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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-6546; Directorate Identifier 2015-NM-179-AD; Amendment 39-18338; AD 2015-24-06]

RIN 2120-AA64

Airworthiness Directives; Gulfstream Aerospace Corporation Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Gulfstream Aerospace Corporation Model GVI airplanes. This AD requires repetitive breakaway torque checks and torqueing of the brake inlet self-sealing couplings. This AD also requires revising the airplane flight manual to include procedures to follow in the event of certain display indications. This AD was prompted by reports of the self-sealing couplings on the brake inlet fitting that have been found backed out of the fully seated position. We are issuing this AD to detect and correct inadequate torque on the self-sealing coupling. This condition could result in an unannounced total loss of braking capability on one or multiple brakes, which could result in a runway overrun or asymmetrical braking that can lead to a lateral runway excursion.

DATES: This AD is effective December 4, 2015.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of December 4, 2015.

We must receive comments on this AD by January 19, 2016.

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, GA 31402-2206; telephone 800-810-4853; fax 912-965-3520; email pubs@gulfstream.com; Internet 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. It is also available on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2015-6546.

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-2015-6546; 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: Gideon Jose, Aerospace Engineer, Systems and Equipment Branch, ACE-119A, FAA, Atlanta Aircraft Certification Office (ACO), 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5569; fax: 404-474-5606; email: Gideon.Jose@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We have received reports of self-sealing couplings on the brake inlet fitting that have been found backed out of the fully seated position. Due to the function of these couplings, this issue allows for the self-sealing mechanism to activate and cut off hydraulic pressure to the brake caliper, resulting in reduced or no braking ability on the affected wheel while the brake pressure indications remain normal on the flight deck indicators. Multiple coupling failures may lead to loss of braking capability on more than one wheel, creating the potential for loss of aircraft braking effectiveness on one or multiple brakes. Since the flight deck brake pressure indications would appear normal under these conditions, the crew will have no indications other than the loss of braking control on one or multiple brakes. Unannounced total loss of braking capability on one or multiple brakes, could result in a runway overrun or asymmetrical braking that can lead to a lateral runway excursion.

Related Service Information Under 1 CFR Part 51

Gulfstream has issued G650 Alert Customer Bulletin 4A, dated November 13, 2015; and G650ER Alert Customer Bulletin 4A, dated November 13, 2015. The service information describes procedures for a breakaway torque check and torqueing the brake inlet self-sealing couplings. 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 of this AD.

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 the same type design.

AD Requirements

This AD requires accomplishing the actions specified in the service information described previously, except as discussed under "Difference Between the AD and the Service Information."

Difference Between the AD and the Service Information

Although Gulfstream G650 Alert Customer Bulletin 4A, dated November 13, 2015; and G650ER Alert Customer Bulletin 4A, dated November 13, 2015; recommend that the breakaway torque check and torqueing the brake inlet self-sealing couplings be repeated only one time, this AD requires repetitive accomplishment of the checks and torqueing of the brake inlet self-sealing coupling at intervals not to exceed 100 flight cycles. We have determined repetitive actions are necessary to address the identified unsafe condition. We have coordinated this difference with Gulfstream.

Interim Action

We consider this AD interim action. The manufacturer is currently developing a modification that will address the unsafe condition identified in this AD and would terminate the repetitive actions 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 an unannounced total loss of braking capability on one or multiple brakes can cause a runway overrun or asymmetrical braking that can lead to a lateral runway excursion. 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-2015-6546 and Directorate Identifier 2015-NM-179-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.

Explanation of ''RC'' Steps in Service Information

The FAA worked in conjunction with industry, under the Airworthiness Directive Implementation Aviation Rulemaking Committee (ARC), to enhance the AD system. One enhancement was a new process for annotating which steps in the service information are required for compliance with an AD. Differentiating these steps from other tasks in the service information is expected to improve an owner's/operator's understanding of crucial AD requirements and help provide consistent judgment in AD compliance. The steps identified as Required for Compliance (RC) in any service information identified previously have a direct effect on detecting, preventing, resolving, or eliminating an identified unsafe condition.

For service information that contains steps that are labeled as RC, the following provisions apply: (1) 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, and an AMOC is required for any deviations to RC steps, including substeps and identified figures; and (2) 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.

Costs of Compliance

We estimate that this AD affects 120 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Cost per product	Cost on U.S. operators
Breakaway torque check and torqueing of inlet self-sealing couplings	2 work-hours × $85 per hour = $170 per check/torque cycle	$170 per check/torque cycle	$20,400 per check/torque cycle.
AFM revision	1 work-hour × $85	$85	$10,200.

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

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):

2015-24-06 Gulfstream Aerospace Corporation: Amendment 39-18338; Docket No. FAA-2015-6546; Directorate Identifier 2015-NM-179-AD.

(a) Effective Date

This AD is effective December 4, 2015.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Gulfstream Aerospace Corporation Model GVI airplanes, certificated in any category, serial numbers 6001 and 6003 through 6163 inclusive.

