

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-28373; Directorate Identifier 2007-NM-110-AD; Amendment 39-15104; AD 2007-12-25]

RIN 2120-AA64

Airworthiness Directives; Gulfstream Model GIV-X, GV, and GV-SP Series Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Gulfstream Model GIV-X, GV, and GV-SP series airplanes. This AD requires revising the airplane flight manuals (AFMs) of those airplanes, and doing repetitive functional checks of the forward water drain/supply valves and applicable corrective actions. This AD also provides for optional terminating action for the repetitive functional checks. This AD results from reports of failed forward water drain/supply valves on numerous airplanes, and reports of ice striking the wing-to-body fairings and engine nose cowl of several airplanes. We are issuing this AD to prevent leakage from failed water drain/supply valves allowing the build-up of ice on the airplane, which could separate and strike the airplane structure aft of the failed valves; become ingested by a propulsion engine; or become a hazard to persons or property on the ground.

DATES: This AD becomes effective July 5, 2007.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of July 5, 2007.

We must receive comments on this AD by August 20, 2007.

ADDRESSES: Use one of the following addresses to submit comments on this AD.

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
- Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590.
- Fax: (202) 493-2251.

- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O. Box 2206, Savannah, Georgia 31402-2206, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Gerald Avella, Aerospace Engineer, Systems and Equipment Branch, ACE-119A, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia 30349; telephone (770) 703-6066; fax (770) 703-6097.

SUPPLEMENTARY INFORMATION:

Discussion

We have received a report of 18 instances of failed forward water drain/supply valves on Gulfstream Model GIV-X, GV, and GV-SP series airplanes. Investigation by the airplane manufacturer revealed that the water drain/supply valves can be damaged by attempted operation when they are frozen. We also received a report of seven instances of ice striking the wing-to-body fairings and engine nose cowls of several airplanes. Leakage from failed water drain/supply valves can allow the build-up of ice on the airplane, which could separate and strike the airplane structure aft of the failed valves; become ingested by a propulsion engine; or become a hazard to persons or property on the ground.

Relevant Service Information

We have reviewed the Gulfstream airplane flight manual (AFM) supplements and alert customer bulletins, including the Joint Aviation Authority (JAA) Gulfstream AFM revisions. We have identified these documents in the following tables.

The Gulfstream AFM supplements describe procedures for revising the Normal Procedures section of the AFMs of the affected airplanes to specify a functional check of forward water drain/supply valves, and corrective actions if necessary. Corrective actions include purging, deactivating, and securing the galley and lavatory sinks, or the entire water system, as applicable, and placarding those systems "Inoperative" or "Do Not Use." The AFM supplements are identified as follows:

Gulfstream AFM Supplements

Airplane Model	AFM Supplement	Date
GIV-X	G350-2007-01	April 12, 2007
	G450-2007-02	April 12, 2007
GV	GV-2007-04	April 12, 2007
GV-SP	G500-2007-03	April 12, 2007
	G550-2007-05	April 12, 2007

The alert customer bulletins identified in the following table describe procedures for doing repetitive functional checks of the forward water drain/supply valves for leakage; inspecting to determine whether the water supply valve has part number (P/N) 4E4151-1 or the water drain valve has P/N 4E4151-3; and replacing any water supply valve having P/N 4E4151-1 with a new, improved valve having P/N 4E4491-1, or any water drain valve having P/N 4E4151-3 with a new, improved

valve having P/N 4E4493-1. The alert customer bulletins also specify reporting compliance to the manufacturer.

Gulfstream Alert Customer Bulletins		
Airplane Model	Alert Customer Bulletin	Date
GIV-X	G350 Number 5	April 11, 2007
	G450 Number 5	April 11, 2007
GV	GV Number 26	April 11, 2007
GV-SP	G500 Number 7	April 11, 2007
	G550 Number 7	April 11, 2007

The information contained in the JAA AFM revisions identified in the following table is considered acceptable by the European Aviation Safety Agency (EASA) for airplanes operated under and in accordance with the JAA and EASA regulations, supervision, and oversight:

JAA Gulfstream AFM Revisions		
Airplane Model	JAA AFM Revisions	Date
GIV-X	JAA-G350-2007-01	May 21, 2007
	JAA- G450-2007-01	May 21, 2007
GV	JAA-GV-2007-02	May 21, 2007
GV-SP	JAA-G500-2007-03	May 21, 2007

FAA's Determination and Requirements of This AD

The unsafe condition described previously is likely to exist or develop on other airplanes of the same type design. For this reason, we are issuing this AD to prevent leakage from failed water drain/supply valves allowing the build-up of ice on the airplane, which could separate and strike the airplane structure aft of the failed valves; become ingested by a propulsion engine; or become a hazard to persons or property on the ground. This AD requires accomplishing the actions specified in the service information described previously, except as discussed under "Differences Between the AD and Service Information."

