installed such that the inflatable lap belt would not properly deploy. Alternatively, it must be shown that such deployment is not hazardous to the occupant, and will provide the required head-injury protection.

4. The inflatable lap-belt system must be shown not to be susceptible to inadvertent deployment as a result of wear and tear, or inertial loads resulting from in-flight or ground maneuvers (including gusts and hard landings), likely to be experienced in service.

5. Deployment of the inflatable lap belt must not introduce injury mechanisms to the seated occupant, nor result in injuries that could impede rapid egress. This assessment should include an occupant who is in the brace position when it deploys, and an occupant whose inflatable lap belt is loosely fastened.

6. An inadvertent deployment that could cause injury to a standing or sitting person must be shown to be improbable.

7. It must be shown that inadvertent deployment of the airbag system in the lap belt, during the most critical part of the flight, either will not cause a hazard to the airplane or its occupants, or meets the requirement of § 25.1309(b).

8. The inflatable lap belt must be shown to not impede rapid egress of occupants 10 seconds after its deployment.

9. The inflatable lap-belt system must be protected from lightning and HIRF. The threats specified in existing regulations regarding lightning, § 25.1316, and HIRF, § 25.1317, are incorporated by reference for the purpose of measuring lightning and HIRF protection. For the purposes of complying with HIRF requirements, the inflatable lap-belt system is considered a ''critical system'' if its deployment could have a hazardous effect on the airplane; otherwise it is considered an ''essential'' system.

10. The inflatable lap belt must function properly after loss of normal airplane electrical power, and after a transverse separation of the fuselage at the most critical location. A separation at the location of the lap belt does not have to be considered.

11. The inflatable lap belt must be shown to not release hazardous quantities of gas or particulate matter into the cabin.

12. The inflatable lap-belt installation must be protected from the effects of fire such that no hazard to occupants will result.

13. A means must be available for a crewmember to verify the integrity of the inflatable-lap-belt-activation system prior to each flight, or it must be demonstrated to reliably operate between inspection intervals.

14. The inflatable material may not have an average burn rate of greater than 2.5 inches per minute when tested using the horizontal-flammability test as defined in 14 CFR part 25, Appendix F, Part I(b)(5).

15. The airbag system in the lap belt, once deployed, must not adversely affect the emergency-lighting system (*i.e.,* block floor-proximity lights to the extent that the lights no longer meet their intended function).

Issued in Renton, Washington, on September 1, 2015.

Jeffrey E. Duven,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2015–24725 Filed 9–29–15; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA–2015–3367; Special Conditions No. 25–596–SC]

Special Conditions: Flight Structures, Inc., Boeing Model 777–200 Dynamic Test Requirements for Single-Occupant, Oblique (Side-Facing) Seats With Airbag Devices

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions; request for comments.

SUMMARY: These special conditions are issued for Boeing Model 777–200 airplanes. This airplane, as modified by Flight Structures, Inc., will have novel or unusual design features associated with oblique-angled, single-occupant seats equipped with airbag systems. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for these design features. These special conditions contain the additional safety standards the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: The effective date of these special conditions is September 30, 2015. We must receive your comments by November 16, 2015.

ADDRESSES: Send comments identified by docket number FAA–2015–3367 using any of the following methods:

Federal eRegulations Portal: Go to *http://www.regulations.gov/* and follow the online instructions for sending your comments electronically.

Mail: Send comments to Docket Operations, M–30, U.S. Department of Transportation (DOT), 1200 New Jersey Avenue SE., Room W12–140, West Building Ground Floor, Washington, DC, 20590–0001.

Hand Delivery or Courier: Take comments to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Fax: Fax comments to Docket Operations at 202–493–2251.

Privacy: The FAA will post all comments it receives, without change, to *http://www.regulations.gov/,* including any personal information the commenter provides. Using the search function of the docket Web site, anyone can find and read the electronic form of all comments received into any FAA docket, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the **Federal Register** published on April 11, 2000 (65 FR 19477–19478), as well as at *http://DocketsInfo.dot.gov/.*

Docket: Background documents or comments received may be read at *http://www.regulations.gov/* at any time. Follow the online instructions for accessing the docket or go to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: John Shelden, Airframe and Cabin Safety, ANM–115, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98057–3356; telephone 425–227–2785; facsimile 425–227–1149.

SUPPLEMENTARY INFORMATION: The FAA has determined that notice of, and opportunity for, prior public comment on these special conditions are impracticable because these procedures would significantly delay issuance of the design approval and thus delivery of the affected airplane.

In addition, the substance of these special conditions has been subject to the public-comment process in several prior instances with no substantive comments received. The FAA therefore finds that good cause exists for making these special conditions effective upon issuance.

Comments Invited

We invite interested people to take part in this rulemaking by sending written comments, data, or views. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data.

We will consider all comments we receive by the closing date for comments. We may change these special conditions based on the comments we receive.

