection if, upon consideration of the following factors, he determines such action to be as safe a course of action as landing at the nearest suitable airport:

(1) The nature of the malfunctioning and the possible mechanical difficulties which may be encountered if flight is continued;

(2) The availability of the inoperative engine for use;

(3) The altitude, airplane weight, and usable fuel at the time of engine stoppage;

(4) The weather conditions en route and at possible landing points;

(5) The air traffic congestion;

(6) The type of terrain; and

(7) The familiarity of the pilot with the airport to be used.

(c) When engine rotation is stopped in flight, the pilot in command shall immediately notify the proper ground radio station and shall keep such station fully informed regarding the progress of the flight.

(d) In cases where the pilot in command selects an airport other than the nearest suitable airport in point of time, he shall, upon completion of the trip, submit a written report, in duplicate, to his operations manager setting forth his reasons for determining that the selection of an airport other than the nearest was as safe a course of action as landing at the nearest suitable airport. The operations manager shall, within 7 days after completion of the trip, furnish a copy of this

report with his own comments thereon to the Administrator.

40.364 *Instrument approach procedures.* When an instrument approach is necessary, the instrument approach procedures and weather minimums authorized in the operations specifications shall be adhered to.

40.365 *Requirements for air carrier equipment interchange.*

(a) Prior to conducting any operations pursuant to an interchange agreement authorized by the Civil Aeronautics Board, the air carrier shall show that:

(1) The procedures proposed for the conduct of such operations by the carriers involved conform with the provisions of this subchapter and with safe operating practices;

(2) All operations personnel involved are familiar with the airplanes and equipment of the air carrier with whom interchange is to be effected, and with the communications and dispatching procedures to be used;

(3) All maintenance personnel involved are familiar with the airplanes and equipment, and the maintenance procedures of the air carrier with whom interchange is to be effected;

(4) The flight crew and the dispatchers involved meet the appropriate route and airport qualifications; and

(5) All airplanes operated are essentially similar to those airplanes of the carrier with whom interchange is to be effected with respect to flight instruments and their arrangement and with respect to the arrangement and motion of controls critical to safety, unless the Administrator determines that adequate training programs have been established to insure that any dissimilarities which might be a potential hazard will be safely overcome by flight crew familiarization.

(b) The pertinent provisions and procedures affecting the carriers involved shall be included in their manuals.

40.370 *Briefing of passengers.* After May 31, 1956, each air carrier engaged in extended overwater operations shall assure that all passengers are briefed orally concerning the location and method of operation of life vests and emergency exits and the location of life rafts. The procedure to be followed in presenting this briefing shall be described in the air carrier manual. Such a briefing shall include a demonstration of the method of donning and inflating a life vest. Where the airplane proceeds directly over water after take-off, the briefing on location of the life vests and emergency exits shall be accomplished prior to take-off, and the remainder of the briefing shall be accomplished as soon thereafter as practicable. Where the airplane does not proceed directly over water after take-off, no part of the briefing need be accomplished prior to take-off but the entire briefing shall be accomplished prior to reaching the overwater portion of the flight.

40.371 *Drinking and serving of alcoholic beverages.*

(a) No person shall drink any alcoholic beverage aboard an air carrier aircraft unless such beverage has been served to him by the air carrier operating the aircraft.

(b) No air carrier shall serve any alcoholic beverage to any person aboard an air carrier aircraft if such person appears to be intoxicated.

[(c) No air carrier shall permit any person to board an air carrier aircraft if such person appears to be intoxicated.

[(d) An air carrier shall report to the Administrator within 5 days any incident in which a person aboard its aircraft refuses to comply with paragraph (a) of this section, or any disturbance caused by a person who appears to be intoxicated while aboard its aircraft.]

(Amendment 40-24, published in 25 F.R. 169, Jan. 9, 1960, effective March 10, 1960;

[Amendment 40-31, published in 26 F.R. 9905, Oct. 21, 1961, effective Nov. 21, 1961.)]

Dispatching Rules

40.381 *Necessity for dispatching authority.* No flight shall be started without specific authority from an aircraft dispatcher, except when an airplane has landed at an in-

termediate airport specified in the original dispatch release and has remained there for one hour or less.

40.382 *Familiarity with weather conditions.* No aircraft dispatcher shall release a flight unless he is thoroughly familiar with existing and anticipated weather conditions along the route to be flown.

