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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM267; Special Conditions No. 25-251-SC]

Special Conditions: Gulfstream Aerospace Corporation Model Gulfstream 200 (Galaxy); Single-Occupant Side-Facing Seats

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions; request for comments.

SUMMARY: These special conditions are issued for the Gulfstream Aerospace Corporation Model Gulfstream 200 (Galaxy) airplane. This airplane as modified by Gulfstream Aerospace Corporation will have novel or unusual design features associated with single-occupant side-facing seats. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for these design features. 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.

DATES: The effective date of these special conditions is October 9, 2003. Comments must be received on or before November 17, 2003.

ADDRESSES: Comments on these special conditions may be mailed in duplicate to: Federal Aviation Administration, Transport Airplane Directorate, Attn: Rules Docket (ANM-113), Docket No. NM267, 1601 Lind Avenue SW., Renton, Washington, 98055-4056; or delivered in duplicate to the Transport Airplane Directorate at the above address. Comments must be marked: Docket No. NM267. Comments may be inspected in the Rules Docket

weekdays, except Federal holidays, between 7:30 a.m. and 4 p.m.

FOR FURTHER INFORMATION CONTACT: Michael Thompson, FAA, Airframe/Cabin Safety Branch, ANM-115, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington, 98055-4056; telephone (425) 227-1157; facsimile (425) 227-1149.

SUPPLEMENTARY INFORMATION: The FAA has determined that notice and opportunity for prior public comment are impracticable because these procedures would significantly delay issuance of the design approval. In addition, the substance of these special conditions has been subject to the public comment process with no substantive comments received. The FAA therefore finds that good cause exists for making these special conditions effective upon issuance.

Comments Invited

Interested persons are invited to submit such written data, views, or arguments, as they may desire. Communications should identify the rules docket number and be submitted in duplicate to the address specified above. The Administrator will consider all communications received on or before the closing date for comments. The special conditions may be changed in light of the comments received. All comments received will be available in the Rules Docket for examination by interested persons, both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerning this rulemaking will be filed in the docket. Persons wishing the FAA to acknowledge receipt of their comments submitted in response to these special conditions must include with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. NMxxx." The postcard will be date stamped and returned to you.

Background

On May 30, 2003, Gulfstream Aerospace Corporation, 7440 Aviation Place, Dallas, Texas, 75235, applied for a supplemental type certificate for installation of single-occupant side-facing seats on Gulfstream 200 (Galaxy) airplanes. Gulfstream requested special conditions for these seats and that the

special conditions be listed on the supplemental type certificate. The Gulfstream 200 (Galaxy) airplane is a twin engine, turbofan powered, transport category airplane, which is currently the subject of a type certification program.

Section 25.785(b) requires that "each seat * * * at each station designated as occupiable during takeoff and landing must be designed so that a person making proper use of these facilities will not suffer serious injury in an emergency landing as a result of the inertia forces specified in §§ 25.561 and 25.562." Additionally, § 25.562 requires dynamic testing of all seats that are occupied during takeoff and landing. However, side-facing seats are considered a novel design for transport category airplanes that include Amendment 25-64 in the certification basis and were not considered when those airworthiness standards were promulgated. Hence, the existing regulations do not provide adequate or appropriate safety standards for occupants of side-facing seats. In order 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 are applicable only to single-occupant side-facing seats. They are not sufficient or intended to be used for the certification of multiple-occupant side-facing divans or sofas.

Type Certification Basis

Under the provisions of § 21.101, Gulfstream Aerospace Corporation must show that the Gulfstream Model 200 (Galaxy) airplane, as changed, continues to meet the applicable provisions of the regulations incorporated by reference in Type Certificate No. A53NM 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. A53NM are as follows: 14 CFR part 25, effective February 1, 1965, as amended by Amendments 25-1 through 25-82.

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 Gulfstream Aerospace Corporation Model Gulfstream 200 (Galaxy) 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 Gulfstream Aerospace Corporation Model Gulfstream 200 (Galaxy) 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 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, the special conditions would also apply to the other model.

