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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-0199; Product Identifier 2020-NM-035-AD; Amendment 39-19860; AD 2020-05-12]

RIN 2120-AA64

Airworthiness Directives; Gulfstream Aerospace Corporation Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Gulfstream Aerospace Corporation Model GVII-G500 and GVII-G600 airplanes. This AD requires revising the airplane flight manual (AFM) for your airplane to incorporate revised limitations and procedures. This AD was prompted by a report of a landing incident where the alpha limiter engaged in the landing flare in unstable air while on the approach, resulting in a high rate of descent landing and damage to the airplane. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective March 13, 2020.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of March 13, 2020.

The FAA must receive comments on this AD by April 27, 2020.

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 <https://www.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.

For service information identified in this final rule, contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O. Box 2206, Savannah, GA 31402-2206; telephone 800-810-4853; fax 912-965-3520; email pubs@gulfstream.com; internet <https://www.gulfstream.com/customer->

support. You may view this service information at the FAA, Policy and Innovation Division, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148. It is also available on the internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0199.

Examining the AD Docket

You may examine the AD docket on the internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0199; 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, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Myles Jalalian, Aerospace Engineer, Systems and Equipment Section, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5572; fax: 404-474-5606; email: Myles.Jalalian@faa.gov.

SUPPLEMENTARY INFORMATION: **Discussion**

The FAA has received a report of a Gulfstream Model GVII-G500 airplane that was involved in a landing incident where the alpha (angle of attack) limiter engaged during the landing flare in unstable air. The engagement of the alpha limiter resulted in insufficient nose-up authority to control the descent rate at touchdown even though the sidestick was in the full aft position. The airplane landed in a 900-feet-per-minute descent, with resulting damage to the airplane. The flight control system alpha limiter can engage even when the airplane is not near a critical angle of attack and limit the pilot's pitch authority in the flare, resulting in a landing at a high rate of descent. Unstable air, combined with rapid, large, and alternating pitch commands, contributes to the alpha limiter engaging at an inappropriate time, possibly resulting in a high rate of descent contact with the runway and loss of control of the airplane as a result of a hard landing. To address this issue, the FAA is requiring revisions to be made to the AFM for your airplane. The revised AFM limits the maximum crosswind component for landing, and also increases the normal approach speeds, based on steady-state winds and wind gusts. These new and revised operating limitations and revised landing procedures minimize the possibility of unintended alpha limiter engagement thereby minimizing the possibility of reduced pilot flight control authority during the landing flare.

Related Service Information Under 1 CFR Part 51

The FAA reviewed following service information, which has been revised to provide new and revised operating limitations and flight control and landing procedures in strong winds and gusty conditions.

Gulfstream GVII-G500 Airplane Flight Manual, GAC-AC-GVII-G500-OPS-0001, Revision 5, dated March 3, 2020.

- Step 3., “Wind Conditions,” of Section 01-02-10, “Runway, Slope and Wind Conditions,” of Chapter 01, “LIMITATIONS.”
- Step 15., “Approach Speed,” of Section 01-03-40, “Airspeed Limitations,” of Chapter 01, “LIMITATIONS.”
- Section 01-27-10, “Normal Control Laws,” of Chapter 01, “LIMITATIONS.”
- Step 5., Section 01-34-40, “Takeoff and Landing Data (TOLD),” of Chapter 01, “LIMITATIONS.”

- “WARNING,” preceding Step 4. of Section 02-05-50, “Landing,” of Chapter 02, “NORMAL OPERATIONS.”
- Step 11., “Landing,” of Section 03-12-10, “Zero Flaps or Partial Flaps Landings,” of Chapter 03, “ABNORMAL PROCEDURES.”
- Step 8., “Final Approach Fix,” of Section 04-08-40, “One Engine Inoperative Landing Procedure,” of Chapter 04, “EMERGENCY PROCEDURES.”
- Step 1, “Introduction,” of Section 05-11-10, “Threshold Speeds,” of Chapter 05, “PERFORMANCE FAA BASELINE.”
- Step 1, “Introduction,” of Section 5A-11-10, “Threshold Speeds,” of Chapter 5A, “PERFORMANCE (ASC 022).”

Gulfstream GVII-G600 Airplane Flight Manual, GAC-AC-GVII-G600-OPS-0001, Revision 3, dated March 3, 2020.

