

SUMMARY: These special conditions are for Airbus Model A320 airplanes. These airplanes, as modified by AMSAFE Inc., will have novel and unusual design features associated with a child restraint system that attaches to the existing passenger lap belt. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

EFFECTIVE DATE: January 16, 2004.

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SUPPLEMENTARY INFORMATION:

Background

On February 12, 2003, AMSAFE Inc., P.O. Box 1570, Higley, Arizona 85236, applied for a supplemental type certificate for the modification of Airbus Model A320 airplanes. The modification includes a child restraint system (identified by AMSAFE as a child safety system (CSS)) that attaches to the existing passenger lap belt and can be installed on certain seats of Airbus Model A320 airplanes in order to reduce the potential for injury in the event of an accident. The Model A320 is a swept-wing, conventional tail, twin-engine, turbofan-powered transport airplane.

Type Certification Basis

Under the provisions of § 21.101, AMSAFE Inc. must show that the Airbus Model A320 airplanes, as changed, continue to meet the applicable provisions of the regulations incorporated by reference in Type Certificate No. A28NM, or the applicable regulations in effect on the date of application for the change. The regulations incorporated by reference in the type certificate are commonly referred to as the "original type certification basis." The regulations incorporated by reference in Type Certificate No. A28NM are as follows: 14 CFR part 25, effective February 1, 1965, including Amendments 25-1 through 25-56; SFAR 27, effective February 1, 1974, including Amendments 27-1 through 27-5; and 14 CFR part 36 effective December 1, 1969, including Amendments 36-1

through 36-12. In addition, the certification basis includes other regulations and special conditions that are not pertinent to these special conditions.

If the Administrator finds that the applicable airworthiness regulations (*i.e.*, 14 CFR part 25) do not contain adequate or appropriate safety standards for the Airbus Model A320 airplanes because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

In addition to the applicable airworthiness regulations and special conditions, the Airbus Model A320 airplanes must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34 and the noise certification requirements of 14 CFR part 36.

Special conditions, as defined in § 11.19, are issued in accordance with § 11.38 and become part of the type certification basis in accordance with § 21.101.

Special conditions are initially applicable to the model for which they are issued. Should AMSAFE Inc. apply for a supplemental type certificate to modify any other model included on the same type certificate to incorporate the same or similar novel or unusual design feature, the special conditions would also apply to the other model under the provisions of § 21.101.

Novel or Unusual Design Features

The AMSAFE Inc., Child Safety System (CSS) is an improved harness type child restraint system (CRS) that utilizes the seat back and the lap belt on passenger seats to provide upper torso restraint and to improve the restraint of small children. The physical characteristics of small children will govern the use of the CSS and must be defined according to accepted classification standards. The device is intended for children in the 1 to 4-year age group who are prohibited from being held in their parents' arms during taxi, take-off, and landing and must occupy their own passenger seat, typically with no supplemental restraint. The CSS is made with webbing and fastening hardware and consists of an adjustable strap that wraps horizontally around the seat back to secure the device to the passenger seat, and a double shoulder harness that is fastened around the child's upper torso. The ends of the device's shoulder harness are held in place using the existing passenger lap belt that is passed through two open loops on the lower ends of the device's shoulder straps. The current part 25 airworthiness

regulations are not adequate to define the necessary certification criteria.

Discussion

The CSS is a non-conforming CRS, that is not approved for use on aircraft per Federal Motor Vehicle Safety Standard (FMVSS) 213 and as such the design requirements are established in these special conditions. It is a safety restraint device specifically designed for use by small children on JetBlue Airways Airbus A320 aircraft.

The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this particular design feature. Additional safety standards are therefore necessary to establish a level of safety equivalent to that established by the existing airworthiness standards for transport category airplanes.

Additionally, the operating regulations, 14 CFR 91.107 and 121.311, prohibit the use of any "vest-type child restraints, and harness-type child restraints" for commercial and private use operations. In order for the CSS, which is a harness-type child restraint, to be useable in the U.S., AMSAFE Inc., or their agent, must petition the FAA for an exemption from the operating regulations. The petition must be granted in order to allow use of the CSS.

The following special conditions can be characterized as addressing the safety performance of the system and the capability of the system to be installed and utilized without creating additional safety concerns. Because of the nature of the system and the direct interface with the crew and passengers, as well as the intended occupants, these special conditions are more rigorous from a design standpoint than for the standard lapbelt installation.

Discussion of Comments

Notice of proposed special conditions No. 25-03-07-SC for the Airbus Model A320 airplanes was published in the **Federal Register** on October 8, 2003 (68 FR 58042). One commenter responded.

The commenter, on behalf of its members, notes that the members generally support the special conditions, but express some concerns (some safety related, others not so) with the design and certification of the CSS. The commenter's concerns and FAA responses are as follows:

Comment 1: The CSS could endanger the child if installed on a seat with full breakover, and it would be difficult to control the seats where the CSS could be installed.

FAA Response: The FAA does not agree. Special Condition 1 requires that the CSS prevent serious head and other