

not clear which airplanes encompass the differences in their noise certifications. This proposed rule would harmonize the two technical items to eliminate the differences and the need for the additional reviews.

The two unharmonized items, which are the subject of this proposed rule, are as follows:

(1) The use of "maximum continuous power" during the second segment of the noise certification test flight path is allowed under current section G36.111. However, the "power" definition in Annex 16, Chapter 10, section 10.5.2 for the second segment is defined as "maximum power". Since the "maximum continuous power" is typically lower than the maximum or takeoff power described in ICAO, the two items are not considered harmonized.

(2) For fixed pitch type propellers, current section G36.201 specifies a simplified data correction procedure if the engine test power is within 5 percent of the reference power. The ICAO Annex 16, Volume 1, Chapter 10 does not have a corresponding simplified data correction procedure.

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is the FAA's policy to comply with ICAO Standards and Recommended Practices to the maximum extent practicable. We propose to revise the two unharmonized technical items in Appendix G to part 36 to make them the same as ICAO Annex 16, Volume I, Chapter 10, regarding propeller-driven small airplane noise certification regulation. The proposed revisions better represent the intent of the original noise certification standards, which was to certify propeller-driven small airplanes at takeoff power. This proposed rule would complete harmonization between current Appendix G to part 36 of 14 CFR and Annex 16.

### Section-by-Section Analysis

*Appendix G To Part 36—Takeoff Noise Requirements for Propeller-Driven Small Airplane and Propeller-Driven, Commuter Category Airplane Certification Tests on or After December 22, 1988*

#### *Section G36.111 Flight Procedures*

Current section G36.111 allows the use of maximum continuous power during the second segment of the flight path. However, the power definition in Annex 16, Chapter 10, section 10.5.2 for the second segment is defined as maximum or takeoff power. The maximum continuous power described in Appendix G is typically lower than

the takeoff power and is applicable only to older engines. This proposed rule specifies that takeoff power must be used in the second segment of the flight profile and describes a method to perform the test if the test airplane is equipped with an engine that can operate at takeoff power for only a short time.

The FAA conducted an informal survey to determine whether any recent noise certification tests have been conducted on airplanes equipped with time-limited engines. The FAA found no noise measurements of airplanes with old-technology engines that may be affected by this proposal. If testing were required for an airplane, which was previously noise certificated at maximum continuous power, rather than at takeoff power as proposed in this NPRM, the noise levels could be slightly higher or lower, depending on the height gained over the microphone by operating at the higher engine power. The amount of height gained is a function of the performance of the particular airplane. The noise increase caused by the engine at takeoff power will be canceled or reduced by the height gained over the microphone since the sound propagation distance from the airplane to the microphone increases as the airplane flies higher. Hence, the sound reaches the microphone at a lower level.

#### *Section G36.201 Corrections to Test Results*

This section prescribes that corrections made to test results must account for the effects of differences between the conditions referenced in the prescribed procedures in Appendix G and the actual test conditions.

Under current section G36.201(c)(1), helical tip Mach number and power corrections must be made if (1) the propeller is a variable pitch type, or (2) the propeller is a fixed pitch type and the actual power is not within 5 percent of the reference power. The 1999 rule change includes an additional helical tip Mach number correction exception for all types of propellers by stating that a correction is not necessary if the helical tip Mach number meets criteria listed in current section G36.201(c)(2). This proposal (1) removes the exception provided for fixed pitch propellers if the test power is within 5 percent of the reference power and (2) requires helical tip Mach number and power corrections for all types of propellers, depending on which criteria of current section G36.201(c)(2) are being used.

Fixed pitch propellers rotate at less than their maximum speed during takeoff because the pitch angle cannot

be adjusted to match the loading on the propeller blade. As the propeller slows down, the dominant noise generation shifts from the propeller to the engine exhaust. The lack of a correction exception for slower rotating propellers is provided not just as a simplification to the procedure, but to avoid correcting the engine noise using the propeller speed. Current section G36.201(c)(2) provides either no correction exception or a small correction for slow rotating propellers, if the test power is not within 5 percent of the reference power. These requirements coincide with the exception in section G36.201(c)(1)(ii) proposed to be removed in this NPRM. Accordingly, the proposed change is not expected to affect test results.

### Economic Evaluation

Proposed changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs that each Federal agency must propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (19 U.S.C. 2531–2533) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, this Trade Act requires agencies to consider international standards and, where appropriate, make them the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of \$100 million or more annually (adjusted for inflation).

However, for regulations with an expected minimal impact, the above-specified analyses are not required. The Department of Transportation Order DOT 2100.5 prescribes policies and procedures for simplification, analysis, and review of regulations. If it is determined that the expected impact is so minimal that the proposal does not warrant a full evaluation, a statement to that effect and the basis for it are included in proposed regulation.

This proposed rule would revise two technical items, which are the only remaining unharmonized items between part 36 Appendix G and the ICAO Annex 16, Volume I, Chapter 10,