

ALERT BULLETIN

AB 2024:22/3-14

9/4/2024

2139763

TO: Gulfstream Aerospace Corporation

INFO: FAA (AVP-1, AVP-200, AFS-300, AFS-260, AFS-800, AFS-200, MKC-AEG, ANM-100, AIR-360), AMFA, AOPA, ASAP, ATSG, GAMA, IAM, IBT, ICASS, NBAA, NTSB, PAMA, TWU

FROM: Becky L. Hooey, Director
NASA Aviation Safety Reporting System

SUBJ: Gulfstream G650 Aileron Control Failure

We recently received ASRS reports describing a safety concern that may involve your area of operational responsibility. We do not have sufficient details to assess either the factual accuracy or possible gravity of the report. It is our policy to relay the reported information to the appropriate authority for evaluation and any necessary follow-up. We feel you should be aware of the following:

ASRS received a report from a G650 pilot describing the inflight failure of the left aileron control system. Reporter stated they were in cruise flight at FL470 when the aileron anomaly occurred, jerking the yoke to the left. An immediate descent was initiated, and the flight diverted to a suitable alternate airport. Reporter expressed concern that recovery from this event may not have been possible if it had occurred at low altitude.

To properly assess the usefulness of our alert message service, we would appreciate it if you would take the time to give us your feedback on the value of the information that we have provided. Please contact Dr. Becky Hooey at (408) 541-2854 or email at becky.l.hooey@nasa.gov.



Aviation Safety Reporting System
P.O. Box 189 | Moffett Field, CA | 94035-0189



ACN 2139763

DATE / TIME

Date of Occurrence 202406
Local Time Of Day 0601 to 1200

PLACE

Locale ZZZZ.ARTCC
State FO
Altitude - MSL 47000

ENVIRONMENT

Flight Conditions VMC

AIRCRAFT / EQUIPMENT X

ATC / Advisory - Center ZZZZ
Make Model Name Gulfstream G650
Operating Under FAR Part 91

COMPONENT 1

Aircraft Component Aileron Control System

PERSON 1

Function - Flight Crew Pilot Flying
ASRS Report Number 2139763

EVENTS

Anomaly Aircraft Equipment Problem - Critical
Anomaly Inflight Event / Encounter - Loss Of Aircraft Control
Detector - Automation Aircraft Other Automation
Detector - Person Flight Crew
Result - Flight Crew Overcame Equipment Problem
Result - Flight Crew Requested ATC Assistance / Clarification
Result - Air Traffic Control Issued New Clearance

NARRATIVE 1

Enroute from ZZZZ to ZZZ. Approximately 7 hours after takeoff. While in cruise flight at FL470, Mach .86. Aircraft jerked. Autopilot reverted to pitch and roll modes. Amber "L Aileron Fail" CAS (Crew Alert System) message illuminated. Disengaged autopilot, yoke jerked hard to the left. Significant manual control force required to regain wings level flight. Displayed flight control synoptic. Left aileron showed full up deflection in synoptic. Left aileron Hydraulic Actuator and left aileron Emergency Backup Hydraulic Actuator were both boxed Amber (failed). Completed "Aileron Fail" checklist. Flight Control Reset switch was ineffective. [Advised] ZZZZ Control.

Required immediate descent to reduce pitch to avoid aerodynamic stall due to high drag created by deflected left aileron, and counteracting right aileron and spoilers. Diverted to ZZZZ1 for best wind and runway length.

Performed controllability check. Landed without further incident. Recovery from this event would likely not be possible if it had occurred during takeoff or landing.

SYNOPSIS

G650 pilot reported an aileron control failure during cruise flight and had to immediately descend to avoid a stall. The pilot diverted to an alternate airport and safely landed.