ALERT BULLETIN

AB 2023:2/3-1
1/26/2023
1955247

TO: Gulfstream Aerospace Corporation, Honeywell Aerospace

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 G-IV Dual Flight Guidance Computer Failures

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 Gulfstream G-IV Captain describing the loss of both Flight Guidance Computers on final approach. Reporter stated that this was the second incident of this type in the last two weeks. Reporter suggested that cold weather could have been a factor, and recommended action by Gulfstream and/or Honeywell to address the issue.

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 1955247	
DATE / TIME	
Date of Occurrence	202212
Local Time Of Day	1801 to 2400
PLACE	
Locale	ZZZ.Airport
State	US
ENVIRONMENT	
Flight Conditions	VMC
AIRCRAFT / EQUIPMENT X	
Make Model Name	Gulfstream IV / G350 / G450
Operating Under FAR Part	91
COMPONENT 1	
Aircraft Component	Autoflight System
COMPONENT 2	
Aircraft Component	Autoflight System
PERSON 1	
Function - Flight Crew	Captain
Function - Flight Crew	Pilot Not Flying
ASRS Report Number	1955247
PERSON 2	
Function - Flight Crew	Captain
Function - Flight Crew	Pilot Flying
ASRS Report Number	1955248
EVENTS	
Anomaly	Aircraft Equipment Problem - Critical
Anomaly	Inflight Event / Encounter - Loss Of Aircraft Control
Detector - Automation	Aircraft Other Automation
Detector - Person	Flight Crew
Result - General	Flight Cancelled / Delayed
Result - Flight Crew	Took Evasive Action
NARRATIVE 1	

While on the RNAV (GPS) X Runway XX approach to ZZZ, between waypoints ZZZZZ and ZZZZZ1 and just after completing the before landing check with the aircraft fully configured for landing, we experienced a simultaneous failure of both Flight Guidance Computers (FGCs). Aircraft entered an uncommanded nose-down pitch attitude at which time the "FGC 1-2 FAIL" CAS message appeared along with audible alert. Autopilot, autothrottle, flight director, electric pitch trim and yaw damper all disconnected. PF (Pilot Flying) immediately took control of the airplane and corrected the pitch attitude while remaining on the approach course. We assessed and discussed the situation and decided due to our low altitude and close proximity to the runway that the best course of action was to continue the approach and landing without attempting to troubleshoot the anomalies. PF flew the aircraft while PM (Pilot Monitoring) manipulated the manual trim wheel at the PF's command. Aircraft landed safely without further incident.

This was the second simultaneous dual FGC failure in the G-IV fleet (two different aircraft) in the last two weeks. Both failures occurred during the approach phase of flight, and both occurred in cold weather environments (ZZZ1 and ZZZ). Suggest getting Gulfstream and/or Honeywell involved in identifying and remedying the root cause(s) of these failures. The potential for a catastrophic outcome from a similar failure under less optimal weather conditions or with a less experienced crew is rather high.

NARRATIVE 2

On an 8 mile final to Runway XX in ZZZ we experienced a dual flight guidance computer failure while flying the RNAV-GPS X Runway XX. The aircraft experienced an uncommanded pitch down as all automation including auto-throttles disconnected. The pitch trim and yaw dampener also failed. The aircraft was flown manually with no automation, no auto throttles, and manual pitch trim to an uneventful landing using raw data.

Please investigate with Gulfstream to fix the problem. Had this occurred in IMC with the slightest distraction the result could have been very different.

SYNOPSIS

Gulfstream G-IV Flight Crew reported loss of both Flight Guidance computers on final approach. Reporter stated this is a recurring issue.