Note 1 to paragraph (c) of this AD: Model GVI airplanes are also referred to by marketing designations G650 and G650ER.

(d) Subject

Air Transport Association (ATA) of America Code 32, Landing gear.

(e) Unsafe Condition

This AD was prompted by reports of the self-sealing couplings on the brake inlet fitting that have been found backed out of the fully seated position. We are issuing this AD to detect and correct inadequate torque on the self-sealing coupling. This condition could result in an unannounced total loss of braking capability on one or multiple brakes, which could result in a runway overrun or asymmetrical braking that can lead to a lateral runway excursion.

(f) Compliance

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

(g) Repetitive Breakaway Torque Checks and Torqueing

(1) Within 15 days after the effective date of this AD, perform a breakaway torque check and torque the brake inlet self-sealing couplings, in accordance with Part I of the Accomplishment Instructions of Gulfstream G650 Alert Customer Bulletin 4A, dated November 13, 2015; or Gulfstream G650ER Alert Customer Bulletin 4A, dated November 13, 2015; as applicable.

(2) Within 100 flight cycles after completing the actions required by paragraph (g)(1) of this AD, perform a breakaway torque check and torque the brake inlet self-sealing couplings, in accordance with Part II of the Accomplishment Instructions of Gulfstream G650 Alert Customer Bulletin 4A,

dated November 13, 2015; or Gulfstream G650ER Alert Customer Bulletin 4A, dated November 13, 2015; as applicable. Repeat the actions thereafter at intervals not to exceed 100 flight cycles.

(h) Revision to Airplane Flight Manual (AFM)–Dispatch Limitations

Within 15 days after the effective date of this AD, revise the Limitations section of the AFM to include the statement found in figure 1 to paragraph (h) of this AD. This may be done by inserting a copy of this AD into the AFM. When a statement identical to that in figure 1 to paragraph (h) of this AD has been included in the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.

Figure 1 to Paragraph (h) of this AD - *Dispatch Limitation*

BRAKE MAINTENANCE REQUIRED

"IF THE BLUE BRAKE MAINTENANCE REQD CAS MESSAGE DISPLAYS DURING AIRCRAFT OPERATIONS, FLIGHT CREWS ***MUST NOT DISPATCH*** OR ***PERFORM A TAKEOFF*** UNTIL AFTER MAINTENANCE PERSONNEL HAVE DETERMINED THE CAUSE OF THE MESSAGE AND CONFIRM IT IS NOT A BRAKE FAILURE RESULTING FROM ONE OR MORE LOOSE BRAKE CONNECTOR LINE FITTINGS."

(i) Revision to AFM–In-flight Warning

Within 15 days after the effective date of this AD, revise the Limitations section of the AFM to include the statement found in figure 2 to paragraph (i) of this AD. This may be done by inserting a copy of this AD into the AFM. When a statement identical to that in figure 2 to paragraph (i) of this AD has been included in the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.

Figure 2 to Paragraph (i) of this AD – *In-flight Warning*

WHEEL DESPIN FAIL

"WARNING: IF AMBER WHEEL DESPIN FAIL CAS MESSAGE DISPLAYS, BRAKING CAPABILITY MAY BE REDUCED AND/OR THERE MAY BE NO BRAKING ON ONE SIDE, RESULTING IN ASYMMETRIC BRAKING. ***SELECT THE LONGEST RUNWAY*** POSSIBLE FOR LANDING"

(j) Credit for Previous Actions

This paragraph provides credit for the actions required by paragraph (g)(1) of this AD, if those actions were performed before the effective date of this AD using Gulfstream G650 Alert Customer

Bulletin 4, dated November 6, 2015; or Gulfstream G650ER Alert Customer Bulletin 4, dated November 6, 2015; which are not incorporated by reference in this AD.

(k) No Reporting Requirement

Although Gulfstream G650 Alert Customer Bulletin 4A, dated November 13, 2015; and Gulfstream G650ER Alert Customer Bulletin 4A, dated November 13, 2015; specify to submit certain information to the manufacturer, this AD does not require that action.

(l) 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 (m) 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 (l)(3)(i) and (l)(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.

(m) Related Information

For more information about this AD, Gideon Jose, Aerospace Engineer, Systems and Equipment Branch, ACE-119A, FAA, Atlanta Aircraft Certification Office (ACO), 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5569; fax: 404-474-5606; email: Gideon.Jose@faa.gov.

(n) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) 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 G650 Alert Customer Bulletin 4A, dated November 13, 2015.

(ii) Gulfstream G650ER Alert Customer Bulletin 4A, dated November 13, 2015.

(3) For Gulfstream 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; Internet http://www.gulfstream.com/product_support/technical_pubs/pubs/index.htm.

(4) You may view this service information at 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.

(5) You may view this service information that is incorporated by reference at the National Archives and 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.

Issued in Renton, Washington, on November 25, 2015.
Michael Kaszycki,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.