Novel or Unusual Design Features

Gulfstream Aerospace Corporation will install single-occupant, side-facing seats on Gulfstream 200 (Galaxy) airplanes. Section 25.785(b) requires that “each seat * * * at each station designated as occupiable during takeoff and landing must be designed so that a person making proper use of these facilities will not suffer serious injury in an emergency landing as a result of the inertia forces specified in §§ 25.561 and 25.562.” Additionally, § 25.562 requires dynamic testing of all seats that are occupied during takeoff and landing. However, side-facing seats are considered a novel design for transport category airplanes that include Amendment 25–64 in the certification basis, and were not considered when those airworthiness standards were promulgated. Hence, the existing regulations do not provide adequate or appropriate safety standards for occupants of side-facing seats. In order 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.

Discussion

The following special conditions are considered to provide occupants of single-occupancy side-facing seats a level of safety that is equivalent to that afforded occupants of forward and aft facing seats. These special conditions supplement 14 CFR part 25 and, more

specifically, they supplement §§ 25.785 and 25.562.

Applicability

As discussed above, these special conditions are applicable to the Gulfstream Aerospace Corporation Model Gulfstream 200 (Galaxy) modified by Gulfstream Aerospace Corporation. Should Gulfstream Aerospace Corporation apply at a later date for a supplemental type certificate to modify any other model included on Type Certificate No. A53NM to incorporate the same novel or unusual design feature, the special conditions would apply to that model as well.

Conclusion

This action affects only certain novel or unusual design features on one model of airplanes. It is not a rule of general applicability, and it 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 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. For this reason, and because a delay would significantly affect the certification of the airplane, which is imminent, the FAA has determined that prior public notice and comment are unnecessary and impracticable, and good cause exists for adopting these special conditions upon issuance. 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 Gulfstream Aerospace Corporation Model Gulfstream 200 (Galaxy) airplanes. In addition to the airworthiness standards of §§ 25.562 and 25.785, the minimum acceptable standards for dynamic certification of

Model Gulfstream 200 (Galaxy) single-occupant side-facing seats are as follows:

Injury Criteria

(a) **Existing Criteria:** All injury protection criteria of § 25.562(c)(1) through (c)(6) apply to the occupant of a side-facing seat. Head Injury Criterion (HIC) assessments are required only 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 support the pelvis, upper arm, chest, and 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:** The Thoracic Trauma Index (TTI) injury criterion must be substantiated by dynamic test or by rational analysis, based on a previous test or tests of a similar seat installation. Testing must be conducted with a Side Impact Dummy (SID), as defined by 49 CFR Part 572, Subpart F, or its equivalent. TTI must be less than 85, as defined in 49 CFR Part 572, Subpart F. TTI data must be processed as defined in Federal Motor Vehicle Safety Standard (FMVSS) Part 571.214, section S6.13.5.

(d) **Pelvis:** Pelvic lateral acceleration must be shown by dynamic test or by rational analysis based on previous test(s) of a similar seat installation to not exceed 130g. Pelvic acceleration data must be processed as defined in FMVSS Part 571.214, section S6.13.5.

(e) **Shoulder Strap Loads:** Where upper torso straps (shoulder straps) are used for occupants, tension loads in individual straps must not exceed 1,750 pounds. If dual straps are used for restraining the upper torso, the total strap tension loads must not exceed 2,000 pounds.

Test Requirements

The above performance measures must not be exceeded during the following dynamic tests:

(a) Conduct a longitudinal test per § 25.562(b)(2) with a SID, undeformed floor, no yaw, and with all lateral structural supports (armrests/walls).

Pass/fail injury assessments: TTI and pelvic acceleration.

(b) Conduct a longitudinal test per § 25.562(b)(2) with the Hybrid II ATD, deformed floor, 10 degrees yaw, and

with all lateral structural supports (armrests/walls).

Pass/fail injury assessments: HIC, upper torso restraint load, restraint system retention and pelvic acceleration.

(c) Conduct a downward vertical test per § 25.562(b)(1) with a modified Hybrid II ATD with existing pass/fail criteria.

Issued in Renton, Washington, on October 9, 2003.

