
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 39.1 (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/G1159/43**Damper Shafts****13/2004**

Applicability: Gulfstream Model G-1159, G-1159A, G-1159B, and G-IV series aeroplanes.

Requirement: 1. Carry out a one-time general visual inspection of the left and right aileron and elevator actuators to determine the part number (P/N) and serial number (S/N) of each actuator, in accordance with the applicable alert customer bulletin.

For the purposes of this Directive, a general visual inspection is: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to ensure visual access to all surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

2. For any actuator identified during the inspection required by Requirement 1 of this Directive with a P/N and S/N listed in the applicable alert customer bulletin, and for actuators for which the P/N and/or S/N were missing or unreadable: Do a detailed inspection of each identified actuator to detect a broken damper shaft, in accordance with the applicable alert customer bulletin.

For the purposes of this Directive, a detailed inspection is: "An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirror, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required."

(a) If no damper shaft is found broken: Repeat the inspection required by Requirement 2 of this Directive.

(b) If any damper shaft is found broken: Replace the actuator in accordance with the applicable alert customer bulletin.

Gulfstream (Grumman) G1159 and G-IV Series Aeroplanes

AD/G1159/43 (continued)

For any replacement actuator having a P/N and S/N listed in the applicable alert customer bulletin, an inspection in accordance with Requirement 2 of this Directive must be carried out prior to fitment. Ongoing repeat inspection will then apply as detailed in Requirement 2a of this Directive.

Fitment of any actuator having a P/N and/or S/N not listed in the applicable alert customer bulletin will provide terminating action for that actuator only.

Optional Terminating Action

Replacement of all suspect actuators with new or serviceable actuators having a P/N and/or S/N not listed in the applicable alert customer bulletin terminates the requirements of this Directive.

3. Do not install an aileron or elevator actuator having a P/N and S/N specified in the applicable alert customer bulletin, on any aeroplane, unless the actuator has been inspected according to Requirement 2 of this Directive.

Table 1. - Applicable Gulfstream Alert Customer Bulletins

For model-	Alert customer bulletin-	Revision-	Dated-
G-1159 and G-1159B series aeroplanes.	Gulfstream GII/GIIB Alert Customer Bulletin 29A.	A	23 August 23 2004.
G-1159A series aeroplanes.	Gulfstream GIII Alert Customer Bulletin 15A	A	23 August 23 2004.
G-IV series aeroplanes.	Gulfstream G300 Alert Customer Bulletin 32A	A	23 August 23 2004.
G-IV series aeroplanes.	Gulfstream G400 Alert Customer Bulletin 32A	A	23 August 23 2004.
G-IV series aeroplanes.	Gulfstream GIV Alert Customer Bulletin 32A	A	23 August 23 2004.

Note: FAA AD 2004-21-03 Amdt 39-13824 refers.

Gulfstream (Grumman) G1159 and G-IV Series Aeroplanes

AD/G1159/43 (continued)

- Compliance:
1. Within 50 flight hours after the effective date of this Directive.
 2. Before further flight.
 - 2.a. At intervals not to exceed 500 flight hours or 12 months, whichever occurs first from the last detailed inspection as detailed in Requirement 2 or 2a of this Directive.
 - 2.b. Actuator replacement; Before further flight.
 3. From the effective date of this Directive.

This Airworthiness Directive becomes effective on 23 December 2004.

Background: This Directive is prompted by reports of broken or cracked damper shafts within the aileron and elevator actuator assemblies. This Directive is issued to detect and correct broken damper shafts, which could result in locking of an aileron or elevator actuator (hard- over condition), subsequent loss of aileron or elevator control, and consequent reduced controllability of the aeroplane.



James Coyne
Delegate of the Civil Aviation Safety Authority

9 November 2004