



適航指令發布單

Airworthiness Directive Issuance Form

民航局 AD 編號 AD number	CAA-2022-08-003	發布日期 Date issued	2022/8/19
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	This AD applies to Gulfstream Aerospace Corporation Model GV and GV-SP airplanes, all serial numbers, certificated in any category. Note: Model GV-SP airplanes are also referred to by the marketing designations G500, G550, and G500-5000.		
主旨摘要 Subject	This AD requires inspecting the horizontal stabilizer lower skin and associated bonded doublers and bonded stringers, repairing any area with corrosion beyond allowable damage limits, and incorporating revisions to the airworthiness limitations section in the existing aircraft maintenance manual or progressive maintenance program.		
民航局 CAA <input type="checkbox"/> 本國產品 Native product <input type="checkbox"/> 其他個案 Other	<div style="text-align: center;">設計國民航主管機構 Original Authority</div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> FAA <input type="checkbox"/> EASA <input type="checkbox"/> Brazil <input type="checkbox"/> Transport Canada Civil Aviation <input type="checkbox"/> DGAC </div> <div style="width: 45%;"> <input type="checkbox"/> Germany LBA <input type="checkbox"/> CAA-NL <input type="checkbox"/> UK CAA <input type="checkbox"/> Japan CAB <input type="checkbox"/> CAA of Israel <input type="checkbox"/> Other _____ </div> </div>		
	設計國 AD 編號 Original AD number	2022-16-04	
	1. 直接採用原 AD 之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 否(No) _ a. 生效日期另訂為(Re-specify the effective date as) : _____ b. 執行時限另訂為(Re-specify the compliance time or period as) : _____ 2. 使用人是否需要將 AD 執行結果向民航局提出報告?(Do Users need to report the status of compliance to the CAA?) <input type="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No)		
備註 Note	ATA 55. Ref. Gulfstream G500-5000 Customer Bulletin No. 190, Revision B, dated October 31, 2019. and Gulfstream G550 Customer Bulletin No. 190, Revision B, dated October 31, 2019. and Gulfstream GV Customer Bulletin No. 228, Revision B, dated October 31, 2019.		
註： 1. AD 內容後附。 2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。 3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6330 / 6332, Fax：(02)2545-8464, e-mail： adcaa@mail.caa.gov.tw Note： 1. The AD text is enclosed. 2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval. 3. For further information, please contact Civil Aeronautics Administration on Tel：(02)2349-6330 / 6332, Fax： (02)2545-8464, e-mail： adcaa@mail.caa.gov.tw			

[Federal Register Volume 87, Number 148 (Wednesday, August 3, 2022)]

[Rules and Regulations]

[Pages 47337-47341]

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[FR Doc No: 2022-16535]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0958; Project Identifier 2019-CE-010-AD; Amendment 39-22133; AD 2022-16-04]

RIN 2120-AA64

Airworthiness Directives; Gulfstream Aerospace Corporation Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Gulfstream Aerospace Corporation (Gulfstream) Model GV and GV-SP airplanes. This AD was prompted by corrosion of the horizontal stabilizer lower bonded skin assemblies. This AD requires inspecting the horizontal stabilizer lower skin and associated bonded doublers and bonded stringers, repairing any area with corrosion beyond allowable damage limits, and incorporating revisions to the airworthiness limitations section (ALS) in the existing aircraft maintenance manual (AMM) or progressive maintenance program. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective September 7, 2022.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of September 7, 2022.

ADDRESSES: For service information identified in this final rule, contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O. Box 2206, Savannah, GA 31402; phone: (800) 810-4853; fax: (912) 965-3520; email: pubs@gulfstream.com; website:

www.gulfstream.com/en/customer-support/. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at www.regulations.gov by searching for and locating Docket No. FAA-2021-0958.

