[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-0659; Project Identifier AD-2022-01404-T]

RIN 2120-AA64

Airworthiness Directives; Gulfstream Aerospace Corporation Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Gulfstream Aerospace Corporation Model GVII-G600 airplanes. This AD was prompted by a failure that occurred during flight testing of a Gulfstream Model GVII-G500 airplane, when the aircraft was configuring for a steep approach test point, the crew received a flap failure message that was a result of a disconnect of the left hand flap due to structural failure. This AD requires revising the airworthiness limitations section (ALS) of the instructions for continued airworthiness (ICA) or inspection program for the airplane to establish a life limit for certain left-hand and right-hand inboard flap yoke fittings. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA 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 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.

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA-2023-0659; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Jeffrey Johnson, Aerospace Engineer, Airframe Section, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5554; email: 9-ASO-ATLACO-ADs@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include "Docket No. FAA-2023-0659; Project Identifier AD-2022-01404-T" at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to regulations.gov, including any personal

information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Jeffrey Johnson, Aerospace Engineer, Airframe Section, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5554; email: 9-ASO-ATLACO-ADs@faa.gov. Any commentary that the FAA receives that is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA has received a report that a failure occurred during flight testing of a Gulfstream Model GVII-G500 airplane, which is structurally similar to the GVII-G600 airplane, when the aircraft was configuring for a steep approach test point, the crew received a flap failure message. After an investigation, it was discovered that the left-hand flap track "B" yoke became disconnected due to structural failure. Gulfstream's investigation revealed that certain left-hand and right-hand inboard flap yoke fittings have fatigue life design flaws, including insufficient shaft diameter, a small fillet radius detail on the shaft, and rough surface finish. These design flaws attributed to higher stress concentrations which could cause fracture of the flap actuator yoke at the junction of the

fitting shaft and yoke clevis. Gulfstream revised the ALS for the applicable airplanes to establish a life limit for the affected inboard flap yoke fittings. The design flaws, if not addressed, could result in the flaps being jammed in the position when the fracture occurred. Additional failures in the flap actuator force limiter, or flap yoke actuator disconnect, could result in asymmetric flap positions leading to a loss of control of the airplane.

FAA's Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Proposed AD Requirements in this NPRM

This proposed AD would require revising the ALS of the existing ICA or inspection program for the airplane to establish a life limit of 4,000 flight cycles for the left-hand part number (P/N) 73P5755033M005 and right-hand P/N 73P5755033M006 inboard flap yoke fittings.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 41 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Revise ALS	1 work-hour X $85 per hour = $85	N/A	$85	$3,485

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.

The FAA is 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

The FAA 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) Would not affect intrastate aviation in Alaska, and

(3) Would 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. The FAA amends § 39.13 by adding the following new airworthiness directive:

Gulfstream Aerospace Corporation: Docket No. FAA-2023-0659; Project Identifier AD-2022-01404-T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Gulfstream Aerospace Corporation Model GVII-G600 airplanes, certificated in any category, serial numbers 73001 through 73051 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight Controls.

(e) Unsafe Condition

This AD was prompted by a failure that occurred during flight testing of a Gulfstream Model GVII-G500 airplane, when the aircraft was configuring for a steep approach test point, the crew received a flap failure message that was a result of a disconnect of the left hand flap due to structural failure. Gulfstream's investigation revealed the need to establish a life limit for the affected inboard flap yoke fittings. The FAA is issuing this AD to address design flaws that cause decreased fatigue life of the yoke fittings and attribute to higher stress concentrations at the junction of the fitting shaft and yoke clevis. The unsafe condition, if not addressed, could result in flaps being

jammed in the position when the fracture occurred. Additional failures in the flap actuator force limiter, or flap yoke actuator disconnect, could result in asymmetric flap positions leading to a loss of control of the airplane.

(f) Compliance

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

(g) Incorporation of ALS Revisions

Within 30 days after the effective date of this AD, revise the existing ALS of the ICA or inspection program for your airplane by establishing a life limit of 4,000 flight cycles for the left-hand part number (P/N) 73P5755033M005 and right-hand P/N 73P5755033M006 inboard flap yoke fittings.

Note 1 to paragraph (g): The life limit in paragraph (g) of this AD is contained in table 2 in Section 05-10-10 of Gulfstream GVII-G600 Aircraft Maintenance Manual, Revision 9, dated November 15, 2022.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Atlanta ACO Branch, 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 responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (i)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(i) Related Information

(1) For more information about this AD, contact Jeffrey Johnson, Aerospace Engineer, Airframe Section, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5554; email: 9-ASO-ATLACO-ADs@faa.gov.

(2) For Gulfstream service information identified in this AD that is not incorporated by reference, contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O. Box 2206, Savannah, GA 31402-2206; telephone 800-810-4853; email pubs@gulfstream.com; website gulfstream.com/en/customer-support/. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(j) Material Incorporated by Reference

None.

Issued on March 30, 2023.

Christina Underwood, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.
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