Noise Stringency Increase for Single-Engine Propeller-Driven Small Airplanes

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In June, 1995, the ICAO Committee on Aviation and Environmental Protection (CAEP) met in Montreal, Canada. Representatives that attended the meeting were from the Joint Aviation Authorities Council. At the meeting, the need to study the environmental impact of propeller-driven small airplane noise was identified and added to the work plan of CAEP's aircraft noise working group (Docket No. FAA-2004-17041).

The aircraft noise working group formed a task group to study the environmental impact of propeller-driven small airplane noise. The task group was also asked to recommend remedies to reduce environmental impact depending on the study results, such as a stringency increase, operational limitations, and economic incentives. During the initial meetings, the task group agreed that it was important to base any remedy on the current technology, and that any changes recommended would be aimed at preventing noise levels from increasing beyond the best current technology in production (Docket No. FAA-2004-17041).

In subsequent meetings, the task group concluded that the noise problem from propeller-driven small airplanes is regional in nature and characterized primarily by training flights using single-engine airplanes. This conclusion by the task group led to the decision to limit its review of available technology to noise abatement of single-engine small propeller-driven airplanes. The task group agreed that the multi-engine

small propeller airplanes were not the noise problem because single-engine airplanes are the ones most frequently used for training (Docket No. FAA-2004-17041).

The task group compiled a database of noise certification level and performance data for each model of single-engine small propeller-driven airplanes in production. The purpose of the database was to identify the effectiveness of available noise abatement technologies applicable to singe-engine propeller-driven airplanes that would not affect airworthiness of the airplanes (Docket No. FAA-2004-17041).

The task group studied several stringency options for the airplanes in the database, and decided to propose new noise stringency levels that are at the noise levels of current production airplanes. The proposed noise stringency level reflects the current noise abatement technology that is applied to the single-engine propeller-driven small airplanes in production. Raising the stringency to the level of current production guarantees that future designs do not generate greater noise levels than current production airplanes (Docket No. FAA-2004-17041).

The proposed rule includes a 6 dBA noise limit reduction for single-engine propeller-driven small airplanes having maximum take-off weight less than 1,257 lb, and a 3 dBA noise limit reduction for airplanes with weights above 3,307 lb. The new limits will apply to new type certificates and Supplemental Type Certificates for which application is made after November 4, 2004. The proposed change would ensure that the noise level of single-engine propeller-driven small airplanes is held to that appropriate for current noise abatement technology (Docket No. FAA-2004-17041).

After reviewing the notice of proposed rule making on the Noise Stringency Increase for Single-Engine Propeller-Driven Small Airplanes, I am convinced to agree

with it to some extent. It is my understanding that this rule would apply to aircraft manufactures when building new aircraft, but would not apply to the currently existing operating aircraft. If this is the case then I would agree with it because to implement a rule on existing operating aircraft would be too difficult, but not only would cost the aviators a lot of money, but as well as the aviation industry too.

I think this shouldn't be a top priority in the aviation industry, but should be addressed soon. The reason is because of the ever-growing general aviation industry. With new airports being built, and the population growing around them can't be ignored. With houses, and towns near by airports we can't afford to let the noise level of small aircraft increase. There are already complaints being made about the noise level in and around the general aviation airports.

The noise reduction specified for a small aircraft is only 6 decibels, which in today's technology era shouldn't be too difficult to obtain. The single engine planes do not make that much noise though. They produce around 70 decibels. If you compare that to an ambulance, which produces 120 decibels, then it seems as though airplanes don't really make that much noise. To better understand how the surrounding public feels, I think there should be surveys conducted on how often, and how loud they feel the aircraft are operating in, and around the skies of the airport.

Overall I think this notice of proposed rule making is a good idea. It can, and would develop uniformity in the aviation industry. This is something that if not addressed and taken care of now will become a major problem in the years to come. This compliance would not be too difficult and should be implemented.

Resources

1. Department Of Transportation, Federal Aviation Administration. 14 CFR Part 36. (Docket No. FAA-2004-17041). RIN 2120-AH44