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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-0831; Project Identifier 2019-CE-031-AD; Amendment 39-21471; AD 2021-06-04]

RIN 2120-AA64

Airworthiness Directives; Gulfstream Aerospace Corporation Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Gulfstream Aerospace Corporation (Gulfstream) Model GV airplanes. This AD was prompted by notification of corrosion present in floor beam support links. This AD requires inspecting the right butt line 6 floor beam inboard support links and bushings for corrosion. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective May 4, 2021.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of May 4, 2021.

ADDRESSES: For service information identified in this final rule, contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O. Box 2206, Savannah, GA 31402-2206; phone: (800) 810-4853; fax: (912) 965-3520; email: pubs@gulfstream.com; website: <https://www.gulfstream.com/en/customer-support/>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106.

For information on the availability of this material at the FAA, call (816) 329-4148. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0831.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0831; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of

Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Ronald Wissing, Aviation Safety Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5552; fax: (404) 474-5606; email: ronald.wissing@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Gulfstream Model GV airplanes. The NPRM published in the Federal Register on December 10, 2020 (85 FR 79443). The NPRM was prompted by notification of a failed floor beam support link at right butt line (RBL) 6 on a Gulfstream Model GV airplane, resulting from seizure of the retaining sleeve and bushing at the lower attachment point due to undetected corrosion.

The floor beam support links at RBL 6, fuselage stations (FS) 499, 531, and 569.5 have a two-piece installation with straight bushings rather than spherical bearings in the inboard link lower end. Design of the support links allows floor beam movement when the cabin is pressurized. Seizure of the lower bushing will not allow the link assembly to move as designed, resulting in bending stress and potential failure of the link, which may compromise the integrity of the pressure vessel floor. Gulfstream determined that the procedures for the existing Aircraft Maintenance Manual (AMM) inspection do not reliably detect corrosion in the floor beam support link lower bushings.

Accordingly, Gulfstream has revised the airworthiness limitation requirements to the AMM by adding a detailed inspection with an initial and repetitive inspections at intervals of 96 months and including references for removal and installation instructions for RBL 6 Floor Beam Support Links.

In the NPRM, the FAA proposed to require inspecting the right butt line 6 floor beam inboard support links and bushings for corrosion. The FAA is issuing this AD to prevent link failure, which can compromise the integrity of the pressure vessel floor and lead to loss of pressurization of the airplane.

Discussion of Final Airworthiness Directive

Comments

The FAA received one comment from Gulfstream. The following presents the comment received on the NPRM and the FAA's response to the comment.

Request for Clarification on Reporting

Gulfstream requested the FAA clarify whether the AD requires or recommends reporting the CB 231A inspection results to Gulfstream. Gulfstream noted a discrepancy in the NPRM, where the section titled "Proposed AD Requirements" states that the proposed AD recommends sending the inspection results to Gulfstream, but the section titled "Differences Between this Proposed AD and the Service Information" states that the proposed AD would not require reporting the results of the inspection to Gulfstream.

The FAA agrees. This AD does not require reporting the results of the inspection. This AD is not an interim action; mandating a report of the inspection results is not necessary to correct the unsafe condition. The FAA should not have included conflicting language in the NPRM to this effect. The FAA has revised the preamble of this final rule to correct this discrepancy.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Gulfstream GV Customer Bulletin Number 231, Revision A, dated July 30, 2019 (Gulfstream CB 231A). The service information contains procedures for the inspection of the RBL 6, FS 499, 531, and 569.5, and the bushing in the lower end of the link and all attachments for corrosion.

The FAA reviewed Table 13: Fuselage Inspection Table in Section 05-10-10 of Chapter 5—Time Limits/Maintenance Checks of Gulfstream GV Aircraft Maintenance Manual, Revision 51, dated February 28, 2020. The service information identifies tasks for a recurring detailed inspection of the floor beam and wing links FS 465 through FS 576.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Differences Between This AD and the Service Information

Gulfstream CB 231A specifies reporting the results of the inspection to Gulfstream, and this AD does not.