Examining the AD Docket

You may examine the AD docket at www.regulations.gov by searching for and locating Docket No. FAA-2021-0958; 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 final rule, any comments received, and

other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Ronald Wissing, Aviation Safety Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5552; email: 9-ASO-ATLACO-ADs@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Gulfstream Model GV and GV-SP airplanes. The NPRM published in the Federal Register on November 5, 2021 (86 FR 61088). The NPRM was prompted by bond line corrosion on Model GV and GV-SP airplanes, which causes disbonding between the horizontal stabilizer lower skin and associated bonded doublers and bonded stringers. Gulfstream determined that the existing visual inspection in the AMM did not reliably detect bond line corrosion and added a repetitive non-destructive testing (NDT) inspection to detect the damage. In the NPRM, the FAA proposed to require inspecting the horizontal stabilizer lower skin and associated bonded doublers and bonded stringers, repairing any area with corrosion beyond allowable damage limits, and incorporating revisions to the ALS in the existing AMM. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from one commenter, Gulfstream. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request To Clarify Information in the Preamble

Gulfstream requested that the FAA revise a phrase describing part of the proposed corrective action under SUMMARY and under the “Proposed AD Requirements in This NPRM” section of SUPPLEMENTARY INFORMATION. Gulfstream requested the FAA change “repairing the area susceptible to corrosion” to “identify if a repair is required.” Gulfstream stated that the bonded structure is “susceptible” to corrosion but does not necessarily require “repair” because the need for repair is based on the inspection results.

The FAA agrees that all areas susceptible to corrosion do not necessarily require repair. The FAA has revised the SUMMARY of this final rule to clarify that only areas with corrosion that exceeds allowable damage limits need to be repaired. The “Proposed AD Requirements in This NPRM” section is not restated in this final rule, so a change is unnecessary.

Request To Revise the Description of a Service Document

Gulfstream requested the FAA change the description of Gulfstream Service Letter Document No. GSL505510019, Revision E, dated September 3, 2021, in the “Other Related Service Information” section of the preamble. In the NPRM, the FAA stated that the service letter contains procedures for applying on-wing corrosion inhibiting compound (CIC) to the horizontal stabilizer. Gulfstream advised that this description is inaccurate because although the service letter specifies applying CIC, it references another service letter for the application instructions. Gulfstream

requested that the preamble state instead that this service letter “contains allowable damage limits for the horizontal stabilizer assembly.”

The FAA agrees and has revised this final rule accordingly.

Request Regarding the Airplane Effectivity Range

Gulfstream requested that the FAA remove language in the preamble explaining that the proposed AD would apply to all Model GV and GV-SP airplanes, while the service bulletins exclude certain serial-numbered airplanes. Gulfstream also requested that the inspection proposed in paragraph (i) of the proposed AD not be required for these same serial-numbered airplanes. Gulfstream stated that four airplanes were excluded from the effectivity of the customer bulletin because the airplanes had not yet reached the baseline compliance time for doing the initial “Part II” inspection of the horizontal stabilizer lower skin. Gulfstream explained that removing those four airplanes from the inspection portion of the proposed AD would not have an impact on safety, because those airplanes will be inspected in accordance with the 144-month entry into service inspection specified in Chapter 5 of the AMM.

The FAA disagrees. Gulfstream's request appears to be based on the compliance time for those four airplanes and not whether they are subject to the unsafe condition identified in this AD. The inspection required by paragraph (i) of this AD is necessary to correct the unsafe condition on all Model GV-SP airplanes with a serial number in the range of 5001 through 5158. The FAA did not change this AD based on this comment.

Request To Include Terminating Action

Gulfstream requested that the FAA add terminating actions for the ALS revision proposed in paragraph (g) and for the inspection proposed in paragraph (i) of the proposed AD. Gulfstream stated that otherwise owners will have to comply for an indefinite period.

The FAA does not agree because paragraphs (g) and (i) of this AD require one-time actions and not repetitive actions; therefore, terminating action is not necessary. Once an operator has revised the maintenance or inspection program for its airplane by incorporating the applicable ALS revision, the operator has complied with paragraph (g) of this AD. As explained in the NPRM, although the service bulletins allow the inspection to be repeated indefinitely every 48 months, this AD does not. Instead, paragraph (i) of this AD requires the inspection once, and any necessary repairs within 48 months after the inspection. The FAA did not change this AD based on this comment.

Request To Remove Entry Into Service Criteria

Gulfstream requested that the FAA revise paragraph (i) of the proposed AD to remove the criteria that the inspection be required for airplanes “where more than 132 months have elapsed since the original certificate of airworthiness issue date (often referred to as entry into service date).” In support, Gulfstream explained that this language is no longer applicable because all affected airplanes have accumulated 132 months since entry into service. In addition, Gulfstream noted that the entry into service date and the original certificate of airworthiness issue date are two different dates and are not interchangeable.

The FAA agrees and has revised paragraph (i) of this AD accordingly.