Background

On July 7, 2014, Flight Structures, Inc., applied for a supplemental type certificate to allow the installation of oblique business-class passenger seats, positioned at 32.5 degrees to the vertical plane of the airplane longitudinal centerline, and to include inflatable lap belts, in Boeing Model 777–200 airplanes.

The seating configuration Flight Structures, Inc., proposes in certification plan No. B3FS332–D10 includes the installation of TSO–39c-approved, Zodiac Aries model, side-facing, pod-style, business-class seats (with surrounding shells and front-row furniture), installed at an angle of up to 32.5 degrees to the airplane longitudinal centerline. These seats will include restraint (airbag) systems for occupant restraint and injury protection.

The Boeing Model 777–200 airplane, approved under Type Certificate No. T00001SE, is a swept-wing, conventional-tail, twin-engine, turbofan-powered transport airplane, with seating capacity for 440 passengers.

Type Certification Basis

Under the provisions of title 14, Code of Federal Regulations (14 CFR) 21.101, Flight Structures, Inc., must show that the Model 777–200 airplane, as changed, meets the applicable provisions of the regulations listed in Type Certificate No. T00001SE, or the applicable regulations in effect on the date of application for the change, except for earlier amendments as agreed upon by the FAA. The regulations listed in the type certificate are commonly referred to as the ''original type-certification basis.'' The regulations listed in Type Certificate No. T00001SE are as follows:

14 CFR part 25, Amendments 25–1 through 25–82, with exceptions listed in the type-certification data sheet. In addition, the certification basis includes certain special conditions, exemptions, or later amended sections of the applicable part that are not relevant 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 Boeing Model 777–200 airplanes because of a novel or unusual design feature, special conditions are prescribed under § 21.16.

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

In addition to the applicable airworthiness regulations and special conditions, the Boeing Model 777–200 airplane 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.

The FAA issues special conditions as defined in 14 CFR 11.19, in accordance with § 11.38, and they become part of the type certification basis under § 21.101.

Novel or Unusual Design Features

The business-class seating configuration Flight Structures, Inc., proposes is novel and unusual due to the seat installation at 32.5 degrees to the aircraft centerline, the airbag-system installation, and the seat/occupant interface with the surrounding furniture that introduces occupant alignment and loading concerns. The proposed business-class seating configuration also is beyond the limits of current acceptable equivalent-level-of-safety findings.

Ongoing research is progressing to establish acceptable limits. Until those limits become available, the FAA proposes a set of interim limits based on the current literature available, current National Highway Traffic Safety Administration (NHTSA) regulations, and preliminary test data from the research program.

The existing regulations do not provide adequate or appropriate safety standards for occupants of oblique-angled seats with airbag systems. To provide a level of safety that is equivalent to that afforded occupants of forward- and aft-facing seats, additional airworthiness standards, in the form of special conditions, are necessary. These special conditions supplement part 25 and, more specifically, supplement §§ 25.562 and 25.785. The requirements contained in these special conditions consist of both test conditions and injury pass/fail criteria.

Discussion

Amendment 25–15 to part 25, dated October 24, 1967, introduced the subject of side-facing seats, and a requirement that each occupant in a side-facing seat must be protected from head injury by a safety belt and a cushioned rest that will support the arms, shoulders, head, and spine.

Subsequently, Amendment 25–20, dated April 23, 1969, clarified the definition of side-facing seats to require that each occupant of a seat, positioned at more than an 18-degree angle to the vertical plane of the airplane longitudinal centerline, must be protected from head injury by a safety belt and an energy-absorbing rest that will support the arms, shoulders, head, and spine; or by a safety belt and shoulder harness that will prevent the head from contacting any injurious object. The FAA concluded that an 18-degree angle would provide an adequate level of safety based on tests that were performed at that time, and thus adopted that standard.

Part 25 was amended June 16, 1988, by Amendment 25–64, to revise the emergency-landing conditions that must be considered in the design of the airplane. Amendment 25–64 revised the static-load conditions in 14 CFR 25.561, and added the new § 25.562 that requires dynamic testing for all seats approved for occupancy during takeoff and landing. The intent of Amendment 25–64 is to provide an improved level of safety for occupants on transport-category airplanes. Because most seating is forward-facing on transport-category airplanes, the pass/fail criteria developed in Amendment 25–64 focused primarily on these seats. As a result, the FAA issued Policy Memorandums ANM–03–115–30 and PS–ANM–100–2000–00123 to provide the additional guidance necessary to demonstrate the level of safety required by the regulations for side-facing seats.

To reflect current research findings, the FAA developed a methodology to address all fully side-facing seats (*i.e.,* seats positioned in the airplane with the occupant facing 90 degrees to the vertical plane of the airplane centerline), and has documented those requirements in a set of new special conditions. The FAA issued Policy Statement PS–ANM–25–03–R1 to define revised injury criteria associated with neck and leg injuries.

The proposed Model 777–200 airplane business-class seat installation is novel such that the current Model 777–200 airplane certification basis does not adequately protection of the occupant's neck and spine for seat

configurations that are positioned at an angle greater than 18 degrees from the airplane centerline. Therefore, the Flight Structures, Inc., proposed configuration will require new special conditions.