40.383 *Facilities and services.* The dispatcher shall furnish to the pilot in command all available current reports or information pertaining to irregularities of navigational facilities and airport conditions which may affect the safety of the flight. He shall also furnish the pilot, while en route, any addi-

SPECIAL CIVIL AIR REGULATION NO. SR-448A

Adopted: Oct. 9, 1961
Effective: Oct. 13, 1961
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(26 F.R. 9669)

Precautions to Prevent Hijacking of Aircraft and Interference With Crewmembers in the Performance of Their Duties

Special Civil Air Regulation No. SR-448 was adopted and effective July 28, 1961 (26 F.R. 7009). The preamble thereto stated that:

"The recent hijackings of air carrier aircraft have highlighted a necessity to provide additional controls over the conduct of passengers in order to avoid a serious threat to the safety of flights and persons aboard them. The Federal Aviation Agency has the responsibility to see that air carriers take such steps as are possible to prevent such occurrences. We have requested the air carriers to take every practicable precaution to prevent passengers from having access to the pilot compartment. In addition, we are adopting a regulation which will prohibit any person, except one who is specifically authorized to carry arms, from carrying on or about his person while aboard an air carrier aircraft a concealed deadly or dangerous weapon. The regulation being adopted will also make it a violation of the CARs for any person to assault, threaten, intimidate, or interfere with a crewmember in the performance of his or her duties aboard an air carrier aircraft or to attempt to or cause a flight crewmember to divert the flight from its intended course or destination."

Special regulation SR-448, however, does not prohibit a person from carrying an unconcealed deadly or dangerous weapon on or about his person while aboard an aircraft. The present emergency situation requires stringent measures to preclude the carriage of any weapon which may be used to intimidate or interfere with crewmembers performing their duties on an aircraft engaged in air transportation. Therefore, paragraph 2 of SR-448 is amended by this regulation to prohibit any person, except those specified, from carrying a deadly or dangerous weapon on or about his person, either concealed or openly, while on board an air carrier aircraft engaged in air transportation.

Since the promulgation of Special Civil Air Regulation No. SR-448, Public Law 87-197 has been enacted which, among other things, makes it a criminal offense to carry a concealed deadly or dangerous weapon on or about one's person while aboard an air carrier aircraft being operated in air transportation. Excepted from this provision are certain law

enforcement officers, and "other persons as may be so authorized under regulations issued by the Administrator." To implement this statutory provision, this regulation excepts from the prohibition against carrying a concealed weapon while aboard an aircraft being operated by an air carrier in air transportation (1) employees or officials of municipal, State, or Federal Governments who are authorized or required to carry arms; (2) crewmembers authorized by the air carrier; and (3) such other persons as may be authorized by the air carrier pursuant to such precautions as may be established by the carrier.

In view of the foregoing exceptions, the prohibition of paragraph 2 of SR–448 is changed to apply to any person, rather than only to those persons who are passengers. This regulation does not in any way affect the shipment of unloaded firearms in baggage not accessible to the passenger while aboard the aircraft if these firearms are otherwise acceptable for shipment under the provisions of Part 49. In such case, the firearms will be located so as not to be accessible to the passenger during flight, and therefore, not deemed to be on or about his person within the meaning of this regulation.

The present provisions of paragraph 1 of SR–448 apply to aircraft being operated in air transportation. This paragraph is changed to apply to aircraft being operated in air commerce to broaden the scope of the provision to provide similar protection to those general aviation operations and operations conducted for compensation or hire which are not considered as air transportation under the Federal Aviation Act of 1958.

Because of the emergency nature of the situation and the present threat to safety of persons being carried in air commerce, I find that notice and public procedure hereon would be impracticable and good cause exists for making this regulation effective in less than 30 days.

In consideration of the foregoing changes, Special Civil Air Regulation SR–448 is superseded by the following Special Civil Air Regulation to become effective October 13, 1961:

1. No person shall assault, threaten, intimidate, or interfere with a crewmember in the performance of his duties aboard an aircraft being operated in air commerce; nor shall any person attempt to or cause the flight crew of such aircraft to divert its flight from its intended course or destination.