Request To Remove Note Regarding ALS Inspections

Gulfstream requested that the FAA remove Note 2 to the introductory text of paragraph (i) of the proposed AD, which advised that the inspections listed in the ALS revision (required by paragraph (g) of the proposed AD) must be done at the same time as the Part II inspection. Gulfstream stated it is not necessary to mandate the ALS maintenance inspections at the same time as the Part II

inspection of the horizontal stabilizer lower skin for bond line corrosion. Gulfstream explained there is no reason to accomplish these actions together and doing so could result in duplication of efforts.

The FAA agrees that, to correct the unsafe condition, the ALS maintenance inspections are not required at the same time as the airworthiness inspection of the horizontal stabilizer lower skin for bond line corrosion. However, operators may align these inspections to establish a baseline for the required repetitive inspection intervals. The FAA has revised Note 2 to the introductory text of paragraph (i) of this AD accordingly.

Request To Clarify Note 2 of the Proposed AD

Gulfstream requested the FAA clarify the intent and placement of Note 2, which was located after the introductory text of paragraph (i) of the proposed AD and before paragraphs (i)(1) and (2) of the proposed AD. Gulfstream explained that due to the placement of the note, it is unclear whether paragraphs (i)(1) and (2) of the proposed AD are part of the note or whether they are lower level paragraphs of paragraph (i) of the proposed AD. Gulfstream also stated that this note does not follow FAA policy and guidance, which states that notes are for informational purposes, because it introduces a requirement not otherwise stated in the AD.

Paragraphs (i)(1) and (2) of this AD are lower level paragraphs of paragraph (i) of this AD. Paragraph (i) of this AD requires inspecting the horizontal stabilizer lower skin for bond line corrosion and applying CIC. Paragraphs (i)(1) and (2) of this AD provide the compliance time for repairing any corrosion found as a result of the inspection: either within 48 months after applying CIC if the corrosion is within allowable damage limits, or before further flight if any corrosion exceeds allowable damage limits. The placement of the note after the introductory text of paragraph (i) of this AD follows the formatting requirements for regulatory documents in the Office of the Federal Register's Document Drafting Handbook. The FAA did not change this AD based on this comment.

Request To Remove Paragraphs (i)(1) and (2) of the Proposed AD

Gulfstream requested that the FAA remove paragraphs (i)(1) and (2) of the proposed AD, which proposed to require, after performing the Part II inspection, repairing the area using a method approved by Gulfstream's Organization Designation Authorization (ODA). Gulfstream stated that these paragraphs are unnecessary and redundant with normal operating and repair station procedures. Gulfstream further noted that the FAA's regulations in 14 CFR part 43 already require that aircraft with corrosion exceeding allowable damage limits be repaired and in an airworthy state before approval for return to service.

The FAA disagrees with removing paragraph (i)(2) of this AD. For corrosion that exceeds allowable damage limits, the FAA finds that the repair mandated by paragraph (i)(2) of this AD is required to address the identified unsafe condition. Aircraft found with corrosion that exceeds allowable damage limits will require corrective action that may appreciably affect the structural strength of the airframe. FAA-approved (or ODA-approved) engineering data will likely be required to return the aircraft to service. In addition, the FAA is unaware of a repair procedure or specification that could be used to approve all affected aircraft for return to service. Rather, unique, airplane-specific repairs will be necessary.

However, the FAA agrees that standard maintenance practices are sufficient to repair corrosion within allowable limits and has revised paragraph (i)(1) of this AD accordingly. The FAA has also clarified the scope of the repair required after the CIC application by revising paragraph (i)(1) of this AD. Instead of the broader requirement to repair "the area," that paragraph now specifies repairing "all bond line corrosion." This change will decrease the burden of this requirement on operators while appropriately addressing bond line corrosion.

Request To Address Airplanes Repaired Prior to AD Issuance

Gulfstream requested that, for airplanes that have been “permanently” repaired prior to AD issuance, the FAA give operators the full benefit of the repair. Alternatively, Gulfstream suggested the FAA allow a 48-month compliance time, the same as for an airplane with allowable bond line corrosion, to avoid immediately grounding airplanes.

