§ 36.1583 Noncomplying agricultural and fire fighting airplanes.

(a) This section applies to propeller-driven small airplanes that—

(1) Are designed for “agricultural aircraft operations” (as defined in §137.3 of this chapter, effective on January 1, 1966) or for dispensing fire fighting materials; and

(2) Have not been shown to comply with the noise levels prescribed under appendix F of this part—

(i) For which application is made for a standard airworthiness certificate and that do not have any flight time before January 1, 1980; or

(§ 36.1583 14 CFR Ch. 1 (1–1–13 Edition))
(i) For which application is made for an acoustical change approval, for airplanes which have a standard airworthiness certificate after the change in the type design, and that do not have any flight time in the changed configuration before January 1, 1980.

(b) For airplanes covered by this section an operating limitation reading as follows must be furnished in the manner prescribed in §36.1581:

Noise abatement: This airplane has not been shown to comply with the noise limits in FAR Part 36 and must be operated in accordance with the noise operating limitation prescribed under FAR §91.815.


APPENDIX A TO PART 36—AIRCRAFT NOISE MEASUREMENT AND EVALUATION UNDER §36.101

Sec.

A36.1 Introduction.

A36.2 Noise Certification Test and Measurement Conditions.

A36.3 Measurement of Airplane Noise Received on the Ground.

A36.4 Calculations of Effective Perceived Noise Level From Measured Data.

A36.5 Reporting of Data to the FAA.

A36.6 Nomenclature: Symbols and Units.

A36.7 Sound Attenuation in Air.

A36.8 [Reserved]

A36.9 Adjustment of Airplane Flight Test Results.

Section A36.1 Introduction

A36.1.1 This appendix prescribes the conditions under which airplane noise certification tests must be conducted and states the measurement procedures that must be used to measure airplane noise. The procedures that must be used to determine the noise evaluation quantity designated as effective perceived noise level, EPNL, under §§36.101 and 36.803 are also stated.

A36.1.2 The instructions and procedures given are intended to ensure uniformity during compliance tests and to permit comparison between tests of various types of airplanes conducted in various geographical locations.

A36.1.3 A complete list of symbols and units, the mathematical formulation of perceived noisiness, a procedure for determining atmospheric attenuation of sound, and detailed procedures for correcting noise levels from non-reference to reference conditions are included in this appendix.


Section A36.2 Noise Certification Test and Measurement Conditions

A36.2.1 General.

A36.2.1.1 This section prescribes the conditions under which noise certification must be conducted and the measurement procedures that must be used.

NOTE: Many noise certifications involve only minor changes to the airplane type design. The resulting changes in noise can often be established reliably without resorting to a complete test as outlined in this appendix. For this reason, the FAA permits the use of approved equivalent procedures. There are also equivalent procedures that may be used in full certification tests, in the interest of reducing costs and providing reliable results. Guidance material on the use of equivalent procedures in the noise certification of subsonic jet and propeller-driven large airplanes is provided in the current advisory circular for this part.

A36.2.2 Test environment.

A36.2.2.1 Locations for measuring noise from an airplane in flight must be surrounded by relatively flat terrain having no excessive sound absorption characteristics such as might be caused by thick, matted, or tall grass, shrubs, or wooded areas. No obstructions that significantly influence the sound field from the airplane must exist within a conical space above the point on the ground vertically below the microphone, the cone being defined by an axis normal to the ground and by a half-angle of 80° from this axis.

NOTE: Those people carrying out the measurements could themselves constitute such obstructions.

A36.2.2.2 The tests must be carried out under the following atmospheric conditions:

(a) No precipitation;

(b) Ambient air temperature not above 95 °F (35 °C) and not below 14 °F (−10 °C), and relative humidity not above 95% and not below 20% over the whole noise path between a point 33 ft (10 m) above the ground and the airplane;

NOTE: Care should be taken to ensure that the noise measuring, airplane flight path tracking, and meteorological instrumentation are also operated within their specific environmental limitations.

(c) Relative humidity and ambient temperature over the whole noise path between a point 33 ft (10 m) above the ground and the airplane such that the sound attenuation in the one-third octave band centered on 6 kHz will not be more than 12 dB/100 m unless: