

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2012-0494; Directorate Identifier 2012-NM-088-AD; Amendment 39-17069; AD 2012-11-06]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Gulfstream Aerospace Corporation Airplanes**

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

**ACTION:** Final rule; request for comments.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for all Gulfstream Aerospace Corporation Model G-1159, G-1159A, and G-1159B airplanes. This AD requires, for certain airplanes, a measurement to determine the clearance (gap) of the exposed rounded portion of the doubler and clothespin fitting at the wing-to-fuselage attachment, and repair if necessary. This AD also requires, for certain other airplanes, determining if a certain aircraft service change has been incorporated, and for affected airplanes, a measurement to determine the clearance (gap) of the exposed rounded portion of the doubler and clothespin fitting at the wing-to-fuselage attachment, and repair if necessary. This AD was prompted by a report of an improper structural modification that had excessive gaps in the wing-to-fuselage attachment fittings. We are issuing this AD to detect and correct excessive gaps in the wing-to-fuselage attachment fittings, which could result in reduced structural integrity at the wing-to-fuselage attachment and consequent separation of the wing from the airplane.

**DATES:** This AD is effective May 29, 2012.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of May 29, 2012.

We must receive comments on this AD by July 13, 2012.

**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: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Gulfstream Aerospace Corporation, Technical Publications Dept., 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 copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. 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>; 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 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:** Michael Cann, Senior Aerospace Engineer, Airframe Branch, ACE-117A, Atlanta Aircraft Certification Office, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5548; fax (404) 474-5606; email: [michael.cann@faa.gov](mailto:michael.cann@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We received a report of an improper structural modification that resulted in excessive gaps in the wing-to-fuselage attachment fittings on a number of airplanes. The modification specified in Gulfstream Model G-1159A (also known as (aka) G-III) and G-1159B (aka G-IIB) Aircraft Service Change (ASC) 229 and G-1159 (aka G-II) ASC 426 installs a new three-piece box fitting on the left and right side wing-to-fuselage installations, including new part number 1159SB30175-11/-12 doublers.

During a routine corrosion inspection on a Model G-1159A (G-III) airplane, it was observed that the aft wing-to-fuselage attach fitting had an assembly gap exceeding the gap allowed by type design. This condition results in a transfer of wing loads through a different load path resulting in negative margins of safety in the upper bolt and lower bolt in bearing.

A records review revealed that this condition was the result of an improper structural modification. This records search also revealed that six other Model G-1159 (G-II) and G-1159A (G-III) airplanes incorporated the modification. All seven airplanes have been inspected, and four airplanes were found not to be in conformity with the type design, two are in conformity to the type design, and no data are available on the other. A further search has revealed that a similar nonconforming condition was found on a total of six airplanes. Of those, one airplane does not conform to type design, and no further information is available for the other five airplanes. Based on this information, it is possible that other Model G-1159 (G-II), G-1159B (G-IIB), and G-1159A (G-III) airplanes could potentially exhibit the same condition.

The excessive clearance between the structural members results in a change in load path and reduced structural strength of the assembly below certified limits. This condition, if not corrected, could result in reduced structural integrity at the wing-to-fuselage attachment and consequent separation of the wing from the airplane.

## **Relevant Service Information**

We reviewed Gulfstream III Alert Customer Bulletin 21, including Service Reply Card, dated May 18, 2012 (for Model G-1159A airplanes); and Gulfstream II/IIB Alert Customer Bulletin 36, including Service Reply Card, dated May 18, 2012 (for Model G-1159 and G-1159B airplanes). This service information describes procedures for a measurement to determine the clearance (gap) of the exposed rounded portion of the doubler and clothespin fitting at the wing-to-fuselage attachment, and contacting Gulfstream if necessary.

We have also reviewed Gulfstream III Alert Customer Bulletin 22, including Service Reply Card, dated May 18, 2012 (for Model G-1159A airplanes); and Gulfstream II/IIB Alert Customer Bulletin 37, including Service Reply Card, dated May 18, 2012 (for Model G-1159 and G-1159B airplanes). This service information describes procedures for determining if a certain airplane service change has been incorporated, and, for affected airplanes, a measurement to determine the clearance (gap) of the exposed rounded portion of the doubler and clothespin fitting at the wing-to-fuselage attachment, and contacting Gulfstream if necessary.

## **FAA's Determination**

We are issuing 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 these same type designs.

## **AD Requirements**

This AD requires accomplishing the actions specified in the service information described previously, except as discussed under "Differences Between the AD and the Service Information." The AD also requires sending the measurement results to Gulfstream.

## **Differences Between the AD and the Service Information**

Although the service information specifies that operators may contact the manufacturer for disposition of certain repair conditions, this AD requires operators to repair those conditions in accordance with a method approved by the FAA.

## **Interim Action**

We consider this AD interim action. The manufacturer is currently developing a modification intended to address the unsafe condition identified in this AD. Once this modification is developed, approved, and available, we might consider additional rulemaking.

## **FAA's Justification and Determination of the Effective Date**

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because of the discovery of an improper structural modification that had excessive gaps in the wing-to-fuselage attachment fittings. We are issuing this AD to detect and correct excessive gaps in the wing-to-fuselage attachment fittings, which could result in reduced structural integrity at the wing-to-fuselage attachment. Therefore, we find that notice and opportunity for prior public comment are impracticable and that good cause exists for making this amendment effective in less than 30 days.

## Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2012-0494 and Directorate Identifier 2012-NM-088-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this 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 AD.

## Costs of Compliance

We estimate that this AD affects 223 airplanes of U.S. registry.  
We estimate the following costs to comply with this AD:

### Estimated Costs

| Action         | Labor cost                           | Parts cost | Cost per product | Number of U.S. operators | Cost on U.S. operators |
|----------------|--------------------------------------|------------|------------------|--------------------------|------------------------|
| Records Review | 1 work-hour × \$85 per hour = \$85   | \$0        | \$85             | 210                      | \$17,850               |
| Measurement    | 4 work-hours × \$85 per hour = \$340 | 0          | 340              | 13                       | 4,420                  |

We estimate the following costs to do any necessary measurements and repairs that would be required based on the results of the measurement. We have no way of determining the number of aircraft that might need these actions:

### On-Condition Costs

| Action      | Labor cost   | Parts cost | Cost per product |
|-------------|--------------|------------|------------------|
| Measurement | 4 work-hours | \$0        | \$340            |

We have received no definitive data that would enable us to provide cost estimates for the on-condition repair specified in this AD.

## 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**

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) Is not a "significant rule" under 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.

### **Adoption of 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 (AD):



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**2012-11-06 Gulfstream Aerospace Corporation:** Amendment 39-17069; Docket No. FAA-2012-0494; Directorate Identifier 2012-NM-088-AD.

**(a) Effective Date**

This AD is effective May 29, 2012.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Gulfstream Aerospace Corporation Model G-1159, G-1159A, and G-1159B airplanes; certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 57, Wings; and 53, Fuselage.

**(e) Unsafe Condition**

This AD was prompted by a report of an improper structural modification that had excessive gaps in the wing-to-fuselage attachment fittings. We are issuing this AD to detect and correct excessive gaps in the wing-to-fuselage attachment fittings, which could result in reduced structural integrity at the wing-to-fuselage attachment and consequent separation of the wing from the airplane.

**(f) Compliance**

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

**(g) Measurement and Repair**

For airplanes identified in paragraphs (g)(1) and (g)(2) of this AD: Before further flight, measure to determine the clearance (gap) of the exposed rounded portion of the doubler and clothespin fitting at the wing-to-fuselage attachment, in accordance with Gulfstream III Alert Customer Bulletin 21, including Service Reply Card, dated May 18, 2012 (for Model G-1159A airplanes); or Gulfstream II/IIB Alert Customer Bulletin 36, including Service Reply Card, dated May 18, 2012 (for Model G-1159 and G-1159B airplanes). If the clearance exceeds the limit specified in Gulfstream III Alert Customer Bulletin 21, including Service Reply Card, dated May 18, 2012 (for Model G-1159A airplanes); or Gulfstream II/IIB Alert Customer Bulletin 36, including Service Reply Card, dated May 18, 2012 (for Model G-1159 and G-1159B airplanes); before further flight, repair in accordance with a method approved by the Manager, Atlanta Aircraft Certification Office (ACO), FAA. For a

repair method to be approved by the Manager, Atlanta ACO, as required by this paragraph, the Manager's approval letter must specifically refer to this AD.

(1) Model G-1159, and G-1159B airplanes, having serial numbers (S/N) 083, 084, 096, 130, 176, 202, 238, 239, and 240.

(2) Model G-1159A airplanes, having S/N 346, 355, 385, and 486.