- Step 3., “Wind Conditions,” of Section 01-02-10, “Runway, Slope and Wind Conditions,” of Chapter 01, “LIMITATIONS.”
- Step 15., “Approach Speed,” of Section 01-03-40, “Airspeed Limitations,” of Chapter 01, “LIMITATIONS.”
- Section 01-27-10, “Normal Control Laws,” of Chapter 01, “LIMITATIONS.”
- Steps 3. and 4., Section 01-34-40, “Takeoff and Landing Data (TOLD),” of Chapter 01, “LIMITATIONS.”
- “WARNING,” preceding Step 4., of Section 02-05-50, “Landing,” of Chapter 02, “NORMAL OPERATIONS.”
- Step 11., “Landing,” of Section 03-12-10, “Zero Flaps or Partial Flaps Landings,” of Chapter 03, “ABNORMAL PROCEDURES.”
- Step 8., “Final Approach Fix,” of Section 04-08-40, “One Engine Inoperative Landing Procedure,” of Chapter 04, “EMERGENCY PROCEDURES.”
- Step 1, “Introduction,” of Section 05-11-10, “Threshold Speeds,” of Chapter 05, “PERFORMANCE.”
- Step 1, “Introduction,” of Section 05-11-20, “Tire Speed and BKE Limited Maximum Landing Weight,” of Chapter 05, “PERFORMANCE.”

These documents are distinct because they apply to different airplane models. 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.

FAA's Determination

The FAA is issuing this AD because the agency evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

AD Requirements

This AD requires revising the AFM for your airplane to incorporate revised limitations and procedures. Specific revisions must be made to the sections of the applicable AFM described previously.

This AD specifies that the owner/operator (pilot) may revise the AFM. Revising an AFM is not considered a maintenance action that must be performed by a certified person as specified in 14 CFR 43.3 and may be done by a pilot holding at least a private pilot certificate. This action must be recorded in the aircraft maintenance records to show compliance with this AD.

Interim Action

The FAA considers this AD interim action. The manufacturer is currently developing a modification that will address the unsafe condition identified in this AD. Once this modification is developed, approved, and available, the FAA might consider additional rulemaking.

Justification for Immediate Adoption and Determination of the Effective Date

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) (5 U.S.C.) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for “good cause,” finds that those procedures are “impracticable, unnecessary, or contrary to the public interest.” Under this section, an agency, upon finding good cause, may issue a final rule without seeking comment prior to the rulemaking. Similarly, Section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause.

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies foregoing notice and comment prior to adoption of this rule because, as described in the Discussion section of this AD, inappropriate alpha limiter engagement during the landing flare limits the pilot's pitch authority during a critical phase of flight near the ground, and could result in a landing at a high rate of descent and the possible consequent loss of control of the airplane. Given the significance of the risk presented by this unsafe condition, it must be immediately addressed.

Accordingly, notice and opportunity for prior public comment are impracticable pursuant to 5 U.S.C. 553(b)(3)(B). In addition, for the reasons stated above, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days.

Regulatory Flexibility Act (RFA)

The requirements of the RFA do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without notice and comment, RFA analysis is not required.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, the FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2020-0199 and Product Identifier 2020-NM-035-AD at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this final rule. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

The FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this final rule.

Costs of Compliance

The FAA estimates that this AD affects 62 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 product	Cost on U.S. operators
AFM revision	1 work-hour × \$85 per hour = \$85	\$0	\$85	\$5,270

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, and
- (2) Will not affect intrastate aviation in Alaska.

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 airworthiness directive (AD):



2020-05-12 Gulfstream Aerospace Corporation: Amendment 39-19860; Docket No. FAA-2020-0199; Product Identifier 2020-NM-035-AD.

(a) Effective Date

This AD is effective March 13, 2020.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Gulfstream Aerospace Corporation Model GVII-G500 and GVII-G600 airplanes, certificated in any category, all serial numbers.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by report of a landing incident in which the alpha limiter engaged in the landing flare in unstable air while on the approach, resulting in a high rate of descent landing and damage to the airplane. The FAA is issuing this AD to address inappropriate alpha limiter engagement during the landing flare, which can limit pilot pitch authority during a critical phase of flight near the ground, and result in a high rate of descent landing and the possible consequent loss of control of the airplane on landing.

(f) Compliance

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

(g) AFM Revision for GVII-G500

For Model GVII-G500 airplanes: Within 5 days after the effective date of this AD, revise the airplane flight manual (AFM) for your airplane to incorporate the information specified in paragraphs (g)(1) through (9) of this AD.

(1) Step 3. "Wind Conditions" of Section 01-02-10, "Runway, Slope and Wind Conditions," of Chapter 01, "LIMITATIONS," of the Gulfstream GVII-G500 Airplane Flight Manual, GAC-AC-GVII-G500-OPS-0001, Revision 5, dated March 3, 2020.

