

reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data. We ask that you send us two copies of written comments.

We will file in the docket all comments we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning these special conditions. The docket is available for public inspection before and after the comment closing date. If you wish to review the docket in person, go to the address in the **ADDRESSES** section of this preamble between 7:30 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

We will consider all comments we receive on or before the closing date for comments. We will consider comments filed late if it is possible to do so without incurring expense or delay. We may change these special conditions in light of the comments we receive.

If you want the FAA to acknowledge receipt of your comments on this proposal, include with your comments a pre-addressed, stamped postcard on which the docket number appears. We will stamp the date on the postcard and mail it back to you.

Background

On November 24, 1999, Cessna Aircraft Company, One Cessna Boulevard, Wichita, KS 67277, applied for type certificate for their new Cessna Model 680 Sovereign airplane. The Model 680 Sovereign is a twin engine pressurized executive jet airplane with standard seating provisions for 12 passenger/crew and allowance for baggage and optional equipment. This airplane will have a maximum takeoff weight of 30,000 pounds with a wingspan of 63.1 feet and will have two aft-mounted Pratt & Whitney 306C engines.

Cessna Model 680 offers interior arrangements, which include single-occupant side-facing seat installations. These seats are installed on the LH and RH side of the cabin's forward section, forward of and opposite to the entry door respectively. Dynamic testing of all seats approved for occupancy during takeoff and landing is required by 14 CFR 25.562. The pass/fail criteria for the testing developed in Amendment 25-64 to § 25.562 focused primarily on fore/aft facing seats. Side facing seating installations were not adequately addressed for transport category airplane in this Amendment.

These special conditions are applicable to single-occupant side-facing seats only. They are not intended to be used for multiple-occupant side-

facing divans or sofas, as they do not account for possible interaction among the occupants.

Type Certification Basis

Under the provisions of 14 CFR 21.17, the Cessna Aircraft Company must show that the Model 680 Sovereign airplane meets the applicable provisions of 14 CFR part 25, effective February 1, 1965, as amended by Amendments 25-1 through 25-98; 14 CFR part 34, effective September 10, 1990, as amended by any amendment in effect on the date of certification. Subsequent changes have been made to § 21.101 as part of Amendment 21-77, but those changes do not become effective until June 10, 2003.

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 Cessna Model 680 Sovereign airplane 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 Cessna Model 680 Sovereign must comply with the fuel vent and exhaust emission requirements of part 34 and the noise certification requirements of part 36, and the FAA must issue a finding of regulatory adequacy pursuant to § 611 of Public Law 92-574, the "Noise Control Act of 1972."

Special conditions, as defined in 14 CFR 11.19, are issued in accordance with § 11.38 and become part of the type certification basis in accordance with § 21.17(a)(2), Amendment 21-69, effective September 16, 1991. Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same novel or unusual design feature, the special conditions would also apply to the other model under the provisions of § 21.101(a)(1), Amendment 21-69, effective September 16, 1991.

Novel or Unusual Design Features

The Cessna Model 680 offers interior arrangements, which include single-occupant side-facing seat installations. These seats are installed on the LH and RH side of the cabin's forward section, forward and opposite to the entry door respectively. Dynamic testing of all seats approved for occupancy during takeoff and landing is required by § 25.562. The pass/fail criteria for the testing developed in Amendment 25-64 to § 25.562 focused primarily on fore/aft

facing seats. Side facing seating installations were not adequately addressed for transport category airplanes in this Amendment.

Discussion

The following injury criteria and testing represent the minimum acceptable standards, and are being proposed for certification of the Model 680 single-occupant side-facing seats, and are to be included as requirements in the proposed special conditions. However, the existing requirements call for a "no yaw" test condition. Cessna is proposing to demonstrate values of thoracic trauma index (TTI) and lateral pelvic acceleration (LPA) for a "10 degree yaw" for which it has some test data. In this case, Cessna must show the "10 degree yaw" yields results that will only differ slightly from the "no yaw" condition and that these differences would not be of such magnitude as to exceed the maximum allowable.

Proposed Injury Criteria

(a) *Existing Criteria.* As referenced by § 25.785(b), all injury protection criteria of §§ 25.562(c)(1) through (c)(6) apply to the occupants of the single-occupant side-facing seats. Head injury criteria (HIC) assessments are only required for head contact with the seat and/or adjacent structures.

(b) *Body-to-wall/furnishing contact.* The seat must be installed aft of a structure such as an interior wall or furnishing that will contact the pelvis, upper arm, chest, or head of an occupant seated next to the structure. A conservative representation of the structure and its stiffness must be included in the tests. It is recommended, but not required, that the contact surface of this structure be covered with at least two inches of energy absorbing protective padding (foam or equivalent), such as Ensolite.

(c) *Thoracic Trauma.* Testing with a Side Impact Dummy (SID), as defined by 49 CFR part 572, subpart F, or its equivalent, must be conducted and TTI injury criteria acquired with the SID must be less than 85, as defined in 49 CFR part 572, subpart F. Side Impact Dummy TTI must be processed as defined in Federal Motor Vehicle Safety Standard (FMVSS) part 571.214, section S6.13.5. Rational analysis, comparing an installation with another installation where TTI data were acquired and found acceptable, may also be viable.

(d) *Pelvis.* Pelvic lateral acceleration must not exceed 130g, pelvic acceleration data must be processed as defined in FMVSS part 571.214, section S6.13.5