



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2016-9385; Directorate Identifier 2016-NM-111-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 all Gulfstream Aerospace Corporation Model G-1159B airplanes. This proposed AD was prompted by a review of airplane maintenance records, which revealed that incorrect rudder assemblies were installed on certain airplanes. **This proposed AD would require certain inspections, and replacement or modification of the rudder assembly if necessary.** 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, Technical Publications Dept., P.O. Box 2206, Savannah, GA 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 view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

### **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-2016-9385; 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 proposed AD, 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:** Krista Greer, Aerospace Engineer, Airframe Branch, ACE-117A, FAA, Atlanta Aircraft Certification Office (ACO), 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5544; fax: 404-474-5606; email: [krista.greer@faa.gov](mailto:krista.greer@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-2016-9385; Directorate Identifier 2016-NM-111-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all

comments received by the closing date and may amend this proposed AD 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 proposed AD.

### **Discussion**

We reviewed Gulfstream airplane maintenance records which revealed that incorrect rudder assemblies were installed on certain Gulfstream Model G-1159B airplanes (also referred to by marketing designation GIIB). Investigation revealed that the Gulfstream GII/GIIB Illustrated Parts Catalog (IPC) did not clearly specify that the rudder assemblies for Model G-1159 airplanes (also referred to by marketing designation GII) have part number (P/N) 1159CS20004-3, and the rudder assemblies for Model G-1159B airplanes have P/N 1159CS25000-3/-9. Installation of rudders for Model G-1159 airplanes on Model G-1159B airplanes does not comply with the design fail-safe requirements for Model G-1159B airplanes. Although the rudder assembly designs are similar, the upper hinge configuration for Model G-1159B airplanes includes a dual load path to prevent control surface flutter in the event of middle or upper hinge failure. Installation of an incorrect rudder assembly could result in flutter and subsequent loss of the rudder, which could result in loss of control of the airplane.

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

We reviewed Gulfstream GII/IIB Customer Bulletin 468, dated February 17, 2016 (for Model G-1159 and Model G-1159B airplanes). The service information describes procedures for inspecting the rudder assembly to determine the part number, verifying that the part number of the rudder assembly matches what is recorded in the airplane maintenance records, inspecting the rudder hinges, and modifying the rudder assembly.

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 24 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>
Inspection	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$2,040

We estimate the following costs to do any necessary replacements or modifications that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need these replacements or modifications:

**On-condition costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
Replacement/ modification	3 work-hours X \$85 per hour = \$255	\$51,445	\$51,700

### **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.

### **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-2016-9385; Directorate Identifier 2016-NM-111-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 all Gulfstream Model G-1159B airplanes, certificated in any category.

Note 1 to paragraph (c) of this AD: Model G-1159B airplanes are also referred to by marketing designation GIIB.

#### **(d) Subject**

Air Transport Association (ATA) of America Code 27; Flight Controls.

**(e) Unsafe Condition**

This AD was prompted by a review of airplane maintenance records, which revealed that incorrect rudder assemblies were installed on certain airplanes. We are issuing this AD to detect and correct the installation of incorrect rudder assemblies, which could result in flutter and subsequent loss of the rudder, and consequent loss of control of the airplane.

**(f) Compliance**

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

**(g) Inspection to Determine Rudder Assembly Part Number and Verification of Maintenance Records**

Within 12 months after the effective date of this AD, do an inspection to determine the part number of the rudder assembly, in accordance with the Accomplishment Instructions of Gulfstream GII/IIB Customer Bulletin Number 468, dated February 17, 2016, except as provided by paragraph (i)(1) of this AD. If the rudder assembly does not have part number (P/N) 1159CS20004-3, within 12 months after the effective date of this AD, verify that the rudder assembly part number recorded in the aircraft maintenance records matches the part number of the rudder assembly installed on the airplane and if the rudder assembly part number does not match, correct the aircraft maintenance records accordingly.

**(h) Additional Inspection and Corrective Action**

If, during the inspection required by paragraph (g) of this AD, a rudder assembly having P/N 1159CS20004-3 is found, before further flight, do a general visual inspection of the middle and upper rudder hinges to determine if a one-piece or two-piece hinge is installed, in accordance with the Accomplishment Instructions of Gulfstream GII/IIB Customer Bulletin Number 468, dated February 17, 2016, and do the applicable action specified in paragraph (h)(1) or (h)(2) of this AD, except as required by paragraph (i)(2) of this AD.

(1) For airplanes with a one-piece hinge installed: Do the actions specified in paragraph (h)(1)(i) or (h)(1)(ii) of this AD.

(i) Modify the rudder assembly, in accordance with the Accomplishment Instructions of Gulfstream GII/IIB Customer Bulletin Number 468, dated February 17, 2016.

Note 1 to paragraph (h)(1)(i) of this AD: Gulfstream GII/IIB Customer Bulletin Number 468, dated February 17, 2016, refers to Gulfstream GII Aircraft Service Change Number 300, Amendment 1, dated May 21, 1984, as an additional source of guidance for accomplishment of the rudder modification.

(ii) Replace the rudder assembly with a rudder assembly that has been modified as specified in Gulfstream GII Aircraft Service Change Number 300. Do the replacement using a method approved in accordance with the procedures specified in paragraph (k)(1) of this AD.

(2) For airplanes with a two-piece hinge installed: Re-identify the rudder assembly as having incorporated the actions in Gulfstream GII Aircraft Service Change Number 300, in accordance with the Accomplishment Instructions of Gulfstream GII/IIB Customer Bulletin Number 468, dated February 17, 2016.

**(i) Exceptions to Service Bulletin Specifications**

(1) Where Gulfstream GII/IIB Customer Bulletin Number 468, dated February 17, 2016, specifies to record the rudder part number and serial number on the service reply card, that action is not required by this AD.

(2) Where Gulfstream GII/IIB Customer Bulletin Number 468, dated February 17, 2016, specifies to contact Gulfstream for instructions on modifying the rudder assembly, this AD requires modifying the rudder assembly before further flight using a method approved in accordance with the procedures specified in paragraph (k)(1) of this AD.

**(j) Special Flight Permit**

Special flight permits, as described in Section 21.197 and Section 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199), are not allowed.

**(k) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Atlanta Aircraft Certification Office (ACO), 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 ACO, send it to the attention of the person identified in paragraph (l)(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) Except as required by paragraph (i) of this AD: For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (k)(3)(i) and (k)(3)(ii) 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.

**(l) Related Information**

(1) For more information about this AD, contact Krista Greer, Aerospace Engineer, Airframe Branch, ACE-117A, FAA, Atlanta Aircraft Certification Office

(ACO), 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5544; fax: 404-474-5606; email: [krista.greer@faa.gov](mailto:krista.greer@faa.gov).

(2) For service information identified in this AD, contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O. Box 2206, Savannah, GA 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 view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on November 2, 2016.

Michael Kaszycki,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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