Differences Between the AD and Service Information

The alert customer bulletins do not describe procedures to be followed if the part number of a water drain/supply valve is missing or cannot be determined. However, this AD requires replacing any such valve with a new, improved valve having P/N 4E4491-1 or P/N 4E4493-1, as applicable.

Although the Accomplishment Instructions of the referenced alert customer bulletins describe procedures for submitting reports of compliance with the service bulletin, this AD does not require those actions.

Interim Action

We consider this AD interim action. We are currently considering requiring the optional terminating action (replacing the water drain/supply valves) provided in this AD, which will terminate the required repetitive functional checks. However, the planned compliance time for the terminating action would allow enough time to provide notice and opportunity for prior public comment on the merits of the valve replacement.

Clarification of Terminology

This AD provides procedures for repetitive functional checks for proper operation of the forward water drain/supply valves, and corrective actions if necessary. We have determined that these functional checks and corrective actions may be properly performed by the cockpit flightcrew because the checks and actions do not require tools, precision measuring equipment, training, or pilot logbook endorsements, or the use of or reference to technical data.

FAA's Determination of the Effective Date

Since an unsafe condition exists that requires the immediate adoption of this AD, we have found that notice and opportunity for public comment before issuing this AD are impracticable, and that good cause exists to make this AD effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements that affect flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any relevant written data, views, or arguments regarding this AD. Send your comments to an address listed in the ADDRESSES section. Include "Docket No. FAA-2007-28373; Directorate Identifier 2007-NM-110-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the AD that might suggest a need to modify it.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of that Web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78), or you may visit <http://dms.dot.gov>.

Examining the Docket

You may examine the AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the DOT street address stated in the ADDRESSES section. Comments will be available in the AD docket shortly after the Docket Management System receives them.

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 have determined that 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 the 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); and
3. 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

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 Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):



2007-12-25 Gulfstream Aerospace Corporation: Amendment 39-15104. Docket No. FAA-2007-28373; Directorate Identifier 2007-NM-110-AD.

Effective Date

(a) This AD becomes effective July 5, 2007.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Gulfstream Model GIV-X, GV, and GV-SP series airplanes, certificated in any category; as identified in the alert customer bulletins specified in Table 1 of this AD.

Table 1 – Gulfstream Alert Customer Bulletins

Airplane Model	Alert Customer Bulletin	Date
GIV-X	G350 Number 5	April 11, 2007
	G450 Number 5	April 11, 2007
GV	GV Number 26	April 11, 2007
GV-SP	G500 Number 7	April 11, 2007
	G550 Number 7	April 11, 2007

Unsafe Condition

(d) This AD results from reports of failed forward water drain/supply valves on numerous airplanes, and reports of ice striking the wing-to-body fairings and engine nose cowls of several airplanes. We are issuing this AD to prevent leakage from failed water drain/supply valves allowing the build-up of ice on the airplane, which could separate and strike the airplane structure aft of the failed valves; become ingested by a propulsion engine; or become a hazard to persons or property on the ground.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Airplane Flight Manual (AFM) Revision and Valve Functional Check

(f) Within 20 flight hours after the effective date of this AD: Revise the Normal Procedures section of the AFMs to include the information in the applicable AFM supplement identified in Table 2 of this AD. This may be done by inserting a copy of the supplement into the AFM.

