

Federal Aviation Administration, DOT

Pt. 36, App. F

noisiest continuous state at the maximum landing weight in normal operation.

Section B36.8 Noise Certification Test Procedures

(a) All test procedures must be approved by the FAA.

(b) The test procedures and noise measurements must be conducted and processed in an approved manner to yield the noise evaluation metric EPNL, in units of EPNdB, as described in appendix A of this part.

(c) Acoustic data must be adjusted to the reference conditions specified in this appendix using the methods described in appendix A of this part. Adjustments for speed and thrust must be made as described in section A36.9 of this part.

(d) If the airplane's weight during the test is different from the weight at which noise certification is requested, the required EPNL adjustment may not exceed 2 EPNdB for each takeoff and 1 EPNdB for each approach. Data approved by the FAA must be used to determine the variation of EPNL with weight for both takeoff and approach test conditions. The necessary EPNL adjustment for variations in approach flight path from the reference flight path must not exceed 2 EPNdB.

(e) For approach, a steady glide path angle of $3^\circ \pm 0.5^\circ$ is acceptable.

(f) If equivalent test procedures different from the reference procedures are used, the test procedures and all methods for adjusting the results to the reference procedures must be approved by the FAA. The adjustments may not exceed 16 EPNdB on takeoff and 8 EPNdB on approach. If the adjustment is more than 8 EPNdB on takeoff, or more than 4 EPNdB on approach, the resulting numbers must be more than 2 EPNdB below the limit noise levels specified in section B36.5.

(g) During takeoff, lateral, and approach tests, the airplane variation in instantaneous indicated airspeed must be maintained within $\pm 3\%$ of the average airspeed between the 10 dB-down points. This airspeed is determined by the pilot's airspeed indicator. However, if the instantaneous indicated airspeed exceeds ± 3 kt (± 5.5 km/h) of the average airspeed over the 10 dB-down points, and is determined by the FAA representative on the flight deck to be due to atmospheric turbulence, then the flight so affected must be rejected for noise certification purposes.

NOTE: Guidance material on the use of equivalent procedures is provided in the current advisory circular for this part.

[Amdt. 36-54, 67 FR 45235, July 8, 2002; Amdt. 36-24, 67 FR 63196, Oct. 10, 2002; 68 FR 1512, Jan. 10, 2003; Amdt. 36-26, 70 FR 38749, July 5, 2005; FAA Doc. No. FAA-2015-3782, Amdt. No. 36-31, 82 FR 46131, Oct. 4, 2017]

APPENDIXES C–E TO PART 36 [RESERVED]

APPENDIX F TO PART 36—FLYOVER NOISE REQUIREMENTS FOR PROPELLER-DRIVEN SMALL AIRPLANE AND PROPELLER-DRIVEN, COMMUTER CATEGORY AIRPLANE CERTIFICATION TESTS PRIOR TO DECEMBER 22, 1988

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PART A—GENERAL

Section F36.1 Scope. This appendix prescribes noise level limits and procedures for measuring and correcting noise data for the propeller driven small airplanes specified in §§ 36.1 and 36.501(b).

PART B—NOISE MEASUREMENT

Sec. F36.101 General test conditions.

(a) The test area must be relatively flat terrain having no excessive sound absorption characteristics such as those caused by thick, matted, or tall grass, by shrubs, or by wooded areas. No obstructions which significantly influence the sound field from the airplane may exist within a conical space above the measurement position, the cone being defined by an axis normal to the ground and by a half-angle 75 degrees from this axis.

(b) The tests must be carried out under the following conditions:

(1) There may be no precipitation.

(2) Relative humidity may not be higher than 90 percent or lower than 30 percent.

(3) Ambient temperature may not be above 86 degrees F. or below 41 degrees F. at 33' above ground. If the measurement site is within 1 n.m. of an airport thermometer the airport reported temperature may be used.

(4) Reported wind may not be above 10 knots at 33' above ground. If wind velocities of more than 4 knots are reported, the flight direction must be aligned to within ± 15 degrees of wind direction and flights with tail