



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2017-1163; Product Identifier 2017-CE-041-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Gulfstream Aerospace Corporation Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for certain Gulfstream Aerospace Corporation Models G-IV and GIV-X airplanes. This proposed AD was prompted by the potential for fatigue cracks developing in the main landing gear actuator attachment fitting that had a certain repair incorporated. This proposed AD would require incorporating new revisions into the Instructions for Continued Airworthiness of the Limitations section of the FAA-approved maintenance program (e.g., maintenance manual) that establish an inspection cycle for the repaired MLG side brace actuator fittings. We are proposing this AD to address the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Gulfstream Aerospace Corporation, P.O. Box 2206, Savannah, Georgia 31402-2206; telephone: (800) 810-4853; fax 912-965-3520; email: [pubs@gulfstream.com](mailto:pubs@gulfstream.com); Internet: [http://www.gulfstream.com/product\\_support/technical\\_pubs/pubs/index.htm](http://www.gulfstream.com/product_support/technical_pubs/pubs/index.htm). You may review this referenced service information at the FAA, Policy and Innovation Division, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-1163; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** William O. Herderich, Aerospace Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, Georgia 30337; phone: (404) 474-5547; fax: (404) 474-5605; email: [william.o.herderich@faa.gov](mailto:william.o.herderich@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2017-1163; Product Identifier 2017-CE-041-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

### **Discussion**

We were notified that fatigue cracking in the main landing gear (MLG) actuator attachment fitting could occur on certain Gulfstream Aerospace Corporation (Gulfstream) Models G-IV and GIV-X airplanes that are Maintenance Steering Group “MSG-3” compliant and have had repair SE05732102 incorporated.

It has been determined that incorrect fracture toughness was used in calculating repetitive inspection intervals based on damage tolerances. Repair SE05732102 for the MLG side brace fitting was issued without Instructions for Continued Airworthiness (ICA). Gulfstream has developed new ICA to address this issue.

This condition, if not corrected, could result in failure of the MLG actuator attachment, which could compromise the lateral support of the MLG during ground maneuvers, possibly leading to collapse of the affected MLG with consequent loss of control. In addition, this condition could also cause the MLG side brace to fail, which could result in penetration of the wing fuel tank and cause an uncontained fire.

**Related Service Information under 1 CFR part 51**

We reviewed Gulfstream G350 Customer Bulletin Number 192A, dated June 15, 2017, including Appendix A, Gulfstream Document GIV-SGER-553, Revision A, Instructions for Continued Airworthiness for Gulfstream Repair Drawing SE05732102, dated December 14, 2016; Gulfstream G450 Customer Bulletin 192A, dated June 15, 2017, including Appendix A, Gulfstream Document GIV-SGER-553, Revision A, Instructions for Continued Airworthiness for Gulfstream Repair Drawing SE05732102, dated December 14, 2016; Gulfstream IV Customer Bulletin Number 238A, dated June 15, 2017, including Appendix A, Gulfstream Document GIV-SGER-553, Revision A, Instructions for Continued Airworthiness for Gulfstream Repair Drawing SE05732102, dated December 14, 2016; Gulfstream G300 Customer Bulletin Number 238A, dated June 15, 2017, including Appendix A, Gulfstream Document GIV-SGER-553, Revision A, Instructions for Continued Airworthiness for Gulfstream Repair Drawing SE05732102, dated December 14, 2016; and Gulfstream G400 Customer Bulletin Number 238A, dated June 15, 2017, including Appendix A, Gulfstream Document GIV-SGER-553, Revision A, Instructions for Continued Airworthiness for Gulfstream Repair Drawing SE05732102, dated December 14, 2016. In combination, the service information describes procedures for inspecting maintenance records to determine if repair SE05732102 for the main landing gear side brace fitting has been incorporated and determining initial and repetitive inspection requirements for the main landing gear side

brace fitting. 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.

**FAA’s Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

**Proposed AD Requirements**

This proposed AD would require accomplishing the actions specified in the service information described previously.

**Costs of Compliance**

We estimate that this proposed AD affects 709 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

**Estimated costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Inspect Maintenance Records	1 work-hour X \$85 per hour = \$85	Not applicable	\$85	\$60,265
Incorporate new revisions into the Instructions for Continued Airworthiness of the Limitations section of the FAA-approved maintenance program (e.g., maintenance manual)	1 work-hour X \$85 per hour = \$85	Not applicable	\$85	\$60,265

### **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.

We are 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.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to small airplanes and domestic business jet transport airplanes to the Director of the Policy and Innovation Division.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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 Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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 (AD):

**Gulfstream Aerospace Corporation:** Docket No. FAA-2017-1163; Product Identifier 2017-CE-041-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to the following Gulfstream Aerospace Corporation model airplanes that are certificated in any category:

- (1) Model G-IV, serial numbers (S/Ns) 1000 through 1399 having Aircraft Service Change (ASC) 416A (MSG-3) incorporated; and S/Ns 1400 through 1535; and
- (2) Model GIV-X, S/Ns 4001 through 4355.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 32, Landing Gear.

