



VAN'S AIRCRAFT
TOTAL PERFORMANCE

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SERVICE BULLETIN 00028

Date Released: June 15, 2021

Date Effective: June 15, 2021

Subject: GSU25C G3X Noise Induced Erroneous Attitude

Affected Models: RV-12 and RV-12iS aircraft equipped with Garmin G3X avionics kits shipped by Van's between March 2019 and June 2021.

SLSA RV-12iS aircraft with serial numbers 12081-12087 equipped with Garmin G3X

Required Action: Avoid flight at night, above an overcast cloud layer, or into any condition where failure of primary attitude indicator would create a significant safety issue, including Instrument Meteorological Conditions (IMC).

If inaccurate attitude indications exist, cease use of Automatic Flight Control Systems operation and disable ESP. Contact Van's Aircraft Support for further guidance and to obtain needed parts.

Time of Compliance: No further flight into the conditions listed above until addressed.

As soon as practicable, investigate if the described condition exists in VMC.

Supersedes Notice: N/A

Labor Required / SLSA Warranty Allowance: N/A

Level of Certification: SLSA: LSA Repairman Maintenance or A&P
ELSA: Owner (certification not required)
Check the rules of the local controlling authority/agency and the operating limitations for your aircraft.

Synopsis:

Flight testing on the RV-12iS has shown that airframe vibrations sometimes affect the performance of the GSU25C, specifically ones shipped in RV-12/12iS Garmin avionics kits beginning in June 2019. Units shipped prior to that date are not affected. The impact

of this issue is that the G3X may erroneously indicate attitude changes in pitch and roll while on the ground or in level flight.

If further flight is required before complying with this service bulletin on an affected aircraft, disable ESP through the G3X configuration menu and ensure all flight will be conducted and can remain in VFR conditions without the use of the autopilot.

Materials Required:

Upon verification that the issue exists (in collaboration with Van's Aircraft Support), the following materials are required to complete the necessary steps for compliance with this Service Bulletin.

SB-00028

- 4 ea. 51820 Bushing
- 4 ea. AN525-10R20 Screw
- 4 ea. AN970-3 Washer

Method of Compliance:

Step 1: Remove ADAHRS Baggage Floor Assembly. Ensure the pitot, static, and AOA pneumatic lines are labelled before removing. For RV-12, reference Section 42N. For RV-12iS, reference Section 42NiS.

Step 2: Remove GSU25C from ADAHRS Baggage Floor Assembly. Retain nuts and washers for reinstallation.

Step 3: Cut the shoulders off the 51820 bushings. Discard the smaller shafts. The larger portion of the bushing will be used as a vibration isolator for this service letter. See Figure 1.



FIGURE 1: CUTTING 51820 BUSHING

Step 4: Secure GSU25C to ADAHRS Baggage Floor Assembly with new isolators. Tighten the nuts so the GSU25C is lightly resting on the AN970-3 washers. See Figure 2 and Figure 3.