These special conditions will provide head injury criteria, neck injury criteria, spine injury criteria, and body-to-wall contact criteria. They 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.

Applicability

These special conditions are applicable to the Boeing Model 777–200 airplanes configured with the business-class seating defined in Flight Structures, Inc., certification plan No. B3FS332–D10. Should Flight Structures, Inc., apply at a later date for a supplemental type certificate to modify any other model included on Type Certificate No. T00001SE to incorporate the same novel or unusual design feature, these special conditions would apply to the other model as well.

Conclusion

This action affects only certain novel or unusual design features on one model of airplane. It is not a rule of general applicability, and affects only the applicant who applied to the FAA for approval of these features on the airplane.

The substance of these special conditions has been subjected to the notice and comment period in several prior instances, and has been derived without substantive change from those previously issued. It is unlikely that prior public comment would result in a significant change from the substance contained herein. Therefore, because a delay would significantly affect the certification of the airplane, the FAA has determined that prior public notice and comment are unnecessary and impracticable, and good cause exists for adopting these special conditions upon publication in the **Federal Register**. The FAA is requesting comments to allow interested persons to submit views that may not have been submitted in response to the prior opportunities for comment described above.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44702, 44704.

The Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for the Boeing Model 777–200 airplane.

Side-Facing Seats Special Conditions

In addition to the requirements of § 25.562:

1. Head-Injury Criteria

Compliance with § 25.562(c)(5) is required, except that, if the anthropomorphic test device (ATD) has no apparent contact with the seat/structure but has contact with an airbag, a head-injury criterion (HIC) unlimited score in excess of 1000 is acceptable, provided the HIC15 score (calculated in accordance with 49 CFR 571.208) for that contact is less than 700.

2. Body-to-Wall/Furnishing Contact

If a seat is installed aft of structure (*e.g.,* an interior wall or furnishing) that does not provide a homogenous contact surface for the expected range of occupants and yaw angles, then additional analysis and/or test(s) may be required to demonstrate that the injury criteria are met for the area that an occupant could contact. For example, if different yaw angles could result in different airbag performance, then additional analysis or separate test(s) may be necessary to evaluate performance.

3. Neck Injury Criteria

The seating system must protect the occupant from experiencing serious neck injury. The assessment of neck injury must be conducted with the airbag device activated, unless there is reason to also consider that the neck-injury potential would be higher for impacts below the airbag-device deployment threshold.

a. The N_{ij} (calculated in accordance with 49 CFR 571.208) must be below 1.0, where $N_{ij} = F_z/F_{zc} + M_y/M_{yc}$, and N_{ij} critical values are:

i. F_{zc} = 1530 lb for tension

ii. F_{zc} = 1385 lb for compression

iii. M_{yc} = 229 lb-ft in flexion

iv. M_{yc} = 100 lb-ft in extension

b. In addition, peak F_z must be below 937 lb in tension and 899 lb in compression.

c. Rotation of the head about its vertical axis, relative to the torso, is limited to 105 degrees in either direction from forward-facing.

d. The neck must not impact any surface that would produce concentrated loading on the neck.

4. Spine and Torso Injury Criteria

a. The shoulders must remain aligned with the hips throughout the impact sequence, or support for the upper torso must be provided to prevent forward or lateral flailing beyond 45 degrees from the vertical during significant spinal loading. Alternatively, the lumbar spine tension (F_z) cannot exceed 1200 lb.

b. Significant concentrated loading on the occupant's spine, in the area between the pelvis and shoulders during impact, including rebound, is not acceptable. During this type of contact, the interval for any rearward (X-direction) acceleration exceeding 20g must be less than 3 milliseconds as measured by the thoracic instrumentation specified in 49 CFR part 572, subpart E, filtered in accordance with SAE International (SAE) J211–1.

c. Occupant must not interact with the armrest or other seat components in any manner significantly different than would be expected for a forward-facing seat installation.

5. Longitudinal test(s), conducted to measure the injury criteria above, must be performed with the FAA Hybrid III ATD, as described in SAE 1999–01–1609. The test(s) must be conducted with an undeformed floor, at the most-critical yaw case(s) for injury, and with all lateral structural supports (armrests/walls) installed.

Note: Boeing must demonstrate that the installation of seats via plinths or pallets meets all applicable requirements. Compliance with the guidance contained in FAA Policy Memorandum PS–ANM–100–2000–00123, dated February 2, 2000, titled ''Guidance for Demonstrating Compliance with Seat Dynamic Testing for Plinths and Pallets,'' is acceptable to the FAA.

Inflatable Lap Belt Special Conditions

If inflatable lap belts are installed on single-place side-facing seats, the lap belts must meet Special Conditions No. 25–187A–SC.

Issued in Renton, Washington, on September 2, 2015.

Jeffrey E. Duven,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2015–24727 Filed 9–29–15; 8:45 am]

BILLING CODE 4910–13–P