The FAA agrees operators should have the benefit of repairs accomplished by Gulfstream before the effective date of the AD, provided Gulfstream's ODA approves those repairs as restoring the airplane to its type certification basis. The FAA infers that by “permanent” repair, Gulfstream is referring to repairs to airplanes found with corrosion exceeding allowable damage limits. Gulfstream has accomplished these repairs on many of the affected airplanes prior to the effective date of the AD under its ODA procedures. In the NPRM, the FAA proposed that these repairs must be made using a method approved by Gulfstream's ODA under the procedures for alternative methods of compliance (AMOCs). In order to more efficiently give operators the benefit of these repairs, the FAA has revised paragraph (i)(2) of this AD to require an FAA-approved or ODA-approved repair method without using AMOC procedures. The document approving the repair method must still specifically reference this AD.

The FAA finds that the additional compliance time requested by Gulfstream is unnecessary. Operators have 12 months after the effective date of this AD to perform the resonance C-Scan (Part II) inspection required by the introductory text of paragraph (i) of this AD, apply CIC, and repair any corrosion that exceeds allowable limits using an FAA-approved or ODA-approved method. Operators have this same 12-month compliance time to take credit for any actions “already done” under paragraph (f) of this AD, including “permanent” repairs that Gulfstream's ODA may need to approve by specifically referring to this AD.

Request To Clarify Allowable Damage Limit

Gulfstream requested that the FAA revise paragraph (i)(2) of the proposed AD to clarify that the term “allowable damage limit” means the allowable damage limits provided by Gulfstream as the original equipment manufacturer. Gulfstream explained that these limits are defined in various Gulfstream documents.

The FAA agrees to clarify the term “allowable damage limit” and has revised paragraph (i)(2) of this AD to specify that the limits are those in the applicable service information or those approved by Gulfstream's ODA.

Request To Clarify Required for Compliance (RC) Steps

Gulfstream requested that the FAA revise paragraph (j)(4)(i) of the proposed AD (paragraph (k)(4)(i) of this AD) to clarify that operators only need to comply with the RC steps required by paragraph (i) of the proposed AD. Gulfstream noted that paragraph (j)(4)(i), as proposed, implies that operators would have to do all of the actions labeled “RC” in the customer bulletin, even though the proposed AD does not specify all of those steps.

The FAA agrees and has revised paragraph (k)(4)(i) of this AD accordingly.

Additional Changes Made to This AD

After the NPRM was issued, Gulfstream revised the portions of the ALS that are relevant to the proposed AD: Section F and Table 11: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream G500-5000 Aircraft Maintenance Manual, Revision 36, dated March 15, 2022; Section F and Table 11: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream G550 Aircraft Maintenance Manual,

Revision 36, dated March 15, 2022; and Section F and Table 12: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream V Aircraft Maintenance Manual, Revision 55, dated March 15, 2022. The FAA reviewed these revisions and determined they do not require additional work or impose any substantive changes to those proposed in the NPRM. Therefore, the FAA has revised paragraph (g) of this AD to require incorporating these later-issued revisions of the applicable section and table of Section 05-10-10 of the ALS. The FAA has also added paragraph (j) of this AD to provide credit for operators who have revised their ALS before the effective date of this AD using the ALS revisions specified in the NPRM. Subsequent paragraphs have been re-designated accordingly.

The FAA has also updated the ALS table number reference in paragraphs (g)(2) and (3) of this AD. This reference changed from Table 12 to Table 11 when Gulfstream revised Section 05-10-10 of the applicable AMMs.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for the changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Gulfstream G500-5000 Customer Bulletin No. 190, Revision B; Gulfstream G550 Customer Bulletin No. 190, Revision B; and Gulfstream GV Customer Bulletin No. 228, Revision B; all dated October 31, 2019. For the applicable marketing designation specified on each document, the customer bulletins specify procedures for inspecting the horizontal stabilizer lower bonded skin.

The FAA also reviewed Section F and Table 12: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream V Aircraft Maintenance Manual, Revision 55, dated March 15, 2022; Section F and Table 11: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream G500-5000 Aircraft Maintenance Manual, Revision 36, dated March 15, 2022; and Section F and Table 11: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream G550 Aircraft Maintenance Manual, Revision 36, dated March 15, 2022. For the applicable marketing designation specified on each document, the service information contains inspection intervals for nondestructive testing of the lower horizontal stabilizer skins and provides the specific reference for the inspection procedures.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

The FAA also reviewed the following service documents related to this final rule.