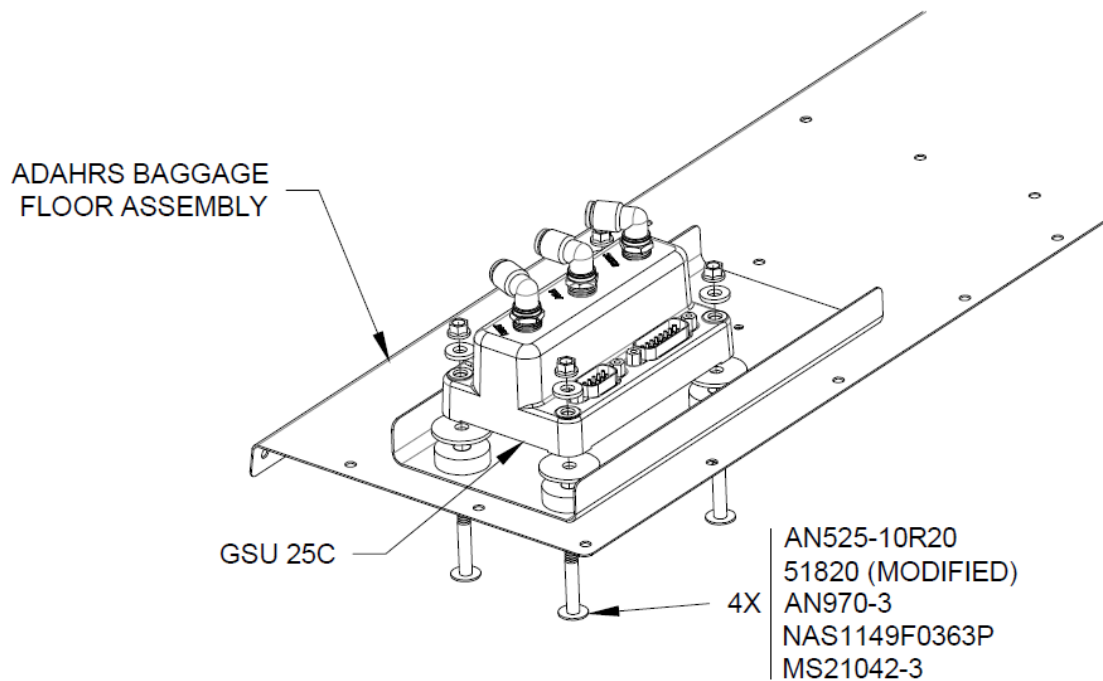


FIGURE 2: INSTALLING ADAHRS WITH ISOLATORS (RV-12iS SHOWN)

Step 5: Tighten the nuts so that the bushings are compressed evenly. Use calipers to measure the distance between the ADAHRS Baggage Floor Assembly and the top of the AN970-3 Washers. Adjust as necessary. Refer to Figure 3 for dimensions.

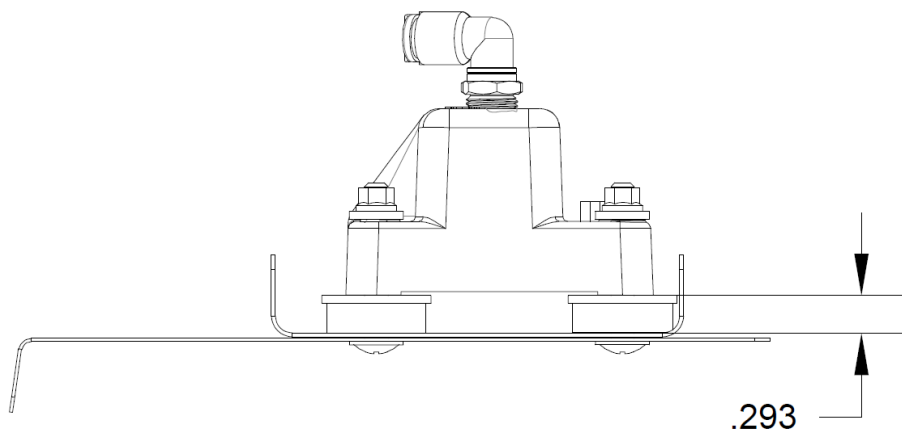


FIGURE 3: MEASURING COMPRESSION OF BUSHINGS (RV-12iS SHOWN)

Step 6: Reconnect pneumatic lines and both connectors to ADAHRS. Install ADAHRS Baggage Floor Assembly per Section 42N or Section 42NiS.

Step 7: Complete the ADAHRS calibration and Engine Run-up Test per the G3X Installation Manual. Contact Van's Aircraft Support if the ADAHRS fails the Engine Run-up Test.

Step 8: Make a logbook entry indicating compliance with service document per the requirements of the controlling authority/agency.

Place a copy of this notification in the back of the maintenance manual for your aircraft. Note the addition of this notification to the bottom of the Maintenance Manual table of contents.

If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and immediately notify Van's Aircraft, Inc. via email at registrations@vansaircraft.com.

Information regarding establishing/transferring aircraft ownership, registration and licensing is available at: <https://www.vansaircraft.com/qr/transfer-of-ownership/>