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

Civil Air Regulations Amendment 3-3
Effective: May 17, 1958
Adopted: April 15, 1958

AIRPLANE AIRWORTHINESS; NORMAL, UTILITY, AND ACROBATIC CATEGORIES

MISCELLANEOUS AMENDMENTS RESULTING FROM THE 1957 ANNUAL AIRWORTHINESS REVIEW

There are contained herein amendments with respect to various issues stemming from the 1957 Annual Airworthiness Review. Although Part 3 was not subject to discussion during the annual airworthiness meetings, the amendments contained herein were proposed in Civil Air Regulations Draft Release No. 57-1C.

The current formulas and loading charts heretofore contained in this part were based on the aerodynamic characteristics of airplanes which, at the time of the promulgation of Part 3, were considered typical of airplanes which would be certificated in accordance with its provisions. Since high performance airplanes are now being developed for certification under this part, certain of these formulas and loading charts can no longer be regarded as generally applicable. Accordingly, amendments are being made to §§ 3.191, 3.215, 3.216, 3.217, 3.219, 3.220, and 3.222 to incorporate appropriate qualifications concerning the applicability of such formulas and loading charts.

It has been found that the provision of § 3.668 requiring a means for indicating the adequacy of power being supplied to each gyroscopic instrument unnecessarily complicates the airplane's vacuum system without giving an indication of all possible instrument failures, such as the clogging of integral filters. For this reason, § 3.668 is being amended to require a power failure indicator only for the power source. In addition, a new § 3.687 is being included which requires electric power system instruments.

There are also contained herein changes in the definition of standard atmosphere to make it consistent with other airworthiness parts of the Civil Air Regulations.

Interested persons have been afforded an opportunity to participate in the making of this amendment (22 F.R. 9116), and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, the Civil Aeronautics Board hereby amends Part 3 of the Civil Air Regulations (14 CFR Part 3, as amended) effective May 17, 1958:

1. By amending § 3.1 (b) (1) by inserting between the words "atmosphere" and "defined" the following: "(see NACA Technical Report 1235)".

2. By amending § 3.1 (b) (1) (iv) by deleting the expression "-67° F." and inserting in lieu thereof "-69.7° F."

3. By amending § 3.1 (b) (1) (v) by deleting the numerals "0.002378" and inserting in lieu thereof "0.002377".

4. By amending the note following § 3.191 (a) by deleting the phrase "These conditions may be covered as noted below:" and inserting in lieu thereof "Unless the Administrator finds such data result in unrealistic loads, these conditions may be covered as follows:"

5. By amending the note following § 3.215 to read as follows: "NOTE: The distribution of Figure 3-7 may be used unless the Administrator finds it results in unrealistic loads."

6. By amending the note following § 3.216 (a) by adding to the end of the first sentence the phrase "unless the Administrator finds it results in unrealistic loads."

7. By amending the note following § 3.216 (b) by adding to the end thereof the phrase "unless the Administrator finds it results in unrealistic loads."

8. By amending the note following § 3.216 (d) by adding to the end of the first sentence the phrase "unless the Administrator finds it results in unrealistic loads."

9. By amending the note following § 3.217 (a) by adding to the end thereof the phrase "unless the Administrator finds it results in unrealistic loads."

10. By amending the note following § 3.219 (a) by adding to the end thereof the phrase "unless the Administrator finds it results in unrealistic loads."

11. By amending the note following § 3.219 (b) by adding to the end thereof the phrase "unless the Administrator finds it results in unrealistic loads."

12. By amending the note following § 3.219 (c) by adding to the end thereof the phrase "unless the Administrator finds it results in unrealistic loads."

13. By amending the note following § 3.220 (c) by adding to the end thereof the phrase "unless the Administrator finds it results in unrealistic loads."

14. By amending § 3.222 by adding an introductory sentence to read: "Paragraphs (c) through (e) and the note following paragraph (b) (3) of this section shall not be applicable to airplanes for which the Administrator finds them to result in unrealistic loads."

15. By amending § 3.668 by deleting the words "each of" from the third sentence of the introductory paragraph.

16. By amending § 3.686 by redesignating the present text as paragraph (a) and by adding a new paragraph (b) to read as follows:

3.686 Generator controls. * * *

(b) A generator reverse current cut-out shall be incorporated and designed to disconnect the generator from the battery and other generators when the generator is developing a voltage of such value that current sufficient to cause malfunctioning can flow into the generator.

17. By adding a new heading and amending § 3.687 to read as follows:

INSTRUMENTS

3.687 Electric power system instruments. Means shall be provided to indicate to appropriate crew members those electric power system quantities which are essential for the safe operation of the system.

NOTE: For direct current systems an ammeter which can be switched into each generator feeder would be acceptable. When only one generator is installed, the ammeter may be in the battery feeder.

(Sec. 205, 52 Stat. 984; 49 U.S.C. Interpret or apply secs. 601, 603, 52 Stat. 1007, 1009, as amended; 49 U.S.C. 551, 553)

By the Civil Aeronautics Board:

/s/ M. C. Mulligan

M. C. Mulligan
Secretary

(SEAL)

USCOMM-DC-10932

Part 3 last printed May 15, 1956.