2. Except for employees or officials of municipal, State, or Federal Governments who are authorized or required to carry arms, and except for those crewmembers and such other persons as may be authorized by an air carrier, no person, while aboard an aircraft being operated by an air carrier in air transportation, shall carry on or about his person a deadly or dangerous weapon, either concealed or unconcealed.

airplane. As this requirement is applicable to all scheduled interstate air carriers and commercial operators subject to Part 40 of the Civil Air Regulations, it is appropriate that it be included in the Civil Air Regulations rather than in the air carriers' operations specifications.

These limitations, which are presently contained in the operations specifications, permit a pilot in command to operate at the lower IFR landing minimums prior to obtaining the required 100 hours experience if a company check pilot certifies that he is qualified to do so. *Investigation of the practice among air carriers has revealed wide variations in* making the determination that a pilot is qualified for the lower landing minimums prior to his attaining 100 hours as pilot in command in a particular type of airplane. This has resulted in pilots being certified to operate at the lower landing minimums after having attained, in some instances, only a small fraction of the required 100 hours.

While the air carriers, in commenting on Draft Release 60–7, expressed their belief that the limitations presently contained in the operations specifications are basically sound, the majority of all comments received in response to the draft release indicated concurrence with adoption of a regulation requiring higher IFR landing minimums for pilots who have not acquired a specified amount of experience as pilot in command in a particular type of airplane in air carrier operations. In addition, the majority of comment suggested that in no case should this requirement be subject to reduction at the discretion of a company check pilot.

There were also suggestions made that certain other factors, such as the pilot's previous experience, his overall proficiency, his knowledge of the particular airport, and the number of approaches and landings made in the new type of airplane, should be recognized and substituted for a portion of the required 100 hours. While these suggestions have merit, it is believed that the factors to be considered could become so numerous, and difficult to assess in terms of an equivalent number of flight hours, as to diminish the effectiveness of the rule.

The safe execution of an instrument approach to the lowest minimums requires the highest degree of pilot familiarity with the airplane, its controls, instruments, and performance characteristics. One hundred hours of experience in a new type of airplane as pilot in command in air carrier or commercial operations is necessary in order to achieve this degree of familiarity so essential to safe operations at the lowest landing minimums.

The Federal Aviation Agency therefore believes that, in the interest of safety, all pilots in command should use IFR landing ceiling and visibility weather minimums 100 feet higher and ½ mile greater than regularly approved minimums, until they have obtained 100 hours of air carrier or commercial operator pilot in command experience in a particular type of airplane.

Interested persons have been afforded an opportunity to participate in the making of this regulation, and due consideration has been given to all relevant matters presented.

Amendment added new paragraph (e) to section 40.406.

Amendment 40–30

Landing Flare Requirements

Adopted: Sept. 15, 1961
Effective: Sept. 21, 1961
Published: Sept. 21, 1961
(26 F.R. 8881)

Section 40.200(d) of the Civil Air Regulations requires that each airplane used at night for extended overwater operations be equipped with landing flares.

In 1958, a requirement for the carriage of flares in night operations over land was deleted from Part 40 by Amendment 40–10 (23 F.R. 292). This requirement was deleted because there had been very little use of flares from 1947 to 1958, and the records revealed numerous instances of flares being inadvertently discharged on the ground or in the air, causing damage to the airplane, other airplanes, ramps, and hangars. Instances were also reported of flares contributing to the intensity of a fire following a crash. The Civil

Aeronautics Board, after consideration of all the facts involved, concluded that equipping an airplane with flares should not be a mandatory safety requirement for operations conducted over land at night.

The military transport services discontinued the use of flares in their passenger transport operations several years ago for reasons involving cost, maintenance, the hazard of carrying flares, and their questionable value under emergency conditions.

Recently, the Federal Aviation Agency received several requests from air carriers for relief from the flare requirement for overwater operations at night. In view of those requests, the Agency has carefully reviewed the subject of flare requirements. Consideration has been given to all of the data available to the Board in 1958 when it deleted the requirement for the carriage of flares in night operations over land. In addition, the Agency has weighed the probability of having to ditch an airplane as opposed to diverting to a land area, in view of such factors as improved airplane performance, reliability, operating range, and the development of more accurate and dependable communication aids. In this connection, we consider it significant that to our knowledge no multiengine air carrier airplane has been involved in the dropping of flares during the past 14 years. Finally, it should be pointed out that the Air Transport Association and the Air Line Pilots Association have recently advised the Agency that they favor deletion of the requirement for flares in night overwater operations.

