

FAA Continued Airworthiness Notification to Civil Aviation Authorities

To: Civil Aviation Authorities

Date: March 6, 2020

From: Federal Aviation Administration
Small Airplane Standards Branch
901 Locust Street
Kansas City, MO 64106

Subject: This message is to advise you of the FAA's ongoing activities related to unanticipated activation of the angle of attack limiting function of the flight control software (i.e., the alpha limiter) that can occur on Gulfstream Aerospace Model GVII-G500 and -G600 airplanes. The unintended engagement of the alpha limiter can occur as a result of rapid, large, and alternating control inputs on the side stick that could occur in unstable air on approach.

Accident/Incident Description: On February 7, 2020, Gulfstream GVII-G500, S/N 72017, experienced a hard landing at KTEB (Teterboro, NJ). The airplane was landing on runway 24 after a circling approach at night. The winds were 300 degrees at 15 knots gusting to 27 knots (crosswind components 13 knots, gusting to 23 knots). The demonstrated crosswind component for the GVII-G500 is 33 knots. The airplane touched down on the runway with a 900 ft/min (15 ft/sec) descent, resulting in a 3.6 g (vertical) touchdown, while the pilot had full nose-up side-stick input with inadequate elevator response to the pilot input. There were 3 crew members and 2 passengers onboard. No injuries were reported; however, the aircraft sustained damage to the landing gear.

It has been determined that inappropriate alpha limiter engagement during the landing flare can limit pilot pitch authority during a critical phase of flight near the ground, and possibly result in a high rate-of-descent landing and consequent loss of control of the airplane on landing.

Aircraft/Engine Model and Series: Gulfstream Aerospace Corporation Model GVII-G500 and GVII-G600 airplanes (Marketing designations G500 and G600).

Worldwide fleet: 71; U.S.-registered fleet: 62

Operators: These airplanes are operated as business jets.

Ongoing activities: On March 3, 2020, Gulfstream released AFM revisions for Model GVII-G500 and GVII-G600 airplanes, containing limitations and procedures to minimize the possibility of unintended alpha limiter engagement. Gulfstream notified all operators by issuance of a Maintenance Operations Letter containing the new AFM revision, along with an educational video to alert operators of this issue and to instruct operators how to avoid unintended alpha limiter engagement. The FAA is in the process of issuing an Immediately Adopted Rule (IAR) airworthiness directive to mandate the Gulfstream AFM revisions as interim corrective action. The FAA is working closely with Gulfstream to develop a terminating action to be implemented in the near future.

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****Note:** This information is for the use of civil aviation authorities only and should not be released to the public at this time.