
AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Gulfstream (Grumman) G1159 and G-IV Series Aeroplanes**AD/G1159/50****Water Drain/Supply Valves****9/2007
DM**

Applicability: Gulfstream Model GIV-X, GV, and GV-SP series aeroplanes, as identified in the alert customer bulletins specified in Table 1 of this AD.

Table 1. - Gulfstream Alert Customer Bulletins

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

Requirement: 1. 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

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

Gulfstream (Grumman) G1159 and G-IV Series Aeroplanes

AD/G1159/50 (continued)

2. 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.

Either the cockpit flight crew 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 below ends the requirement for the repetitive functional checks.

3. 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 aeroplane.

Optional Terminating Action

Doing the following actions described below, as applicable, of this AD terminates the functional checks detailed in Requirement 2 of this AD. After the actions specified in (1) and (2) below have been done, the applicable AFM supplement specified in Requirement 1 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 aeroplane 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 1: Help is available from Gulfstream for determining a missing or otherwise indeterminate part number of any water drain/ supply valve.

Note 2: FAA AD 2007-12-25 Amdt 39-15104 dated 8 June 2007 refers.

- Compliance:
1. Within 20 flight hours after the effective date of this AD, unless previously accomplished.

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AD/G1159/50 (continued)

2. Before further flight following accomplishment of the AFM revision required by Requirement 1 of this AD at the following intervals:
 - (a) Before the first flight of the day.
 - (b) Before further flight when the aeroplane is exposed to freezing conditions on the ground after the aeroplane has been powered down.
3. From the effective date of this AD.

This Airworthiness Directive becomes effective on 10 July 2007.

Background: This AD results from reports of failed forward water drain/ supply valves on numerous aeroplanes, and reports of ice striking the wing-to-body fairings and engine nose cowls of several aeroplanes. The issuing of this AD is intended to prevent leakage from failed water drain/ supply valves allowing the build-up of ice on the aeroplane, which could separate and strike the aeroplane structure aft of the failed valves; become ingested by a propulsion engine; or become a hazard to persons or property on the ground.



David Punshon
Delegate of the Civil Aviation Safety Authority

4 July 2007