Upon consideration of the foregoing, the Agency has concluded that flares for passenger-carrying airplanes should not be required as mandatory safety equipment for air carrier overwater operations conducted at night. Deletion of the flare requirement will not preclude the carriage of flares by an air carrier who may desire to continue carrying them as optional equipment.

Since this amendment relieves a restriction and imposes no additional burden on any person, I find that notice and public procedure hereon are unnecessary, and it may be made effective on less than 30 days' notice.

Amendment deleted paragraph (d) of section 40.200.

Amendment 40–31

Boarding of Air Carrier Aircraft by Persons Appearing Intoxicated

Adopted: Oct. 17, 1961
Effective: Nov. 21, 1961
Published: Oct. 21, 1961
(26 F.R. 9905)

A notice of proposed rule making was published in the Federal Register August 10, 1961 (26 F.R. 7223) and circulated to the industry as Draft Release 61–16 dated August 4, 1961, which proposed to amend Parts 40, 41, and 42 of the Civil Air Regulations to (1) place on the air carrier the responsibility of not permitting any person to board its aircraft if such person appears to be intoxicated, and (2) require that the air carrier notify the Administrator of incidents involving violations of this section, or any disturbance caused by intoxicated persons while boarding or aboard its aircraft.

Many comments were received from interested parties and consideration has been given to all relevant matter presented. Generally speaking, the comments were unanimously in favor of lengthening the proposed 24-hour reporting period contained in paragraph (d). Other comments favored limiting the reporting of violations of paragraph (a) to only those incidents in which the passenger refuses to comply with its provisions. A few comments suggested that the proposed amendments were altogether unnecessary.

In proposing these amendments, the Agency considered several recent incidents where intoxicated persons were permitted to board air carrier aircraft and, due to their condition, subsequently created disturbances, and even threatened to do bodily harm to crewmembers and other persons aboard the aircraft. The drinking regulations adopted in March, 1960, effectively control the consumption and serving of alcoholic beverages to persons aboard air carrier aircraft, but do not provide for situations such as are considered here.

Section 43.45 of the Civil Air Regulations currently provides that a pilot shall not permit any person to be carried in the aircraft who is obviously under the influence of intoxicating liquor. This provision has also served its purpose well. However, when applied to air carrier operations, this regulation has not been entirely effective to prevent incidents such as those which recently have taken place. Placing the responsibility on the pilot is not satisfactory in the case of air carrier operations since, under most conditions, the pilot is not present to observe the appearance and conduct of passengers as they board the aircraft, but is engaged elsewhere in essential duties regarding the flight.

The primary responsibility for preventing intoxicated persons from boarding air carrier aircraft must be placed on those who have an adequate opportunity to prevent the occurrence. The air carrier has both ground personnel and cabin attendants who are in a position to detect those persons who appear to be intoxicated and to refuse such persons permission to board the aircraft. The proposed amendments to Parts 40, 41, and 42 of the Civil Air Regulations place on the carrier the responsibility of not permitting any person to board its aircraft if such person appears to be intoxicated. Some air carriers have developed their own procedures and instructions to appropriate personnel in recognition of a responsibility in this area. This regulation underlines that responsibility and requires all carriers to take steps more appropriate to existing conditions. In particular it will prevent exclusive reliance on the pilot as the carrier's sole agent for this purpose. Section 43.45 is not being amended because it is always the responsibility of the pilot in command to refuse permission for the carriage of any person who is under the influence of intoxicating liquor regardless of the action taken by other airline employees if presence of such person is known to him.

Comments received in regard to the 24-hour reporting period point out that due to crew rotations, weekends and periods when the air carriers' general offices are closed, coupled with the minimum time required to process these reports, such a short period would place a serious burden on the carriers. After consideration of these circumstances, it has been decided to lengthen the reporting period to 5 days. It is felt that this allows sufficient period in which to gather the information and make the necessary report.

In response to comments other changes have been made in paragraph (d). One comment received from an air carrier points out that the rule as proposed requires the making of a report even where a passenger who was unaware of the restriction imposed by paragraph (a) complies with it upon request. It has been determined that whatever advantages might be derived by requiring such reports would be outweighed by the embarrassment and possible adverse publicity to the carrier and passenger concerned. Consequently, the paragraph has been revised to require that only those violations of paragraph (a) which persist after the passenger has been informed of its provision must be reported. Also, the phrase "under the influence of alcoholic beverage" has been changed to "appears to be intoxicated". The purpose of this change is to bring the language in paragraph (d) into conformity with that presently found in paragraphs (b) and (c).

