

Federal Aviation Administration, DOT

§ 35.4

§ 34.82 Sampling and analytical procedures for measuring smoke exhaust emissions.

The system and procedures for sampling and measurement of smoke emissions shall be as specified in Appendix 2 to ICAO Annex 16, Volume II, Environmental Protection, Aircraft Engine Emissions, Second Edition, July 1993, effective July 26, 1993. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. This document can be obtained from, and copies may be reviewed at, the respective addresses listed in § 34.64.

[Doc. No. FAA-1999-5018, 64 FR 5560, Feb. 3, 1999; Amdt. 34-3, 64 FR 60336, Nov. 5, 1999]

§§ 34.83-34.88 [Reserved]

§ 34.89 Compliance with smoke emission standards.

Compliance with each smoke emission standard shall be determined by comparing the plot of SN as a function of power setting with the applicable emission standard under this part. The SN at every power setting must be such that there is a high degree of confidence that the standard will not be exceeded by any engine of the model being tested. An acceptable alternative to testing every engine is described in Appendix 6 to ICAO Annex 16, Environmental Protection, Volume II, Aircraft Engine Emissions, Second Edition, July 1993, effective July 26, 1993. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. This document can be obtained from the address listed in § 34.64. Other methods of demonstrating compliance may be approved by the Administrator with the concurrence of the Administrator of the EPA.

[Doc. No. FAA-1999-5018, 64 FR 5560, Feb. 3, 1999; Amdt. 34-3, 64 FR 60336, Nov. 5, 1999]

PART 35—AIRWORTHINESS STANDARDS: PROPELLERS

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APPENDIX A TO PART 35—INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

AUTHORITY: 49 U.S.C. 106(g), 40113, 44701-44702, 44704.

SOURCE: Docket No. 2095, 29 FR 7458, June 10, 1964, unless otherwise noted.

Subpart A—General

§ 35.1 Applicability.

(a) This part prescribes airworthiness standards for the issue of type certificates and changes to those certificates, for propellers.

(b) Each person who applies under Part 21 for such a certificate or change must show compliance with the applicable requirements of this part.

[Amdt. 35-3, 41 FR 55475, Dec. 20, 1976]

§ 35.3 Instruction manual for installing and operating the propeller.

Each applicant must prepare and make available an approved manual or manuals containing instructions for installing and operating the propeller.

[Amdt. 35-5, 45 FR 60181, Sept. 11, 1980]

§ 35.4 Instructions for Continued Airworthiness.

The applicant must prepare Instructions for Continued Airworthiness in

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accordance with appendix A to this part that are acceptable to the Administrator. The instructions may be incomplete at type certification if a program exists to ensure their completion prior to delivery of the first aircraft with the propeller installed, or upon issuance of a standard certificate of airworthiness for an aircraft with the propeller installed, whichever occurs later.

[Amdt. 35-5, 45 FR 60181, Sept. 11, 1980]

§ 35.5 Propeller operating limitations.

Propeller operating limitations are established by the Administrator, are included in the propeller type certificate data sheet specified in § 21.41 of this chapter, and include limitations based on the operating conditions demonstrated during the tests required by this part and any other information found necessary for the safe operation of the propeller.

[Amdt. 35-5, 45 FR 60182, Sept. 11, 1980]

Subpart B—Design and Construction

§ 35.11 Applicability.

This subpart prescribes the design and construction requirements for propellers.

§ 35.13 General.

Each applicant must show that the propeller concerned meets the design and construction requirements of this subpart.

§ 35.15 Design features.

The propeller may not have design features that experience has shown to be hazardous or unreliable. The suitability of each questionable design detail or part must be established by tests.

§ 35.17 Materials.

The suitability and durability of materials used in the propeller must—

(a) Be established on the basis of experience or tests; and

(b) Conform to approved specifications (such as industry or military specifications, or Technical Standard Orders) that ensure their having the

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strength and other properties assumed in the design data.

(Secs. 313(a), 601, and 603, 72 Stat. 752, 775, 49 U.S.C. 1354(a), 1421, and 1423; sec. 6(c), 49 U.S.C. 1655(c))

[Amdt. 35-4, 42 FR 15047, Mar. 17, 1977]

§ 35.19 Durability.

Each part of the propeller must be designed and constructed to minimize the development of any unsafe condition of the propeller between overhaul periods.

§ 35.21 Reversible propellers.

A reversible propeller must be adaptable for use with a reversing system in an airplane so that no single failure or malfunction in that system during normal or emergency operation will result in unwanted travel of the propeller blades to a position substantially below the normal flight low-pitch stop. Failure of structural elements need not be considered if the occurrence of such a failure is expected to be extremely remote. For the purposes of this section the term “reversing system” means that part of the complete reversing system that is in the propeller itself and those other parts that are supplied by the applicant for installation in the aircraft.

§ 35.23 Pitch control and indication.

(a) No loss of normal propeller pitch control may cause hazardous overspeeding of the propeller under intended operating conditions.

(b) Each pitch control system that is within the propeller, or supplied with the propeller, and that uses engine oil for feathering, must incorporate means to override or bypass the normally operative hydraulic system components so as to allow feathering if those components fail or malfunction.

(c) Each propeller approved for installation on a turbopropeller engine must incorporate a provision for an indicator to indicate when the propeller blade angle is below the flight low pitch position. The provision must directly sense the blade position and be arranged to cause an indicator to indicate that the blade angle is below the flight low pitch position before the