



This Safety Alert is issued per the requirements of ASTM F3198-18.
It is a Safety Directive for the purpose of compliance with 14 CFR § 91.327(b)(4).

EFFECTIVE DATE: This Service Alert is effective February 19, 2021.

SUBJECT: INSTALLATION OF ISOLATOR BUSHINGS FOR GARMIN GSU 25C ADAHRS
USED WITH GARMIN G3X DISPLAY

MODELS AFFECTED:

CC11 Serial Numbers:	All CCX/CCK Prior to Serial Numbers:
<ul style="list-style-type: none">• CC11-160-0433 through CC11-160-0435	<ul style="list-style-type: none">• CCX-1865-0031• CCK-2000-0056• CCX-2000-0113• CCX-2300-0020

This Service Alert pertains to the GSU 25 model "C" mounted in the wing in connection with the Garmin G3X. A visual inspection of the GSU unit can be carried out to verify which model is installed (see instructions below).

COMPLIANCE: RECOMMENDED AT NEXT PERIODIC INSPECTION OR SOONER

Compliance by installing isolator bushings mounting the GSU 25C is highly recommended. Compliance with this Service Alert is suggested and is at the sole discretion of the owner/operator/builder of the applicable listed Experimental Amateur-Built aircraft.

During flight, monitor primary and standby instruments closely to detect any disagreements. Should any deviations be observed, cease AFCS operation and disarm ESP.

Avoid flights into Instrument Meteorological Conditions (IMC) where precipitation may be encountered unless a dissimilar standby attitude source is installed. Reference G3X/G3X Touch Installation Manual, Section 2.1.1.24.

PURPOSE: *A few aircraft owners have indicated occurrences of erratic attitude information when operating in heavy rain.*

Garmin has determined that when the GSU 25(C) Air Data, Attitude, and Heading Reference System (ADAHRS) is subjected to significant amounts of acoustic noise energy, misleading attitude indications may result on the G3X display. Rain impacting the surface of a wing in flight can induce such acoustic energy. Depending on the intensity of the noise and the acoustic path of that energy to the ADAHRS, this acoustic energy may result in misleading attitude information. If a Garmin Automatic Flight Control System (AFCS) is installed, also commonly known as autopilot, an active flight director mode is likely to follow the incorrect attitude and an inactive autopilot may engage Electronic Stability Protection (ESP) functionality. (ESP Functions are typically disabled for builder-assist aircraft delivered from Cub Crafters).



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WARRANTY:

If the aircraft is under warranty, contact a Cub Crafters authorized service center to complete work. Parts will be provided, as necessary. Please contact Cub Crafters Customer support for assistance. A labor reimbursement for an authorized service center will be provided up to 1 hour if needed.

PARTS LIST:

PART	DESCRIPTION	QTY
SP70301-001	Isolator, Stud Mount, 10-32	4
AN3-6A	Bolt	3
AN3-7A	Bolt	1
RM0568-003	Loctite 242, Blue	AR
SC71377-003	Bonding Strap	1
AN960-10L	Washer, Flat, Thin	4
AN936-A10	Lock Washer, #10	3
AN526-1032R10	Screw-Truss Head	1
AN315-3R	Nut, Plain, Airframe	1
AN364-1032A	Nut, Nylon Lock	1

VERIFY MODEL OF GSU UNIT:

1. Open the inspection panel under the left wing, as shown in photo 1.
2. Looking forward into the inspection hole, you will see the GSU 25 mounted on the forward spar. Note the model number as shown on the unit, reference photo 2 and photo 3. If a GSU 25 model "C" is installed, proceed with the directions below to install isolator bushings between the spar and the GSU 25C. If a different model is installed, this service alert does not apply - replace the inspection cover and return aircraft to service.

