

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0270; Directorate Identifier 2007-NM-255-AD; Amendment 39-15628; AD 2008-16-10]

RIN 2120-AA64

Airworthiness Directives; Gulfstream Aerospace LP Model Galaxy Airplanes and Gulfstream 200 Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

The 3 supporting blocks [installed on hydraulic tubes] were made of Teflon, which is unsuitable material for this application. Excessive wear of the blocks was discovered on numerous aircraft, as well as several cases of chafing between the loosely supported tubes. In one case, hydraulic fluid was lost due to fatigue failure of an inadequately supported tube. Loss of hydraulic fluid causes subsequent multiple failures of hydraulically operated systems.

Multiple failures of hydraulically operated systems (for the flight air brake actuators, brake system, right thrust reverser, etc.) could result in reduced controllability of the airplane. We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective December 26, 2008.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of December 26, 2008.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mike Borfitz, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2677; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on March 13, 2008 (73 FR 13490). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

The 3 supporting blocks [installed on hydraulic tubes] were made of Teflon, which is unsuitable material for this application. Excessive wear of the blocks was discovered on numerous aircraft, as well as several cases of chafing between the loosely supported tubes. In one case, hydraulic fluid was lost due to fatigue failure of an inadequately supported tube. Loss of hydraulic fluid causes subsequent multiple failures of hydraulically operated systems.

Multiple failures of hydraulically operated systems (for the flight air brake actuators, brake system, right thrust reverser, etc.) could result in reduced controllability of the airplane. The corrective actions include repetitive visual inspections of the attaching blocks for wear and of the hydraulic tubes to determine if any tube is loose or damaged; an inspection of the entire length of the tubes for chafing, damage, and cracking; replacement of chafed, damaged, or cracked tubes; and replacement of blocks made of Teflon in the right-hand aft fuselage equipment bay with new blocks made of Nylon 6/6. You may obtain further information by examining the MCAI in the AD docket.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

Changes to Note 1 and Service Information References

The statement specified in Note 1 of the NPRM is informational only and is not part of the requirements of this AD. The actions specified in that statement are required regardless of AD action. We have removed Note 1 of the NPRM from this AD and revised the numbering on the subsequent Note in this AD.

We have revised paragraph (f)(1)(iii) of this AD to clarify that the repair may be done in accordance with Chapter 20-10-12 of the Gulfstream G200 Maintenance Manual, Revision 15, dated March 31, 2008.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to

ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow our FAA policies. Any such differences are highlighted in a NOTE within the AD.

Costs of Compliance

We estimate that this AD will affect about 129 products of U.S. registry. We also estimate that it will take about 2 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$80 per work-hour. Required parts will cost about \$54 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$27,606, or \$214 per product.

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 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 this AD:

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.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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 AD:



2008-16-10 Gulfstream Aerospace LP (Formerly Israel Aircraft Industries, Ltd.): Amendment 39-15628. Docket No. FAA-2008-0270; Directorate Identifier 2007-NM-255-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective December 26, 2008.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to Gulfstream Model Galaxy and Gulfstream 200 airplanes, serial numbers 004 through 156, certificated in any category.

Subject

- (d) Air Transport Association (ATA) of America Code 29: Hydraulic Power.

Reason

- (e) The mandatory continuing airworthiness information (MCAI) states:

The 3 supporting blocks [installed on hydraulic tubes] were made of Teflon, which is unsuitable material for this application. Excessive wear of the blocks was discovered on numerous aircraft, as well as several cases of chafing between the loosely supported tubes. In one case, hydraulic fluid was lost due to fatigue failure of an inadequately supported tube. Loss of hydraulic fluid causes subsequent multiple failures of hydraulically operated systems.

Multiple failures of hydraulically operated systems (for the flight air brake actuators, brake system, right thrust reverser, etc.) could result in reduced controllability of the airplane. The corrective actions include repetitive visual inspections of the attaching blocks for wear and of the hydraulic tubes to determine if any tube is loose or damaged; an inspection of the entire length of the tubes for chafing, damage, and cracking; replacement of chafed, damaged, or cracked tubes; and replacement of blocks made of Teflon in the right-hand aft fuselage equipment bay with new blocks made of Nylon 6/6.

Actions and Compliance

- (f) Do the following actions.

(1) Unless already done within 300 flight hours or six months prior to the effective date of this AD: Within 50 flight hours or one month after the effective date of this AD, whichever occurs first, perform a visual inspection of the clamping blocks for wear and of the hydraulic tubes to determine if any tube is loose or damaged. Clamping blocks are shown in detail B of Figure 2 of Gulfstream

Service Bulletin 200-29-316, dated June 29, 2007; or in details B and C of Figure 10, Page 0, of Chapter 29-10-30, of the Gulfstream G200 Illustrated Parts Catalog.