#### **(h) Records Review, Measurement, and Repair**

For all airplanes except those identified in paragraph (g) of this AD: Within 10 flight hours or 60 days after the effective date of this AD, whichever occurs first, do a review of airplane maintenance records to determine if the aircraft service change specified in Gulfstream III Alert Customer Bulletin 22, including Service Reply Card, dated May 18, 2012 (for Model G-1159A airplanes); or Gulfstream II/IIB Alert Customer Bulletin 37, including Service Reply Card, dated May 18, 2012 (for Model G-1159 and G-1159B airplanes); has been incorporated.

(1) For airplanes on which the aircraft service change specified in Gulfstream III Alert Customer Bulletin 22, including Service Reply Card, dated May 18, 2012 (for Model G-1159A airplanes); or Gulfstream II/IIB Alert Customer Bulletin 37, including Service Reply Card, dated May 18, 2012 (for Model G-1159 and G-1159B airplanes); has not been incorporated: No more work is required by this AD.

(2) For airplanes on which the aircraft service change specified in Gulfstream III Alert Customer Bulletin 22, including Service Reply Card, dated May 18, 2012 (for Model G-1159A airplanes); or Gulfstream II/IIB Alert Customer Bulletin 37, including Service Reply Card, dated May 18, 2012 (for Model G-1159 and G-1159B airplanes); has been incorporated: Within 10 flight hours or 60 days after the effective date of this AD, whichever occurs first, measure to determine the clearance (gap) of the exposed rounded portion of the doubler and clothespin fitting at the wing-to-fuselage attachment, in accordance with Gulfstream III Alert Customer Bulletin 22, including Service Reply Card, dated May 18, 2012 (for Model G-1159A airplanes); or Gulfstream II/IIB Alert Customer Bulletin 37, including Service Reply Card, dated May 18, 2012 (for Model G-1159 and G-1159B airplanes). If the clearance exceeds the limit specified in Gulfstream III Alert Customer Bulletin 22, including Service Reply Card, dated May 18, 2012 (for Model G-1159A airplanes); or Gulfstream II/IIB Alert Customer Bulletin 37, including Service Reply Card, dated May 18, 2012 (for Model G-1159 and G-1159B airplanes); before further flight, repair in accordance with a method approved by the Manager, Atlanta ACO, FAA. For a repair method to be approved by the Manager, Atlanta, ACO, as required by this paragraph, the Manager's approval letter must specifically refer to this AD.

#### **(i) Reporting**

Submit a report of the findings of any measurement required by paragraph (g) or (h) of this AD to Gulfstream, at the applicable time specified in paragraph (i)(1) or (i)(2) of this AD, using the Service Reply Card of the applicable customer bulletin specified in paragraph (g) or (h) of this AD. The report must include the measurement results, a description of any discrepancies found, the airplane serial number, and the number of landings and flight hours on the airplane. Under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements contained in this AD and has assigned OMB Control Number 2120-0056.

(1) If the measurement was done on or after the effective date of this AD: Submit the report within 10 days after the measurement.

(2) If the measurement was done before the effective date of this AD: Submit the report within 10 days after the effective date 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) Paperwork Reduction Act Burden Statement**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

## **(l) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Atlanta 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 the Related Information section 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.

## **(m) Related Information**

For more information about this AD, contact Michael Cann, Senior Aerospace Engineer, Airframe Branch, ACE-117A, Atlanta Aircraft Certification Office, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5548; fax (404) 474-5606; email: michael.cann@faa.gov.

## **(n) Material Incorporated by Reference**

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

(2) The Director of the Federal Register approved the incorporation by reference (IBR) of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(i) Gulfstream III Alert Customer Bulletin 21, including Service Reply Card, dated May 18, 2012.

(ii) Gulfstream III Alert Customer Bulletin 22, including Service Reply Card, dated May 18, 2012.

(iii) Gulfstream II/IIB Alert Customer Bulletin 36, including Service Reply Card, dated May 18, 2012.

(iv) Gulfstream II/IIB Alert Customer Bulletin 37, including Service Reply Card, dated May 18, 2012.

(3) For service information identified in this AD, contact Gulfstream Aerospace Corporation, Technical Publications Dept., 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).

(4) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may also review copies of the 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, call 202-741-6030, or go to: [http://www.archives.gov/federal-register/cfr/ibr\\_locations.html](http://www.archives.gov/federal-register/cfr/ibr_locations.html).

Issued in Renton, Washington, on May 22, 2012.

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