MAY 9 1962

Federal Aviation Agency

Washington, D.C.

Civil Aeronautics Manual 42

Irregular Air Carrier and Off-Route Rules

Supplement No. 4, CAM 42 dated Feb. 15, 1960 **October 15, 1961**

SUBJECT: Revisions to CAM 42.

This supplement is issued to incorporate into CAM 42 Civil Air Regulations Amendment 42–33 and Special Civil Air Regulation No. SR–448A.

Amendment 42–33 deleted the landing flare requirements contained in section 42.21(b)(6). It was issued September 15, 1961, and became effective September 21, 1961.

Special regulation SR–448A concerns precautions to prevent hijacking of aircraft and interference with crewmembers in performance of their duties. This regulation was issued October 9, 1961, to become effective October 13, 1961.

New or revised material is enclosed in black brackets on the pages submitted with this supplement, except Special Civil Air Regulation No. SR–448A, which is new in its entirety, and the page in the addendum containing the preamble of Amendment 42–33.

Remove the following pages:	*Insert the following new pages:*
VII and VIII	VII and VIII
11 and 12	11 and 12
	236–3 and 236–4
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GEORGE C. PRILL, *Director,*
Flight Standards Service.

Attachments.

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Addendum

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(2) Carburetor temperature gauge,

(3) Carburetor heating or de-icing equipment for each engine,

(4) Set of approved forward and rear position lights,

(5) At least one landing light,

(6) [Deleted.]

[(Amendment 42-33, published in 26 F.R. 8882, Sept. 21, 1961, effective Sept. 21, 1961.)]

(7) Two-way radio communications system and navigational equipment appropriate to the ground facilities to be used,

(8) Generator of adequate capacity,

(9) One set of instrument lights.

(c) *IFR (day).* For day IFR flight the following is required:

(1) Instruments and equipment specified in paragraph (a) of this section,

(2) Two-way radio communications system and navigational equipment appropriate to the ground facilities to be used,

(3) Gyroscopic rate-of-turn indicator,

(4) Bank indicator,

(5) Rate-of-climb indicator,

(6) Artificial horizon indicator,

(7) Sensitive altimeter adjustable for changes in barometric pressure, in lieu of paragraph (a) (2) of this section,

(8) Clock with a sweep-second hand,

(9) One gryo direction indicator,

(10) Generator of adequate capacity,

(11) One outside air temperature gauge easily readable from the pilot's position,

(12) One carburetor temperature gauge or equivalent approved device,

(13) Power failure warning means or vacuum gauge on instrument panel connecting to lines leading to gyroscopic instruments,

(14) Carburetor heating or de-icing equipment for each engine,

(15) Heated pitot tube for each airspeed indicator,

(d) *IFR (night).* For night IFR flight the following is required:

(1) Instruments and equipment specified in paragraphs (a), (b), and (c) of this section: *Provided,* That when any requirements under paragraphs (a), (b), or (c) of this section are identical, such requirements need not be duplicated.

42.21-1 *Seats and safety belts (FAA rules which apply to sec. 42.21 (a) (11)).* The installation and use of an approved seat and approved individual seat belt for each person over 2 years of age is required. When a child under 2 years of age is held by an adult person, the safety belt shall be used only for the adult. In small aircraft, it will be permissible to carry persons in excess of the number specified in the pertinent aircraft specification; *Provided,* That the seat or seats occupied by such persons are adequate for side-by-side seating; and a safety belt is provided for each seat. Such belt shall not be used for more persons than the number for which it is approved. In any case, the maximum certificated takeoff weight, and allowable c. g. limits of the aircraft shall not be exceeded.

(Published in 14 F. R. 7034, Nov. 22, 1949, effective upon publication.)

42.21-2 *Fire extinguishers (FAA rules which apply to sec. 42.21 (a) (12)).*

(a) A portable fire extinguisher, which shall be of an approved type, shall have a minimum capacity, if carbon tetrachloride, of 1 quart, or, if carbon dioxide, of 2 pounds, or, if other, of equivalent effectiveness.

(b) On transport-type aircraft, fire extinguishers shall be installed so as to be accessible to the passengers and ground personnel. This may be done by securing the extinguisher near the main external cabin door. An extinguisher shall be readily available to the pilot and copilot.

