



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-0677; Directorate Identifier 2013-NM-244-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 GVI airplanes. This proposed AD was prompted by reports of corrosion on in-service air non-return valves. This proposed AD would require a revision to the Emergency Procedures section of the airplane flight manual (AFM). This proposed AD would also require a revision to the maintenance or inspection program, as applicable, to incorporate airworthiness limitations for the high pressure (HP) Stage 5 air non-return valves. We are proposing this AD to ensure the flightcrew is provided with procedures to mitigate the risks associated with failure of the HP Stage 5 air non-return valve. Failure of the HP Stage 5 air non-return valve in the open position could result in engine instability and uncommanded in-flight shutdown.

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 proposed 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 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-2015-0677; 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: Eric Potter, Aerospace Engineer, Propulsion and Services Branch, ACE-118A, Atlanta Aircraft Certification Office, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5583; fax: 404-474-5606; email: eric.potter@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-2015-0677; Directorate Identifier 2013-NM-244-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 received a report of multiple instances of corrosion on in-service air non-return valves on Gulfstream Aerospace Corporation Model GIV-X airplanes. This corrosion has resulted in failure of air non-return valves.

The same part number air non-return valve is installed on the Gulfstream Aerospace Corporation Model GVI airplanes, but it serves a different purpose in that application, where it functions as an HP Stage 5 air non-return valve.

Failure of the HP Stage 5 air non-return valve in the open position on the Model GVI airplanes could supply high-stage pressure to the low-stage port, resulting in engine instability and uncommanded in-flight shutdown. This condition could also have an adverse effect on subsequent in-flight engine re-start efforts if the flightcrew follows the current AFM procedures.

In light of this information, the FAA has determined that certain procedures should be included in the FAA-approved AFM for Model GVI airplanes to ensure the flightcrew is provided with procedures to mitigate the risks associated with failure of the HP Stage 5 air non-return valve. We have also determined that the maintenance or inspection program, as applicable, should be revised to incorporate an airworthiness limitation for the HP Stage 5 air non-return valves.

Related Service Information under 1 CFR part 51

We reviewed Section 04-08-20, Normal Airstart-Automatic; Section 04-08-30, Manual Airstart-Starter Assist; and Section 04-08-40, Manual Airstart-Windmilling; of Chapter 04, Emergency Procedures, of the Gulfstream GVI (G650) AFM, Document Number GAC-AC-G650-OPS-0001, Revision 5, dated August 12, 2013. This service information describes revised procedures for in-flight engine restart and operating procedures.

In addition, we reviewed Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream GVI (G650) Maintenance Manual (MM), Revision 4, dated September 30, 2013. This service information adds an airworthiness limitation for the HP Stage 5 air non-return valve.

This service information is reasonably available; see ADDRESSES for ways to access this service information.

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.

This proposed AD would require revisions to certain operator maintenance documents to include new actions (e.g., inspections). Compliance with these actions is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (j) of this AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane.

Interim Action

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

Costs of Compliance

We estimate that this proposed AD affects 52 airplanes of U.S. registry.

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

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
AFM revision	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$4,420
MM revision	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$4,420

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. Amend § 39.13 by adding the following new airworthiness directive (AD):

Gulfstream Aerospace Corporation: Docket No. FAA-2015-0677; Directorate Identifier 2013-NM-244-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 Aerospace Corporation Model GVI airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 36, Pneumatic.

(e) Unsafe Condition

This AD was prompted by reports of corrosion on in-service air non-return valves. We are issuing this AD to ensure the flightcrew is provided with procedures to mitigate the risks associated with failure of the high pressure (HP) Stage 5 air non-return valve. Failure of the HP Stage 5 air non-return valve in the open position could result in engine instability and uncommanded in-flight shutdown.

(f) Compliance

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

(g) Revision of the Airplane Flight Manual (AFM)

Within 30 days after the effective date of this AD: Revise the Emergency Procedures section of the AFM by inserting Section 04-08-20, Normal Airstart-Automatic; Section 04-08-30, Manual Airstart-Starter Assist; and Section 04-08-40, Manual Airstart-Windmilling; of Chapter 04, Emergency Procedures; of the Gulfstream GVI (G650) AFM, Document Number GAC-AC-G650-OPS-0001, Revision 5, dated August 12, 2013.

(h) Revision of Maintenance or Inspection Program

Within 30 days after the effective date of this AD: Revise the airplane maintenance manual or inspection program, as applicable, by incorporating the requirement for the HP Stage 5 air non-return valve from Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream GVI (G650) Maintenance Manual (MM), Revision 4, dated September 30, 2013. The initial compliance time for replacement of the HP Stage 5 air non-return valve is at the applicable time specified in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream GVI (G650) MM, Revision 4, dated September 30, 2013, or within 30 days after the effective date of this AD, whichever occurs later.

(i) No Alternative Actions or Intervals

After the maintenance or inspection program has been revised, as required by paragraph (h) of this AD, no alternative actions (e.g., inspections) or intervals may be used unless the actions or intervals are approved as an alternative method of compliance in accordance with the procedures specified in paragraph (j) of this AD.

(j) 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 (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.

(k) Related Information

(1) For more information about this AD, contact Eric Potter, Aerospace Engineer, Propulsion and Services Branch, ACE-118A, FAA, Atlanta ACO, 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5583; fax: 404-474-5606; email: eric.potter@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; Internet http://www.gulfstream.com/product_support/technical_pubs/pubs/index.htm. You may view this 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 March 19, 2015.

Jeffrey E. Duven,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.
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