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

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Civil Air Regulations Amendment 43-11
Effective: March 12, 1954
Adopted: February 5, 1954

VOR EQUIPMENT ACCURACY CHECKS

This amendment to Part 43 of the Civil Air Regulations provides for certain VOR equipment accuracy checks prior to flight under instrument flight rules.

It has been determined that errors may exist in omnidirectional radio ranges (VOR) airborne receivers due to inherent characteristics or to inadequacies in equipment installation or maintenance. Such errors may be of sufficient magnitude as to make the use of a VOR system of airways, using the established lateral separation criteria, extremely hazardous unless proper precautions are taken. This amendment undertakes to correct this situation by requiring that certain checks shall be performed on VOR equipment prior to flight under instrument flight rules.

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.

In consideration of the foregoing, the Civil Aeronautics Board hereby amends Part 43 of the Civil Air Regulations (14 CFR, Part 43, as amended) effective March 12, 1954:

By adding a new § 43.31 to read as follows:

43.31 Aircraft electronic navigation equipment accuracy. Except for aircraft in which the omnidirectional radio range (VOR) equipment is maintained, checked, and inspected in accordance with a procedure approved[1/] by the Administrator, no person shall operate an aircraft under instrument flight rules using the VOR system of radio navigation unless the aircraft VOR equipment has been operationally checked, both within the preceding ten hours of aircraft flight time and within the preceding ten days, and found to be within the limits of the indicated bearing error specified

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1/ An approved continuous maintenance and inspection program specified in Operations Specifications issued by or approved by the Administrator or any equivalent maintenance and inspection system specifically approved by the Administrator.

herein for the particular check. The checks shall be conducted in accordance with either paragraph (a) or (b) as follows:

(a) (1) If a CAA operated or approved test signal[2/] is available at the airport of intended departure, a check of the VOR equipment shall be accomplished using this test signal. The maximum permissible indicated bearing error is plus or minus 4°.

(2) If a CAA operated or approved test signal is not available at the airport of intended departure, a check shall be accomplished using a point on an airport surface designated[2/] by the Administrator as a VOR system check point. The maximum permissible indicated bearing error is plus or minus 4°.[3/]

(3) If neither a CAA operated or approved test signal nor a designated check point on the airport surface is available, a check shall be accomplished using an airborne check point designated[2/] as such by the Administrator. The maximum permissible indicated bearing error is plus or minus 6°.

(4) In the event none of the checks prescribed in subparagraphs (1), (2), and (3) can be accomplished, because of the unavailability of a check signal or point, the following airborne procedure shall be accomplished:

(i) Select the VOR radial which lies along the center line of an established VOR airway,

(ii) Choose a prominent ground point along the selected radial preferably more than 20 miles from the VOR ground facility and maneuver the aircraft directly over the point at a reasonably low altitude, and

(iii) Note the VOR bearing indicated by the receiver when over the point. The maximum permissible difference between the published radial and the indicated bearing is plus or minus 6°.

2/ CAA operated or approved test signals, and ground check points on an airport surface and airborne check points designated by the Administrator, will be shown in the Airman's Guide.

3/ In making this check, caution should be exercised to head the aircraft in a direction to prevent the aircraft structure from interfering with the ground signal.

(b) If dual systems (defined as VOR units independent of each other with the exception of the antenna) are installed in the aircraft, one system may be checked against the other in the following manner in lieu of the check procedures specified above: Both systems shall be tuned to the same VOR ground facility and the indicated bearings to that station noted. The maximum permissible variation between the two indicated bearings is 4°.

(c) The person making the VOR operational check as specified in paragraphs (a) or (b) of this section shall make an entry of such check in the aircraft log or other permanent record showing the date, place, bearing error, and his signature.

(Sec. 205 (a), 52 Stat. 984; 49 U.S.C. 425 (a). Interpret or apply secs. 601, 605, 52 Stat. 1007, 1010; 49 U.S.C. 551, 555)

By the Civil Aeronautics Board:

/s/ M. C. Mulligan

M. C. Mulligan
Secretary

(SEAL)

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

Civil Air Regulations Amendment 43-12
Effective: November 25, 1947
Adopted: November 25, 1947

REPEAL OF § 43.23 OF THE CIVIL AIR REGULATIONS

Section 43.22(b) of the Civil Air Regulations, as amended by Amendment 43-10, adopted September 16, 1947, provides for the same inspection requirements as § 43.23. The purpose of this amendment, therefore, is to delete § 43.23.

Since this amendment is minor in nature and imposes no additional burden on any person, notice and public procedure hereon are unnecessary, and the amendment may be made effective without prior notice.

In consideration of the foregoing the Civil Aeronautics Board hereby amends Part 43 of the Civil Air Regulations (14 CFR, Part 43, as amended) effective November 25, 1947, by repealing § 43.23.

(Sec. 205(a), 52 Stat. 984; 49 U.S.C. 425(a))

By the Civil Aeronautics Board:

/s/ M. C. Mulligan

(SEAL)

M. C. Mulligan
Secretary

Part 43 last printed July 1, 1945

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

Civil Air Regulations Amendment 43-12
Effective: August 15, 1954
Adopted: July 9, 1954

GENERAL OPERATION RULES

ANTI-COLLISION LIGHTS FOR LARGE AIRCRAFT OPERATING AT NIGHT

Currently effective § 43.30 of Part 43 of the Civil Air Regulations requires, among other things, that all aircraft operated at night be equipped with a set of certificated forward and rear position lights. Recent experience has indicated that there is need for further improvement in conspicuity than can be obtained with the existing systems of steady or flashing position lights, because of the increased speed of airplanes and the increase in the number of airplanes that operate at night. Experiments in recent years revealed that high intensity rotating lights, commonly referred to as anti-collision lights, increase conspicuity to the point where safety in air navigation can be materially improved if aircraft are equipped with such lights. In order to enable the air carriers, to evaluate this and other systems of aircraft exterior lighting, the Board promulgated several Special Civil Air Regulations, the most recent of which, SR-392, is currently in effect.