- Gulfstream Service Letter Document No. GSL505510019, Revision E, dated September 3, 2021, which contains allowable damage limits for the horizontal stabilizer assembly.
- Gulfstream Service Letter Document No. GSL505510020, Revision C, dated March 12, 2020, which contains procedures for applying CIC to the horizontal stabilizer.
- Gulfstream V Nondestructive Testing Procedures Manual Chapter 05-00-00, 1. Horizontal Stabilizer Lower Skin Resonance C-Scan–NDT Procedure.

Differences Between This AD and the Service Information

The differences between Gulfstream G500-5000 Customer Bulletin No. 190, Revision B; Gulfstream G550 Customer Bulletin No. 190, Revision B; and Gulfstream V Customer Bulletin No. 228, Revision B; all dated October 31, 2019; and this AD are listed below.

- The customer bulletins exclude certain serial-numbered airplanes inspected by Gulfstream, but this AD applies to all Model GV and GV-SP airplanes.
- The customer bulletins include an optional horizontal stabilizer lower skin resonance A-Scan NDT inspection (referred to in the customer bulletins as “Part I Inspection”) for critical areas of the horizontal stabilizer bonded lower skin assemblies, but this AD does not require the Part I Inspection.
- The customer bulletins allow the horizontal stabilizer lower skin resonance C-Scan NDT inspection (referred to in the customer bulletins as a “Part II Inspection”) and application of CIC to be repeated indefinitely every 48 months. This AD only allows the Part II inspection to be performed one time and, within 48 months after the inspection, requires approved repairs.
- The customer bulletins contain actions labeled RC, and the language in the customer bulletins and in paragraph (k)(4) of this AD indicate that operators must comply with all actions labeled RC for compliance with this AD. However, this AD does not require all of the steps in the customer bulletins that are labeled as RC. Operators only need to comply with the RC steps required by paragraph (i) of this AD.

Costs of Compliance

The FAA estimates that this AD affects up to 694 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per airplane	Cost on U.S. operators
Resonance C-Scan NDT (Part II) inspection and CIC application	80 work-hours × \$85 per hour = \$6,800	Not applicable	\$6,800	\$2,196,400 (for 323 airplanes).
AMM revision	1 work-hour × \$85 per hour = \$85	Not applicable	85	\$58,990 (for 694 airplanes).

The extent of corrosion found during the inspection may vary significantly from airplane to airplane. The FAA has no way of determining the number of airplanes that might need repair or the cost to repair each airplane.

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

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 this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, 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.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

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 airworthiness directive:



AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/
www.gpoaccess.gov/fr/advanced.html

2022-16-04 Gulfstream Aerospace Corporation: Amendment 39-22133; Docket No. FAA-2021-0958; Project Identifier 2019-CE-010-AD.

(a) Effective Date

This airworthiness directive (AD) is effective September 7, 2022.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Gulfstream Aerospace Corporation Model GV and GV-SP airplanes, all serial numbers, certificated in any category.

Note 1 to paragraph (c): Model GV-SP airplanes are also referred to by the marketing designations G500, G550, and G500-5000.

(d) Subject

Joint Aircraft System Component (JASC) Code 5510, Horizontal Stabilizer Structure.

(e) Unsafe Condition

This AD results from corrosion of the horizontal stabilizer lower bonded skin assemblies. The FAA is issuing this AD to detect and correct bond line corrosion, which if not addressed, could result in compromise of the structural integrity of the horizontal stabilizer and lead to loss of control of the airplane.

(f) Compliance

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

(g) Incorporation of Airworthiness Limitations (ALS) Revisions

Within 30 days after the effective date of this AD, incorporate into your existing maintenance or inspection program the ALS revision specified in paragraph (g)(1), (2), or (3) of this AD for your applicable airplane designation.

(1) For Model GV airplanes: Section F and Table 12: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream V Aircraft Maintenance Manual, Revision 55, dated March 15, 2022.

(2) For Model GV-SP (G500 and G500-5000) airplanes: Section F and Table 11: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time

Limits/Maintenance Checks, of the Gulfstream G500-5000 Aircraft Maintenance Manual, Revision 36, dated March 15, 2022.

(3) For Model GV-SP (G550) airplanes: Section F and Table 11: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream G550 Aircraft Maintenance Manual, Revision 36, dated March 15, 2022.