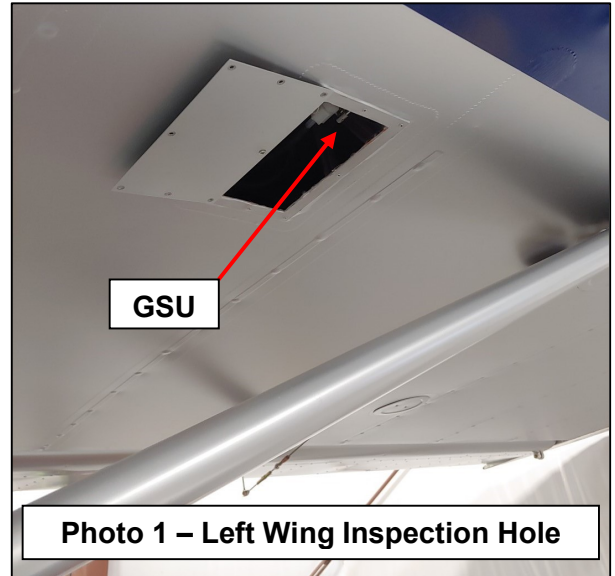


Photo 1 – Left Wing Inspection Hole

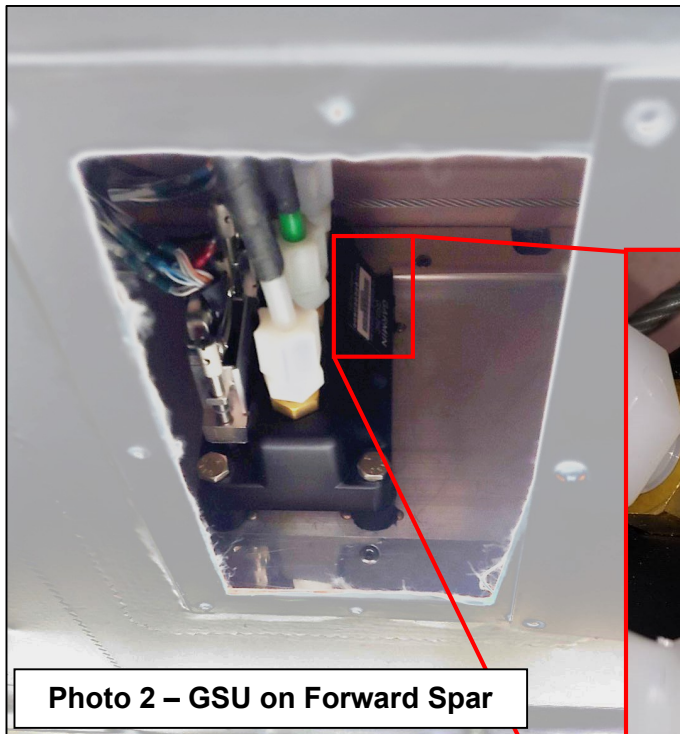


Photo 2 – GSU on Forward Spar

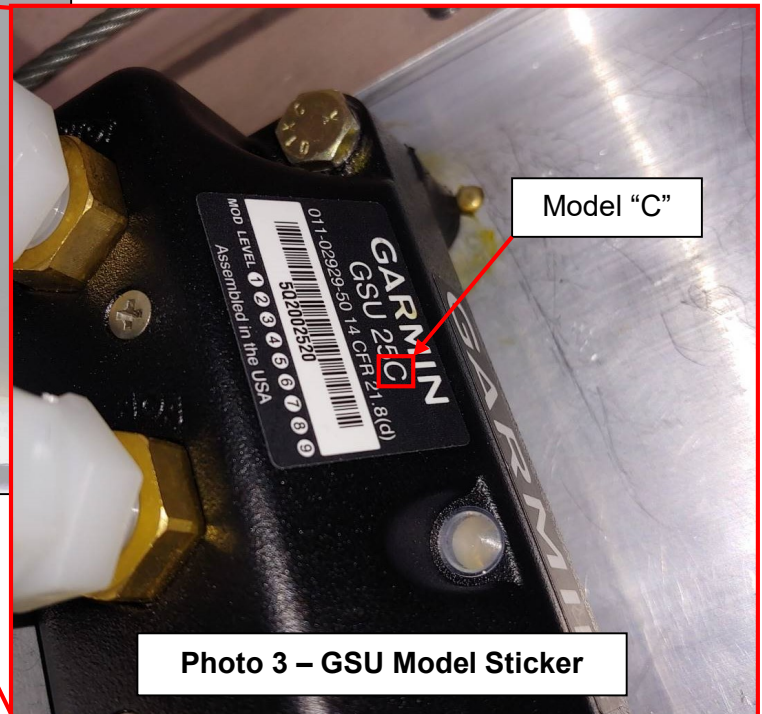


Photo 3 – GSU Model Sticker

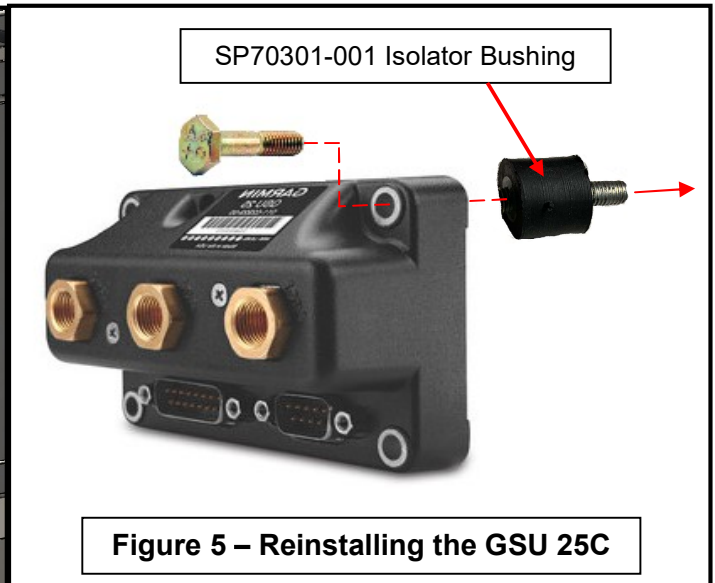
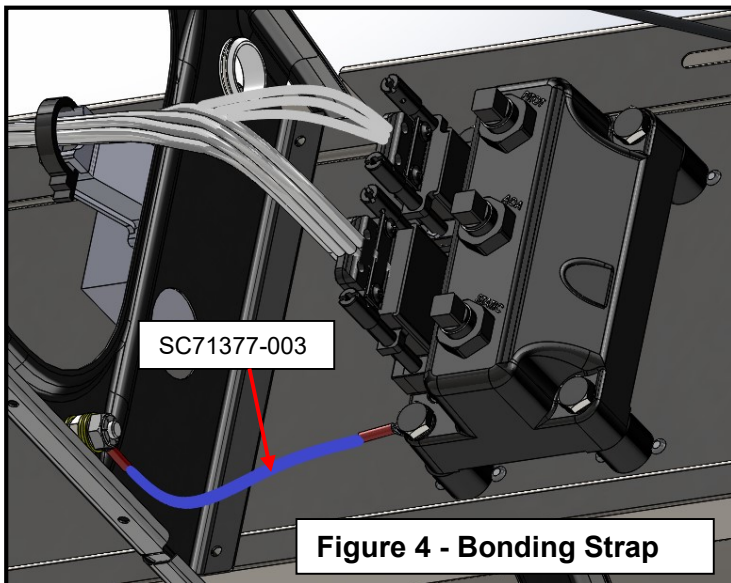
GSU 25C ADAHRS ISOLATOR BUSHING INSTALLATION:

1. Read all instructions before beginning any work.
2. Gain access to GSU 25C through left wing inspection panel (see previous steps).
3. The four bolts on each corner of the GSU unit are secured into nutplates on the forward side of the spar (not visible). Remove these four bolts. Note that some installations may have washers between the GSU and the spar.

NOTE

It is unnecessary to disconnect the wiring or tubing from the GSU during this process. However, it may improve the accessibility. If any of the tubing is removed, a leak check of the pitot system will be necessary before aircraft returns to service.

4. Reinstall the GSU 25C using four AN3 bolts (three AN3-6A bolts and one AN3-7A in the bottom, outboard corner) and the four SP70301-001 Isolator Bushings. Refer to Figure 5 and Figure 6 for details.
 - a. For the lower, outboard bolt, place one end of the bonding strap, SC71377-001, onto the bolt before inserting through the GSU and into the isolator bushing. See Figure 4.



- b. Hand-tighten the isolator bushings through the spar into the nutplates. Ensure that they are fully inserted such that the rubber contacts the spar (If there were previously washers between the GSU and the spar, do not include them).
- c. Apply blue Loctite on the bolts before inserting them through the GSU 25C and into the isolator bushings (see Figure 6).
- d. Tighten all four bolts to no more than 15 inch lbs to avoid damaging the isolator bushings. If the bushing starts twisting against the GSU, stop tightening.

