

FAA Continued Airworthiness Notification to Civil Aviation Authorities

To: Civil Aviation Authorities

Date: November 21, 2019

From:

Federal Aviation Administration
Policy and Innovation Division
901 Locust, Room 301
Kansas City, MO 64106

Subject: This message is to advise you of the FAA's ongoing activities related to uncontrollable lateral-directional oscillations of the airplane that could occur on Gulfstream Aerospace Corporation (Gulfstream) Model GVI airplanes. These oscillations could occur after a rudder "shut-down" (rudder hydraulic actuators commanded by the Flight Control Computer into damped bypass mode).

Accident/Incident Description: On October 1, 2019, Gulfstream Model GVI (G650ER configuration) serial number 6235 experienced an in-flight event resulting in the airplane making an emergency landing with no rudder authority. The crew experienced an amber "Rudder Fail" crew alerting system message at flight level 340 and was unable to command any movement of the rudder. The crew attempted a Flight Control Reset, but the condition remained. Following the rudder "shut-down," the aircraft experienced sustained lateral-directional oscillations, which continued for eight minutes before the flight crew was able to arrest the oscillations. The flight crew declared an emergency and diverted to an alternate airport where the aircraft landed safely.

The FAA has determined that these oscillations could result in loss of control of the airplane or catastrophic structural damage when operated within the flight envelope at a high altitude or high airspeed.

Aircraft/Engine Model and Series: Gulfstream Model GVI (G650 and G650ER configurations).

Worldwide fleet: 389; U.S.-registered fleet: 262
Operators: These airplanes are operated as business jets.

Ongoing activities: On November 5, 2019, Gulfstream released an airplane flight manual supplement (AFMS) containing flight envelope restrictions and revised crew procedures to mitigate the risk of these oscillations. Gulfstream notified all operators by issuing a Maintenance Operations Letter containing the new AFMS. The FAA is in the process of issuing an immediately adopted rule (IAR) airworthiness directive (AD) to mandate the Gulfstream AFMS as interim corrective action. The FAA is also working with Gulfstream to develop a future terminating action.

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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.*