(h) Applicable Customer Bulletins

The customer bulletins specified in paragraphs (h)(1) through (3) of this AD contain procedures for compliance with the actions required by paragraph (i) of this AD for your applicable airplane designation:

- (1) Gulfstream GV Customer Bulletin No. 228, Revision B, dated October 31, 2019;
- (2) Gulfstream G500-5000 Customer Bulletin No. 190, Revision B, dated October 31, 2019; or
- (3) Gulfstream G550 Customer Bulletin No. 190, Revision B, dated October 31, 2019.

(i) Inspection

For Model GV airplanes, all serial numbers, and Model GV-SP airplanes, serial numbers 5001 through 5158: Within 12 months after the effective date of this AD, perform the horizontal stabilizer lower skin resonance C-Scan inspection (Part II inspection) for bond line corrosion and apply corrosion inhibiting compound (CIC) by following steps 6.2.a. through 6.2.e. and 6.3.a. of appendix A of the applicable customer bulletin listed in paragraph (h) of this AD.

Note 2 to the introductory text of paragraph (i): Operators may align the inspections listed in the applicable ALS revision in paragraph (g) of this AD with the Part II inspection.

(1) Within 48 months after applying CIC, repair all bond line corrosion.

(2) If there is bond line corrosion that exceeds the allowable damage limits in Table 2 of appendix A of the applicable customer bulletin listed in paragraph (h) of this AD, or other allowable damage limits established by an appropriately authorized Gulfstream Organization Designation Authorization (ODA) unit member, repair all bond line corrosion before further flight using a repair approved by the FAA or an appropriately authorized Gulfstream ODA unit member.

(i) For a repair method to be approved by the FAA, the FAA's approval of the repair must specifically refer to this AD.

(ii) For a repair method to be approved by a Gulfstream ODA unit member, the unit member must be authorized in writing by the Manager of the Atlanta ACO Branch to approve repairs for this AD, and the unit member's approval of the repair must specifically refer to this AD.

(j) Credit for Previous Actions

You may take credit for the ALS revision required by paragraph (g) of this AD if you revised the ALS before the effective date of this AD using the service information specified in paragraph (j)(1), (2), or (3) of this AD, as applicable to your airplane designation.

(1) For Model GV airplanes: Section F and Table 12: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream V Aircraft Maintenance Manual, Revision 53, dated February 28, 2020.

(2) For Model GV-SP (G500 and G500-5000) airplanes: Section F and Table 11: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream G500-5000 Aircraft Maintenance Manual, Revision 34, dated March 15, 2021.

(3) For Model GV-SP (G550) airplanes: Section F and Table 12: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream G550 Aircraft Maintenance Manual, Revision 34, dated March 15, 2021.

(k) 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 local Flight Standards District 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 (l)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by a Gulfstream Engineering Authorized Representative (EAR) of the Gulfstream ODA that has been authorized by the Manager, Atlanta ACO Branch, to make those findings. To be approved, the repair, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) For service information that contains steps that are labeled as Required for Compliance (RC), the following provisions apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, that are required by paragraph (i) of this AD must be done to comply with this AD. An AMOC is required for any deviations to RC steps required by paragraph (i) of this AD, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(l) Related Information

(1) For more information about this AD, contact Ronald Wissing, Aviation Safety Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5552; email: 9-ASO-ATLACO-ADs@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (m)(3) and (4) of this AD.

(m) Material Incorporated by Reference

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

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Gulfstream G500-5000 Customer Bulletin No. 190, Revision B, dated October 31, 2019.

(ii) Gulfstream G550 Customer Bulletin No. 190, Revision B, dated October 31, 2019.

(iii) Gulfstream GV Customer Bulletin No. 228, Revision B, dated October 31, 2019.

(iv) Section F and Table 11: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream G500-5000 Aircraft Maintenance Manual, Revision 36, dated March 15, 2022.

(v) Section F and Table 11: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream G550 Aircraft Maintenance Manual, Revision 36, dated March 15, 2022.

(vi) Section F and Table 12: Horizontal Stabilizer Inspection Table in Section 05-10-10, Airworthiness Limitations, of Chapter 05, Time Limits/Maintenance Checks, of the Gulfstream V Aircraft Maintenance Manual, Revision 55, dated March 15, 2022.

(3) For service information identified in this AD, contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O. Box 2206, Savannah, GA 31402; phone: (800) 810-4853; fax: (912) 965-3520; email: pubs@gulfstream.com; website: www.gulfstream.com/en/customer-support/.

(4) You may view this service information at FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on July 26, 2022.

Christina Underwood,

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

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