(c) An approved type fire extinguisher is one that has been approved by the Underwriters Laboratories or by the Administrator.

(Published in 14 F. R. 7034, Nov. 22, 1949, effective upon publication.)

42.21-3 *Altimeter (FAA policies which apply to sec. 42.21 (b) (1)).* For VFR flight at night, the installation and use of a sensitive altimeter adjustable for changes in barometric pressure is recommended.

(Published in 14 F. R. 7034, Nov. 22, 1949, effective upon publication.)

42.21–4 *Warning lights for reversible propellers (FAA policies which apply to sec. 42.21 (a) (15)).* In the interest of cockpit uniformity, when warning lights are used to indicate to the pilot that a reversible propeller is in reverse pitch, such warning lights should be amber in color.

(Published in 21 F. R. 4312, June, 20 1956, effective July 1, 1956.)

42.22 *Additional required instruments and equipment for large aircraft.* In addition to the basic instruments required by section 42.21, the following instruments and equipment for the type of operations specified shall be installed and in serviceable condition in large aircraft:

(a) *Day (VFR and IFR).* For flight during the day the following is required:

(1) Additional airspeed indicator,

(2) Additional sensitive altimeter,

(3) Alternate source of energy to supply gyroscopic instruments which shall be capable of carrying the required load. Engine-driven pumps, when used, shall be on separate engines and, in lieu of one such source of energy, an auxiliary power unit may be used. The installation shall be such that the failure of one source of energy will not interfere with the proper functioning of the instrument by means of the other source,

(4) In passenger service, in addition to fire-detecting and fire-extinguishing equipment necessitated as a result of compliance with section 42.12, such additional hand-type fire extinguishers as the Administrator finds necessary for compliance with section 42.21 (a) (12).

(b) *Night (VFR and IFR).* For flight during the night the following is required:

(1) Instruments and equipment specified in paragraph (a) of this section, and one additional landing light,

(2) After May 31, 1956, an approved anticollision light; except that in the event of failure of such light, the aircraft may continue flight to the next stop where repairs or replacements can be made.

42.22a *Flight recorders.*

(a) An approved flight recorder which records at least time, altitude, airspeed, vertical acceleration, and heading shall be installed in accordance with the following requirements:

(1) On all airplanes of more than 12,500 pounds maximum certificated takeoff weight which are certificated for operations above 25,000 feet altitude; and

(2) On and after November 1, 1960, on all turbine-powered airplanes of more than 12,500 pounds maximum certificated takeoff weight; *Provided*, That, the Director, Bureau of Flight Standards, or his authorized representative, may extend the November 1, 1960, compliance date for any air carrier who, prior to September 1, 1960, submits to the Federal Aviation Agency in writing a request for approval for such an extension, together with substantiating data, which shows to the satisfaction of the Director or his authorized representative:

(i) That the air carrier will be unable to comply with the November 1, 1960, date due to flight recorder procurement or installation problems, and;

(ii) The action the air carrier has undertaken to insure that a progressive installation of the required flight recorder equipment will be completed at the earliest practicable date following November 1, 1960. In no event will the November 1, 1960, compliance date be extended beyond May 1, 1961.

(b) When a flight recorder is installed it shall be operated continuously from the instant the airplane commences the takeoff roll until it has completed the landing roll at an airport.

(c) Recorded information shall be retained by the air carrier for a period of at least 60 days. For a particular flight or series of flights, the information shall be retained for a longer period if requested by an authorized representative of the Administrator or the Civil Aeronautics Board.

(d) In the event of failures of the flight recorder, the airplane may continue flight to the next stop where repairs or replacements can be made.

(Amendment 42–29, published in 25 F.R. 6828, July 19, 1960, effective Aug. 18, 1960.)

SPECIAL CIVIL AIR REGULATION NO. SR-448A

Adopted: Oct. 9, 1961
Effective: Oct. 13, 1961
Published: Oct. 13, 1961
(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.

This special regulation supersedes Special Civil Air Regulation No. SR–448.

Amendment 42–33

Landing Flare Requirements

Adopted: Sept. 15, 1961
Effective: Sept. 21, 1961
Published: Sept. 21, 1961
(26 F.R. 8882)

Section 42.21(b)(6) 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 42 by Amendment 42–13 (23 F.R. 293). 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 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 fror 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 section 42.21(b)(6).