(2) Step 15. "Approach Speed" of Section 01-03-40, "Airspeed Limitations," of Chapter 01, "LIMITATIONS," of the Gulfstream GVII-G500 Airplane Flight Manual, GAC-AC-GVII-G500-OPS-0001, Revision 5, dated March 3, 2020.

(3) Section 01-27-10, “Normal Control Laws,” of Chapter 01, “LIMITATIONS,” of the Gulfstream GVII-G500 Airplane Flight Manual, GAC-AC-GVII-G500-OPS-0001, Revision 5, dated March 3, 2020.

(4) Step 5. of Section 01-34-40, “Takeoff and Landing Data (TOLD),” of Chapter 01, “LIMITATIONS,” of the Gulfstream GVII-G500 Airplane Flight Manual, GAC-AC-GVII-G500-OPS-0001, Revision 5, dated March 3, 2020.

(5) “WARNING,” preceding Step 4., of Section 02-05-50, “Landing,” of Chapter 02, “NORMAL OPERATIONS,” of the Gulfstream GVII-G500 Airplane Flight Manual, GAC-AC-GVII-G500-OPS-0001, Revision 5, dated March 3, 2020.

(6) Step 11. “Landing,” of Section 03-12-10, “Zero Flaps or Partial Flaps Landings,” of Chapter 03, “ABNORMAL PROCEDURES,” of the Gulfstream GVII-G500 Airplane Flight Manual, GAC-AC-GVII-G500-OPS-0001, Revision 5, dated March 3, 2020.

(7) Step 8. “Final Approach Fix,” of Section 04-08-40, “One Engine Inoperative Landing Procedure,” of Chapter 04, “EMERGENCY PROCEDURES,” of the Gulfstream GVII-G500 Airplane Flight Manual, GAC-AC-GVII-G500-OPS-0001, Revision 5, dated March 3, 2020.

(8) Step 1., “Introduction,” of Section 05-11-10, “Threshold Speeds,” of Chapter 05, “PERFORMANCE FAA BASELINE,” of the Gulfstream GVII-G500 Airplane Flight Manual, GAC-AC-GVII-G500-OPS-0001, Revision 5, dated March 3, 2020.

(9) Step 1., “Introduction,” of Section 5A-11-10, “Threshold Speeds,” of Chapter 5A, “PERFORMANCE (ASC 022),” of the Gulfstream GVII-G500 Airplane Flight Manual, GAC-AC-GVII-G500-OPS-0001, Revision 5, dated March 3, 2020.

(h) AFM Revision for GVII-G600

For Model GVII-G600 airplanes: Within 5 days after the effective date of this AD, revise the AFM for your airplane to incorporate the information specified in paragraphs (h)(1) through (9) of this AD.

(1) Step 3., “Wind Conditions” of Section 01-02-10, “Runway, Slope and Wind Conditions,” of Chapter 01, “LIMITATIONS,” of the Gulfstream GVII-G600 Airplane Flight Manual, GAC-AC-GVII-G600-OPS-0001, Revision 3, dated March 3, 2020.

(2) Step 15., “Approach Speed” of Section 01-03-40, “Airspeed Limitations,” of Chapter 01, “LIMITATIONS,” of the Gulfstream GVII-G600 Airplane Flight Manual, GAC-AC-GVII-G600-OPS-0001, Revision 3, dated March 3, 2020.

(3) Section 01-27-10, “Normal Control Laws,” of Chapter 01, “LIMITATIONS,” of the Gulfstream GVII-G600 Airplane Flight Manual, GAC-AC-GVII-G600-OPS-0001, Revision 3, dated March 3, 2020.

(4) Steps 3. and 4. of Section 01-34-40, “Takeoff and Landing Data (TOLD),” of Chapter 01, “LIMITATIONS,” of the Gulfstream GVII-G600 Airplane Flight Manual, GAC-AC-GVII-G600-OPS-0001, Revision 3, dated March 3, 2020.

(5) “WARNING,” preceding Step 4., of Section 02-05-50, “Landing,” of Chapter 02, “NORMAL OPERATIONS,” of the Gulfstream GVII-G600 Airplane Flight Manual, GAC-AC-GVII-G600-OPS-0001, Revision 3, dated March 3, 2020.

(6) Step 11., “Landing,” of Section 03-12-10, “Zero Flaps or Partial Flaps Landings,” of Chapter 03, “ABNORMAL PROCEDURES,” of the Gulfstream GVII-G600 Airplane Flight Manual, GAC-AC-GVII-G600-OPS-0001, Revision 3, dated March 3, 2020.