Ali Bahrami,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 03-26310 Filed 10-16-03; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2003-CE-41-AD; Amendment 39-13339; AD 2003-21-04]

RIN 2120-AA64

Airworthiness Directives; Cessna Aircraft Company Models 208 and 208B Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Cessna Aircraft Company (Cessna) Models 208 and 208B airplanes. This AD requires you to inspect the right inboard forward flap bell crank for cracks, deformation, and missing/incomplete welds. If cracks, deformation, or missing/incomplete welds are found, the AD would require you to immediately replace the flap bell crank or temporarily incorporate certain flap limitations. This AD is the result of reports of cracks and missing/incomplete welds in the right inboard forward flap bell crank. We are issuing this AD to prevent failure of the right inboard forward flap bell crank due to cracks, deformation, or missing/incomplete welds. Such failure could lead to damage to the flap system and surrounding structure and result in reduced or loss of control of the airplane.

DATES: This AD becomes effective on October 21, 2003.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulation as of October 21, 2003.

We must receive any comments on this AD by December 15, 2003.

ADDRESSES: Use one of the following to submit comments on this AD:

- *By mail:* FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2003-CE-41-AD, 901 Locust, Room 506, Kansas City, Missouri 64106.
- *By fax:* (816) 329-3771.
- *By e-mail:* 9-ACE-7-

Docket@faa.gov. Comments sent electronically must contain "Docket No. 2003-CE-41-AD" in the subject line. If you send comments electronically as attached electronic files, the files must be formatted in Microsoft Word 97 for Windows or ASCII.

You may get the service information identified in this AD from Cessna Aircraft Company, Product Support, P.O. Box 7706, Wichita, Kansas 67277; telephone: (316) 517-5800; facsimile: (316) 942-9006. You may also view this information at the Rules Docket at the address above.

You may view the AD docket at FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2003-CE-41-AD, 901 Locust, Room 506, Kansas City, Missouri 64106. Office hours are 8 a.m. to 4 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Paul Nguyen, Aerospace Engineer, FAA, Wichita Aircraft Certification Office ACO, 1801 Airport Road, Room 100, Wichita, Kansas 67209; telephone: 316-946-4125; facsimile: 816-946-4107.

SUPPLEMENTARY INFORMATION:

Discussion

What events have caused this AD? The FAA has received reports that the right inboard forward flap bell crank on Cessna Models 208 and 208B airplanes could have missing/incomplete welds. Without complete welds, the flap bell cranks may not have sufficient strength or fatigue endurance to carry critical load with the use of flaps. This could result in cracking or deformation of the flap bell crank and lead to failure of the flap system.

What are the consequences if the condition is not corrected? Failure of the flap system, if not prevented, could lead to damage to the flap system and surrounding structure and result in reduced or loss of control of the airplane.

Is there service information that applies to this subject? Cessna issued Caravan Service Bulletin CAB03-11, Revision 1, dated September 24, 2003.

What are the provisions of this service information? The service bulletin includes procedures for inspecting all

the flap system flap bell cranks for cracks, deformation, and missing/incomplete welds. If cracks, deformation, or missing/incomplete welds are found, this service bulletin specifies either:

- Replacing the subject flap bell crank;
- or
- Incorporating Temporary Revision 208PHTR02, dated September 23, 2003, to the Other Limitations section of the Pilot's Operating Handbook (POH). This is a temporary option and replacing the subject flap bell crank is mandatory within a certain time frame.

FAA's Determination and Requirements of the AD

What has FAA decided? We have evaluated all pertinent information and identified an unsafe condition that is likely to exist or develop on other products of this same type design.

Since the unsafe condition described previously is likely to exist or develop on other Cessna Models 208 and 208B airplanes of the same type design, this AD is being issued to prevent failure of the right inboard forward flap bell crank due to cracks, deformation, or missing/incomplete welds.

What does this AD require? This AD requires you to inspect the right inboard forward flap bell crank for cracks, deformation, and missing/incomplete welds. If cracks, deformation, or missing/incomplete welds are found, the AD would require you to immediately replace the flap bell crank or temporarily incorporate certain flap limitations.

In preparation of this rule, we contacted type clubs and aircraft operators to obtain technical information and information on operational and economic impacts. We did not receive any information through these contacts. If received, we would have included, in the rulemaking docket, a discussion of any information that may have influenced this action.

Are there differences between the service information and this AD? Yes. The service information requires an inspection on all flap bell cranks within the flap system. However, this AD only addresses the right inboard forward flap bell crank.

To date, FAA has only received reports on the right inboard forward flap bell cranks, and we are addressing this issue through a final rule; request for comments (immediately adopted rule) AD action. After issuing this AD, we will evaluate the condition of the entire flap system and determine whether additional action is necessary.