Costs of Compliance

The FAA estimates that this AD affects 148 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated Costs

| Action | Labor cost | Parts cost | Cost per product | Cost on U.S. operators |
|---|---|----------------|------------------|------------------------|
| Inspection per the Customer Bulletin, all 3 locations | 120 work-hours × \$85 per hour = \$10,200 | Not applicable | \$10,200 | \$1,509,600 |
| Revise the AMM | 1 work-hour × \$85 per hour = \$85 | Not applicable | \$85 | \$12,580 |

The FAA estimates the following costs to do any necessary replacements that would be required based on the results of the inspection. The FAA has no way of determining the number of airplanes that might need these replacements:

On-Condition Costs

| Action | Labor cost | Parts cost | Cost per product |
|----------------------------|---|------------|------------------|
| Replacement of all 3 links | 40 work-hours × \$85 per hour = \$3,400 | \$316 | \$3,716 |

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

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

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:



2021-06-04 Gulfstream Aerospace Corporation: Amendment 39-21471; Docket No. FAA-2020-0831; Project Identifier 2019-CE-031-AD.

(a) Effective Date

This airworthiness directive (AD) is effective May 4, 2021.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Gulfstream Aerospace Corporation Model GV airplanes, all serial numbers, certificated in any category.

(d) Subject

Air Transport Association of America (ATA) Code 53: Fuselage Structure.

(e) Reason

This AD was prompted by a report that current inspection procedures of floor beam support links, which can fail due to corrosion, are inadequate. The FAA is issuing this AD to detect and correct corrosion on a floor beam support link lower bushing. This condition, if not addressed, could result in link failure, which can compromise the integrity of the pressure vessel floor and lead to loss of pressurization of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Actions

(1) Within 24 months after the effective date of this AD, inspect the right butt line 6 floor beam inboard support links at fuselage stations (FS) 499, 531, and 569.5 for corrosion by following the Accomplishment Instructions, steps A through M, of Gulfstream GV Customer Bulletin No. 231, Revision A, dated July 30, 2019 (Gulfstream CB 231A). Where Gulfstream CB 231A specifies contacting Gulfstream for procedures if any corrosion is found, you must replace the support link in accordance with a method approved by the Manager, Atlanta ACO Branch, FAA, before further flight. For a method to be approved by the Manager, Atlanta ACO Branch, as required by this paragraph, the Manager's approval letter must specifically refer to this AD.

(2) Within 24 months after the effective date of this AD, revise the airworthiness limitations section of your maintenance manual or inspection program to incorporate the airworthiness

limitations specified in Table 13: Fuselage Inspection Table in Section 05-10-10 of Chapter 5—Time Limits/Maintenance Checks of Gulfstream GV Aircraft Maintenance Manual, Revision 51, dated February 28, 2020. Thereafter, except as provided in paragraph (h) of this AD, no alternative inspection intervals may be approved for the fuselage floor beam and wing link FS 465-FS 576.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Atlanta ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (i)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) For service information that contains steps that are labeled as Required for Compliance (RC), the following provisions apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(i) Related Information

For more information about this AD, contact Ronald Wissing, Aviation Safety Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5552; fax: (404) 474-5606; email: ronald.wissing@faa.gov.

(j) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Gulfstream GV Customer Bulletin Number 231, Revision A, dated July 30, 2019.

(ii) Table 13: Fuselage Inspection Table in Section 05-10-10 of Chapter 5—Time Limits/Maintenance Checks of Gulfstream GV Aircraft Maintenance Manual, Revision 51, dated February 28, 2020.

(3) For Gulfstream Aerospace Corporation service information identified in this AD, contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O. Box 2206, Savannah, GA 31402-2206; phone: (800) 810-4853; fax: (912) 965-3520; email: pubs@gulfstream.com; website: <https://www.gulfstream.com/en/customer-support/>.

(4) You may view this service information at FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on March 5, 2021.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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