Table 2 – AFM Supplements

Airplane Model	AFM Supplement	Date
GIV-X	G350-2007-01	April 12, 2007
	G450-2007-02	April 12, 2007
GV	GV-2007-04	April 12, 2007
GV-SP	G500-2007-03	April 12, 2007
	G550-2007-05	April 12, 2007

Note 1: For airplanes that are operated under and in accordance with the Joint Aviation Authority (JAA)/European Aviation Safety Agency (EASA) regulations, supervision, and oversight: EASA has advised us that revising the Normal Procedures section of the AFMs to include the information in the JAA Gulfstream AFM revisions specified in Table 3 of this AD, as applicable, is acceptable for compliance with the requirements of paragraph (f) of this AD.

Table 3 - JAA Gulfstream AFM Revisions

Airplane Model	JAA AFM Revisions	Date
GIV-X	JAA-G350-2007-01	May 21, 2007
	JAA- G450-2007-01	May 21, 2007
GV	JAA-GV-2007-02	May 21, 2007
GV-SP	JAA-G500-2007-03	May 21, 2007
	JAA-G550-2007-03	May 21, 2007

(g) Before further flight following accomplishment of the AFM revision required by paragraph (f) of this AD: Perform a functional check of the forward water system water drain/supply valves and do applicable corrective actions, in accordance with the applicable AFM supplement identified in Table 2 of this AD. Do the functional check at the times specified in paragraphs (g)(1) and (g)(2) of this AD. Either the cockpit flightcrew or certificated maintenance personnel may perform these functional checks. If the water system has been deactivated as part of the corrective actions, the functional checks need not be performed again until the water system is reactivated. Doing the optional terminating action specified by paragraph (g) of this AD ends the requirement for the repetitive functional checks.

(1) Before the first flight of the day.

(2) Before further flight when the airplane is exposed to freezing conditions on the ground after the airplane has been powered down.

Optional Terminating Action

(h) Doing the actions described in paragraphs (h)(1) and (h)(2), as applicable, of this AD terminates the functional checks required by paragraph (g) of this AD. After the actions specified in paragraphs (h)(1) and (h)(2), as applicable, of this AD have been done, the applicable AFM supplement specified in paragraph (f) of this AD may be removed from the AFM.

(1) Inspect to determine the part numbers of the forward water drain/supply valves, in accordance with Part II of the Accomplishment Instructions of the applicable alert customer bulletin identified in Table 1 of this AD. A review of airplane maintenance records is acceptable in lieu of this inspection if the part numbers of the drain/supply valves can be conclusively determined from that review.

(2) Replace any water supply valve having part number (P/N) 4E4151-1 with a new, improved water supply valve having P/N 4E4491-1, and any water drain valve having P/N 4E4151-3 with a new, improved water drain valve having P/N 4E4493-1; in accordance with Part III of the Accomplishment Instructions of the applicable alert customer bulletin identified in Table 1 of this AD. If the P/N of any water drain/supply valve is missing or cannot be determined, replace the water drain/supply valve with a new, improved water drain/supply valve, as applicable.

Note 2: Help is available from Gulfstream for determining a missing or otherwise indeterminate part number of any water drain/supply valve.

Parts Installation

(i) As of the effective date of this AD, no person may install a water supply valve having P/N 4E4151-1, or a water drain valve having P/N 4E4151-3, on any airplane.

No Reporting Required

(j) Although the alert customer bulletins referred to in this AD specify to submit certain information to the manufacturer, this AD does not include that requirement.

Alternative Methods of Compliance (AMOCs)

(k)(1) The Manager, Atlanta Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

Material Incorporated by Reference

(l) You must use the service information identified in Table 4 and Table 5 of this AD to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O. Box 2206, Savannah, Georgia 31402-2206, for a copy of this service information. You may review copies at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or 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>.

Table 4 – Gulfstream Alert Customer Bulletins

Bulletin Number	Date
G350 Number 5	April 11, 2007
G450 Number 5	April 11, 2007
GV Number 26	April 11, 2007
G500 Number 7	April 11, 2007
G550 Number 7	April 11, 2007

Table 5 - Gulfstream Airplane Flight Manual Supplements

Supplement Number	Date
G350-2007-01	April 12, 2007
G450-2007-02	April 12, 2007
GV-2007-04	April 12, 2007
G500-2007-03	April 12, 2007
G550-2007-05	April 12, 2007

Issued in Renton, Washington, on June 8, 2007.

Stephen P. Boyd,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E7-11587 Filed 6-19-07; 8:45 am]