(7) Step 8., “Final Approach Fix,” of Section 04-08-40, “One Engine Inoperative Landing Procedure,” of Chapter 04, “EMERGENCY PROCEDURES,” of the Gulfstream GVII-G600 Airplane Flight Manual, GAC-AC-GVII-G600-OPS-0001, Revision 3, dated March 3, 2020.

(8) Step 1., “Introduction,” of Section 05-11-10, “Threshold Speeds,” of Chapter 05, “PERFORMANCE,” of the Gulfstream GVII-G600 Airplane Flight Manual, GAC-AC-GVII-G600-OPS-0001, Revision 3, dated March 3, 2020.

(9) Step 1, "Introduction," of Section 05-11-20, "Tire Speed and BKE Limited Maximum Landing Weight," of Chapter 05, "PERFORMANCE," of the Gulfstream GVII-G600 Airplane Flight Manual, GAC-AC-GVII-G600-OPS-0001, Revision 3, dated March 3, 2020.

(i) 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 (j) 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.

(j) Related Information

For more information about this AD, contact Myles Jalalian, Aerospace Engineer, Systems and Equipment Section, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5572; fax: 404-474-5606; email: Myles.Jalalian@faa.gov.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) 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 GVII-G500 Airplane Flight Manual, GAC-AC-GVII-G500-OPS-0001, Revision 5, dated March 3, 2020.

(A) Step 3., "Wind Conditions," of Section 01-02-10, "Runway, Slope and Wind Conditions," of Chapter 01, "LIMITATIONS."

(B) Step 15., "Approach Speed," of Section 01-03-40, "Airspeed Limitations," of Chapter 01, "LIMITATIONS."

(C) Section 01-27-10, "Normal Control Laws," of Chapter 01, "LIMITATIONS."

(D) Step 5., Section 01-34-40, "Takeoff and Landing Data (TOLD)," of Chapter 01, "LIMITATIONS."

(E) "WARNING," preceding Step 4. of Section 02-05-50, "Landing," of Chapter 02, "NORMAL OPERATIONS."

(F) Step 11., "Landing," of Section 03-12-10, "Zero Flaps or Partial Flaps Landings," of Chapter 03, "ABNORMAL PROCEDURES."

(G) Step 8., "Final Approach Fix," of Section 04-08-40, "One Engine Inoperative Landing Procedure," of Chapter 04, "EMERGENCY PROCEDURES."

(H) Step 1, "Introduction," of Section 05-11-10, "Threshold Speeds," of Chapter 05, "PERFORMANCE FAA BASELINE."

(I) Step 1, "Introduction," of Section 5A-11-10, "Threshold Speeds," of Chapter 5A, "PERFORMANCE (ASC 022)."

(ii) Gulfstream GVII-G600 Airplane Flight Manual, GAC-AC-GVII-G600-OPS-0001, Revision 3, dated March 3, 2020.

(A) Step 3., "Wind Conditions," of Section 01-02-10, "Runway, Slope and Wind Conditions," of Chapter 01, "LIMITATIONS."

(B) Step 15., "Approach Speed," of Section 01-03-40, "Airspeed Limitations," of Chapter 01, "LIMITATIONS."

(C) Section 01-27-10, “Normal Control Laws,” of Chapter 01, “LIMITATIONS.”

(D) Steps 3. and 4., Section 01-34-40, “Takeoff and Landing Data (TOLD),” of Chapter 01, “LIMITATIONS.”

(E) “WARNING,” preceding Step 4. of Section 02-05-50, “Landing,” of Chapter 02, “NORMAL OPERATIONS.”

(F) Step 11., “Landing,” of Section 03-12-10, “Zero Flaps or Partial Flaps Landings,” of Chapter 03, “ABNORMAL PROCEDURES.”

(G) Step 8., “Final Approach Fix,” of Section 04-08-40, “One Engine Inoperative Landing Procedure,” of Chapter 04, “EMERGENCY PROCEDURES.”

(H) Step 1, “Introduction,” of Section 05-11-10, “Threshold Speeds,” of Chapter 05, “PERFORMANCE.”

(I) Step 1, “Introduction,” of Section 05-11-20, “Tire Speed and BKE Limited Maximum Landing Weight,” of Chapter 05, “PERFORMANCE.”

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

(4) You may view this service information at the FAA, Policy and Innovation Division, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

(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 fedreg.legal@nara.gov, or go to <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on March 6, 2020.

Lance T. Gant,
Director, Compliance & Airworthiness Division,
Aircraft Certification Service.