After the service testing of anti-collision lights by certain air carrier operators, it appeared early in 1952 that the anti-collision lights which were then available were satisfactory to these operators as evidenced by their plans for installation on a fleet-wide basis. The Board then established a broad standard for these lights in Part 4b of the Civil Air Regulations for the purpose of assuring a reasonable degree of standardization of anti-collision lights.

Since the need for increased conspicuity of aircraft operating at night has not diminished but has been magnified by recent experience of near accidents at night, and since there are satisfactory anti-collision lights available which tend to alleviate the danger of collision, the Board considers it necessary in the interest of safety that the installation of anti-collision lights on all large aircraft be made mandatory. This amendment, therefore, requires that all aircraft having a maximum certificated weight of more than 12,500 pounds be equipped with operable anti-collision lights for operation at night. Although it was proposed that this requirement become effective on September 30, 1954, the Board has been informed that in some cases it would require as long as eighteen months to effect a fleet-wide installation. Therefore, to permit an orderly installation of these lights, the effective date of this requirement has been established as June 1, 1956. Similar amendments are being made to Parts 40, 41, and 42 for all aircraft having a maximum certificated weight of more than 12,500 pounds, and additional study is being given to the possibility of requiring generally similar types of lights for small aircraft.

Since an anti-collision light may become inoperative en route, considerable concern has been expressed over possible delays which might result if, because of its failure, a flight would not be permitted to continue beyond a stop where facilities for repairs or replacements were not available. It is expected that all persons subject to the provisions of this part will perform a high level of maintenance on the light so that failures in flight will be relatively infrequent. In view of the fact, however, that each affected aircraft will be equipped with position lights and in view of the relatively few failures anticipated, this amendment permits aircraft to continue flight, in the event of an anti-collision light failure, to the next stop where proper repairs or replacements can be made without undue delay.

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.

In consideration of the foregoing, the Civil Aeronautics Board hereby amends Part 43 of the Civil Air Regulations (14 CFR, Part 43, as amended), effective August 15, 1954:

By amending § 43.30 (b) by redesignating subparagraphs "(3)", "(4)", "(5)", and "(6)" as subparagraphs "(4)", "(5)", "(6)", and "(7)" respectively, and by adding a new subparagraph (3) to read as follows:

43.30 Instruments and equipment for NC powered aircraft or powered aircraft with standard airworthiness certificates. * * *

(b) Contact flight rules (night). * * *

(3) After May 31, 1956, an approved anti-collision light for aircraft having a maximum certificated weight of more than 12,500 pounds; 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 without undue delay.

(Sec. 205 (a), 52 Stat. 984; 49 U.S.C. 425 (a). Interpret or apply sec. 601, 52 Stat. 1007, as amended; 49 U.S.C. 551)

By the Civil Aeronautics Board:

/s/ M. C. Mulligan

M. C. Mulligan
Secretary

(SEAL)

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

Civil Air Regulations Amendment 43-13
Effective: September 27, 1954
Adopted: August 23, 1954

GENERAL OPERATION RULES

DROPPING OF OBJECTS OR PERSONS FROM AIRCRAFT

Currently effective § 43.47 of Part 43 of the Civil Air Regulations prohibits a pilot from dropping anything from an aircraft that might create a hazard to persons or property. This section has been construed by certain persons to prohibit aerial application operations such as spraying, dusting, and seeding, a prohibition which was never intended. This amendment indicates clearly, however, that these operations are permitted and that other operations such as dropping newspapers and circulars are also permitted, when proper precautions have been taken for the dropping of these objects.

It has also come to the attention of the Board that several parachute jumps have been made in congested areas. The Civil Air Regulations do not currently deal with this problem. In view of the possible hazard to persons or property arising out of such parachute jumps, however, it is now provided that a pilot in command is prohibited from permitting intentional parachute jumps over congested areas except in an emergency or in accordance with an authorization granted by the Administrator.

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.

In consideration of the foregoing, the Civil Aeronautics Board hereby amends Part 43 of the Civil Air Regulations (14 CFR, Part 43, as amended) effective September 27, 1954:

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By amending § 43.47 to read as follows:

43.47 Dropping objects or persons.

(a) No person piloting an aircraft shall permit any object to be dropped from such aircraft in flight which creates a hazard to persons or property.

(Note: This rule prohibits neither aerial application operations, such as seeding, spraying or dusting, nor the dropping of newspapers, periodicals, circulars, or objects of any other kind, provided reasonable precautions are taken to avoid injury or damage to persons or property.)

(b) No person piloting an aircraft shall permit a parachute jump to be made from such aircraft over congested areas of cities, towns, or settlements, or an open air assembly of persons except in an emergency or except under the terms of an authorization issued by the Administrator.

(Sec. 205 (a), 52 Stat. 984; 49 U.S.C. 425 (a). Interpret or apply sec. 601, 52 Stat. 1007, as amended; 49 U.S.C. 551)

By the Civil Aeronautics Board:

/s/ M. C. Mulligan

M. C. Mulligan
Secretary

(SEAL)

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