In addition to the changes made in response to comments, the Agency has made another change in paragraph (d). The proposed rule required a report of disturbances while boarding an air carrier aircraft. Upon further consideration there does not appear any necessity for requiring a report under these circumstances. If the person is not permitted to board the aircraft there has been no safety threat involved and no necessity for a report of the incident to the Federal Government.

Amendment added new paragraphs (c) and (d) to section 40.371.

Amendment 40–32

Carriage of Cargo in Passenger Compartments

Adopted: Nov. 27, 1961
Effective: Jan. 2, 1962
Published: Dec. 1, 1961
(26 F.R. 11354)

The currently effective provisions of section 40.153 of the Civil Air Regulations govern the carriage of cargo in the passenger compartment of an air carrier airplane. This section provides, in part, that cargo shall not be carried aft of seated passengers. The intent

of this provision was to safeguard passengers from any possible injury which could be caused by the shifting forward of cargo in the event the airplane was involved in a survivable crash involving high deceleration forces. The present rule, however, does not recognize that this desired safeguard could be accomplished equally well by the incorporation of suitable methods of cargo stowage designed to prevent the shifting of cargo in accidents of this nature.

As a result of a request from the air carrier industry to permit the carriage of cargo in the passenger compartment in cargo bins specifically designed for this purpose, the Federal Aviation Agency issued a notice of proposed rule making which was published in the Federal Register (24 F.R. 8302) and circulated as Civil Air Regulations Draft Release No. 59–15 dated October 6, 1959, and titled "Carriage of Cargo in Passenger Compartments." This notice proposed to amend Parts 40, 41, and 42 of the Civil Air Regulations to authorize the carriage of cargo in the passenger compartment without regard to its location with respect to seated passengers, provided:

(a) The cargo is carried in approved bins which meet the strength and other safety provisions applicable to cargo and passenger compartments prescribed in Part 4b or other airworthiness part under which the airplane is type certificated, and

(b) The combined weight of the cargo and the approved bin or compartment does not exceed 85 percent of the load used in determining the design conditions for the structure (bin) involved.

It was also proposed in Draft Release 59–15 to continue the authorization to carry cargo forward of seated passengers in the passenger compartment under practically the same provisions as are presently in effect. However, one additional requirement was proposed to be incorporated into the current provision. This requirement was that cargo not carried in approved containers or compartments must be secured by tiedowns possessing sufficient strength to eliminate the possibility of shifting under emergency landing conditions.

The comments received in response to the draft release were for the most part favorable and they reflected endorsement of the principles of the proposal. However, definite opposition was expressed in the comments with regard to the requirement that tiedowns for cargo not carried in approved bins or compartments shall possess sufficient strength to withstand the inertia forces of an emergency landing condition. It was contended that to modify the existing rules by the addition of this requirement would prevent an operational practice which has been utilized for a number of years without adversely affecting safety. Therefore, in view of these comments, and since it was not the intent of the proposal to materially change the existing rule but only to provide additional means of safely carrying cargo in the passenger compartment, the final rule does not contain this requirement.

It will be noted that the final rule sets forth specific minimum requirements which a cargo bin must meet to be "approved" by a representative of the Administrator. Draft Release 59–15 contained notice of the Federal Aviation Agency's intension to require the use of "approved" cargo bins but did not specify the exact requirements for the "approval." The substance of the proposed rule on cargo bin specifications provided that the cargo bin would be required to meet the strength and other safety provisions of Part 4b or other appropriate part under which the airplane is type certificated, and that the bin would be considered as an item of mass for inertia force computations. After further study of these provisions it has been determined that the incorporation into the rule of specific minimum requirements for cargo bins would provide guidance to the industry and eliminate the need for additional directives by the Federal Aviation Agency on this subject. Accordingly, the final rule specifies the minimum requirements which such cargo bins must meet.

It will also be noted that this amendment deletes section 40.153–1, since the material covered by that section is either incorporated in section 40.153, or is no longer applicable.

Interested persons have been afforded an opportunity to participate in the making of this regulation (24 F.R. 8302), and due consideration has been given to all relevant matter presented.

Amendment revised section 40.153 and deleted section 40.153–1.

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