# The Gulfstream Journal

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## G350®/G450® (ATA 31): PlaneView™ EDS Intermittent Failure – Q & A

Submitted by FlightSafety Savannah Learning Center

**Scenario**

A flight crew reported a momentary in-flight failure of multiple PlaneView modules with associated Crew Alerting System (CAS) messages. Because this was a momentary event, there was not enough time for the crew to take any corrective action before the condition cleared itself. However, the primary flight display (PFD) remained on display unit (DU) #2. This made it necessary to restore normal Electronic Display System (EDS) operation by depressing the Display Controller "2/3" selection switch capsule for three seconds. Over the course of the next four flights, the aircraft exhibited similar issues on two of the legs; again, none giving enough time to take any corrective action.

**Questions**

Why was it necessary for the flight crew to hold the DC "2/3" button in order to get the displays back to normal? What information, if any, is available to start the troubleshooting process, and what corrective action was taken to return the aircraft to service?

**Answer**

The original scenario is describing that there are multiple PlaneView module failures. The Quick Reference Handbook (QRH) Abnormal/Emergency Procedures page EF-3 states that "When an in-flight Advanced Graphics Module (AGM) signal loss occurs, the display format configuration conversion latches. Therefore, if a DU experiences an AGM signal loss and then the DU recovers to satisfactory operation, it will be necessary to hold the Display Controller '2/3' selection switch capsule in the depressed position for three (3) seconds in order to unlatch the display format conversion."

For troubleshooting the module failures, the Fault History Data Base was downloaded. Upon examination, it was noted that on the first leg, the failure was attributed to MAU3B Power Supply and/or Nic/Proc #6 faulting. The next flight leg failure was due to a fault with MAU1B Power Supply and/or NIC/Proc #2. The final flight leg exhibiting faults indicated that the issues were due to DGIO #1 and DGIO #2 failures.

With no clear indication as to what could cause these random faults, the decision was made to swap NIC/Proc #3 and #6 and reload software in accordance with Aircraft Maintenance Manual (AMM) section 20-22-00. The technician then performed torque checks of all MAU cabinet modules and connectors in accordance with ATA 31 of the AMM. While performing the torque check, the maintenance technician found MAU #1 NIC/Proc #2 with both upper and lower module screws backed off. On each screw, it was necessary to provide one half-turn before reaching torque requirement. MAU #2 Control I/O #2, Custom I/O #2, and SGIO #4 modules were each found with one of the

screws loose. MAU #3 Control I/O #3 was also found with loose upper and lower screws.

The loose fasteners were torqued and the remaining connectors torque was verified. The aircraft was returned to service with no further PlaneView failures.

The ability to use aircraft system knowledge and deductive reasoning is a skill that is developed through experience and practical application. It often becomes the difference between quick, efficient troubleshooting, which returns an aircraft to service, and extended downtime. Advanced level courses such as FlightSafety's *Advanced Troubleshooter* and *Operational Maintenance Procedures (OMP)* provide the opportunity to develop and practice these skills.

For more information about these programs, contact your FlightSafety Maintenance Training Support Representative. For a list of training centers, visit www.flightsafety.com .

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