**(e) Unsafe Condition**

This AD was prompted by the potential for fatigue cracks in the main landing gear (MLG) actuator attachment fitting that had a certain repair incorporated. We are issuing this AD to prevent failure of the MLG actuator attachment. The unsafe condition, if not corrected, could compromise the lateral support of the MLG during ground maneuvers, possibly leading to collapse of the affected MLG with consequent loss of control. In addition, this condition could also cause the MLG side brace to fail, which could result in a penetration of the wing fuel tank causing an uncontained fire.

**(f) Compliance**

Within the next 100 hours time-in-service after the effective date of this AD, comply with the actions in paragraphs (g) through (i) of this AD, unless already done.

**(g) Inspect Maintenance Records**

Inspect the airplane maintenance records to determine if repair SE05732102 for the MLG side brace fitting has been incorporated. To do this inspection, use the Accomplishment Instructions in Gulfstream G350 Customer Bulletin Number 192A; Gulfstream G450 Customer Bulletin 192A; Gulfstream IV Customer Bulletin Number 238A; Gulfstream G300 Customer Bulletin Number 238A; and Gulfstream G400

Customer Bulletin Number 238A; all dated June 15, 2017, as applicable. The service information referenced in this paragraph specifies sending a service reply card back to Gulfstream Aerospace Corporation if repair SE05732102 for the MLG side brace fitting has been not been incorporated. This action is not required in this AD.

**(h) Determine Initial and Repetitive Inspection Requirements**

If it is determined during the maintenance records inspection required in paragraph (g) of this AD that repair SE05732102 for the MLG side brace fitting has been incorporated, determine the initial and repetitive inspection requirements using the Accomplishment Instructions of the service information identified in paragraph (g) of this AD along with the following documents, as applicable. Comply with the inspection requirements as determined.

(1) Appendix A, Gulfstream Document GIV-SGER-553, Revision A, Instructions for Continued Airworthiness for Gulfstream Repair Drawing SE05732102, dated December 14, 2016, to Gulfstream G350 Customer Bulletin No. 192A, dated June 15, 2017;

(2) Appendix A, Gulfstream Document GIV-SGER-553, Revision A, Instructions for Continued Airworthiness for Gulfstream Repair Drawing SE05732102, dated December 14, 2016, to Gulfstream G450 Customer Bulletin No. 192A, dated June 15, 2017;

(3) Appendix A, Gulfstream Document GIV-SGER-553, Revision A, Instructions for Continued Airworthiness for Gulfstream Repair Drawing SE05732102, dated December 14, 2016, to Gulfstream IV Customer Bulletin No. 283A, dated June 15, 2017;

(4) Appendix A, Gulfstream Document GIV-SGER-553, Revision A, Instructions for Continued Airworthiness for Gulfstream Repair Drawing SE05732102, dated December 14, 2016, to Gulfstream G300 Customer Bulletin No. 283A, dated June 15, 2017; and

(5) Appendix A, Gulfstream Document GIV-SGER-553, Revision A, Instructions for Continued Airworthiness for Gulfstream Repair Drawing SE05732102, dated December 14, 2016, to Gulfstream G400 Customer Bulletin No. 283A, dated June 15, 2017.

**(i) Revise Limitations Section**

Insert the documents listed in paragraphs (h)(1) through (5) of this AD into the Instructions for Continued Airworthiness of the Limitations section of the FAA-approved maintenance program (e.g., maintenance manual), as applicable. The revised limitations sections establish inspections of the repaired MLG side brace actuator fittings.

**(j) 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 (k)(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 provisions of paragraphs (g) through (i) of this AD 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.

**(k) Related Information**

(1) For more information about this AD, contact William O. Herderich, Aerospace Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, Georgia 30337; phone: (404) 474-5547; fax: (404) 474-5605; email: [william.o.herderich@faa.gov](mailto:william.o.herderich@faa.gov).

(2) For service information identified in this AD, contact Gulfstream Aerospace Corporation, P.O. Box 2206, Savannah, Georgia 31402-2206; telephone: (800) 810-4853; fax 912-965-3520; email: [pubs@gulfstream.com](mailto:pubs@gulfstream.com); Internet: [http://www.gulfstream.com/product\\_support/technical\\_pubs/pubs/index.htm](http://www.gulfstream.com/product_support/technical_pubs/pubs/index.htm). You may review this referenced service information at the FAA, Policy and Innovation Division, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued in Kansas City, Missouri, on December 5, 2017.

Pat Mullen,  
Acting Deputy Director, Policy & Innovation Division,  
Aircraft Certification Service

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