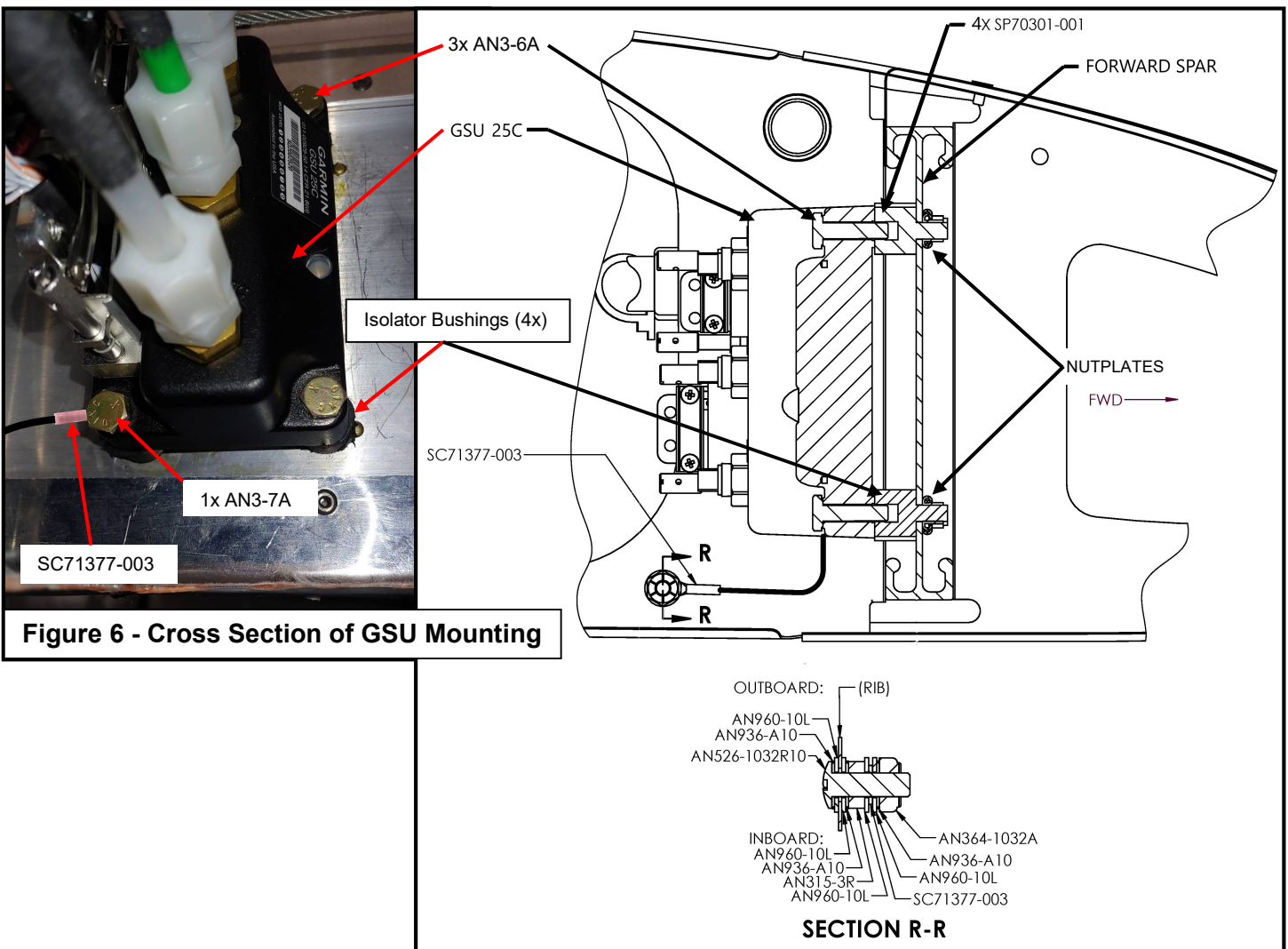


Figure 6 - Cross Section of GSU Mounting

5. Attach the free end of the bonding strap, SC71377-003, to the adjacent spar using the hardware stack-up detailed in Section R-R of Figure 6. See also Figure 4.



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6. Ensure all of the GSU 25C hose and electrical connections are fully seated.
7. Verify that all tools and foreign objects have been removed from the wing and replace the inspection cover.
8. Make a logbook entry that Service Alert SK-SA001 Rev NC was complied with. Changes to weight and balance are considered negligible.

If you are no longer in possession of an affected aircraft, please forward this information to the present owner/operator and notify Cub Crafters, Inc. Contact the customer service department at:

Cub Crafters, Inc.
1918 S. 16th Avenue
Yakima, WA 98903.
1-509-248-9491 or 1-877-484-7865
support@cubcrafters.com

Please include the aircraft registration number, serial number, current name, and address of the owner and/or operator.