(i) If clamping blocks are not worn, repeat the inspections specified in paragraph (f)(1) of this AD thereafter at intervals not to exceed 300 flight hours or six months, whichever comes first, until the replacement required by paragraph (f)(2) of this AD is done.

(ii) If any hydraulic tube is loose or damaged, before further flight, inspect the hydraulic tubes along their entire length for chafing, damage, and cracks.

(iii) Before further flight, repair or replace all chafed, damaged, or cracked tubes in accordance with Chapter 20-10-12 of the Gulfstream G200 Maintenance Manual, Revision 15, dated March 31, 2008; or using a method approved by either the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the Civil Aviation Authority of Israel (CAAI) (or its delegated agent).

(iv) Before further flight, replace all worn clamping blocks by doing the replacement specified in paragraph (f)(2) of this AD, except as provided by paragraph (f)(1)(v) of this AD.

(v) If Nylon 6/6 clamping blocks part number (P/N) 4AS3565055-511 are not available during the replacement specified in paragraph (f)(1)(iv) of this AD, before further flight, install new or serviceable Teflon clamping blocks P/N 4AS3565055-507. Within 300 flight hours or six months after doing the installation, do the actions specified in paragraph (f)(1) of this AD and repeat thereafter at intervals not to exceed 300 flight hours or six months, whichever comes first, until the replacement required by paragraph (f)(2) of this AD is done.

(2) Unless already done: Within 600 flight hours or one year after the effective date of this AD, whichever comes first, replace the existing Teflon clamping blocks P/N 4AS3565055-507 with Nylon 6/6 clamping blocks P/N 4AS3565055-511 in accordance with Gulfstream Service Bulletin 200-29-316, dated June 29, 2007. Accomplishment of this replacement constitutes terminating action for all inspections of the clamping blocks required by this AD. Accomplishment of this replacement also constitutes terminating action for the repetitive inspections of the hydraulic tube required by paragraphs (f)(1)(i) and (f)(1)(v) of this AD.

FAA AD Differences

Note 1: This AD differs from the MCAI and/or service information as follows:

(1) The MCAI does not specify service information if any tube replacement is done. This AD requires doing the replacement as specified in paragraph (f)(1)(iii) of this AD.

(2) The MCAI specifies doing a one-time inspection of the installed Teflon blocks but also specifies doing repetitive inspections of temporary replacement Teflon blocks until the permanent replacement with Nylon 6/6 clamping blocks is done. This AD requires repetitive inspections of all Teflon blocks until the permanent replacement is done.

(3) The MCAI specifies that doing the replacement with Nylon 6/6 clamping blocks constitutes terminating action. This AD specifies that doing the replacement with Nylon 6/6 clamping blocks constitutes terminating action for the inspections of the clamping blocks and for the repetitive inspections of the hydraulic tubes.

Other FAA AD Provisions

(g) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Mike Borfitz, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2677; fax (425) 227-1149. 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.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

Related Information

(h) Refer to MCAI Israeli Airworthiness Directive 29-07-01-11, dated May 28, 2007; Gulfstream Service Bulletin 200-29-316, dated June 29, 2007; and Chapter 20-10-12 of the Gulfstream G200 Maintenance Manual, Revision 15, dated March 31, 2008; for related information.

Material Incorporated by Reference

(i) You must use Gulfstream Service Bulletin 200-29-316, dated June 29, 2007; and Chapter 20-10-12 of the Gulfstream G200 Maintenance Manual, Revision 15, dated March 31, 2008; as applicable, to do the actions required by this AD, unless the AD specifies otherwise.

Chapter 20 of the Gulfstream G200 Maintenance Manual, Revision 15, dated March 31, 2008, contains the following effective pages:

Pages	Revision level shown on page	Date shown on page
List of Effective Pages: Pages 1–2	15	Mar. 31, 2008.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Gulfstream Aerospace Corporation, P.O. Box 2206, Mail Station D-25, Savannah, Georgia 31402-2206; telephone 800-810-4853; fax 912-965-3520; e-mail pubs@gulfstream.com; Internet http://www.gulfstream.com/product_support/technical_pubs/pubs/index.htm.

(3) 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/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on November 4, 2008.
Stephen P. Boyd,
Assistant Manager, Transport Airplane Directorate,
Aircraft Certification Service.