



G500/G600 TXi

Part 23 AML STC Maintenance Manual

**Contains Instructions for Continued Airworthiness
for STC SA02571SE**

Aircraft make, model, registration number, and serial number, along with the applicable STC configuration information, must be completed in Appendix A and saved with aircraft permanent records.

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RECORD OF REVISIONS

Revision	Revision Date	Description
11	06/20/25	Revised to address changes for the v3.80 STC update.
12	06/30/25	Added Textron Aviation (Cessna) Model 525.
13	07/31/25	Added GDU 1210.

REVISION 13 DESCRIPTION OF CHANGES

Section	Description
All	Updated all references of “GDU 700/1060” to “GDU” to include GDU 1210.
	Added references to GDU 1210 where applicable.
1.5	Added Textron Aviation Inc. (Cessna) Model 525 and 525A installation drawings to Table 1-1 Reference Documentation.
1.7.1	Added reference to “GDU” in list of common references.
2.1.1	Clarified Integrated ADAHRS is not applicable to GDU 1210.
2.1.7	Added GDU 1210 values to Table 2-2 G500/G600 TXi LRU Electrical Load. Added values for GDU 700 and 1060 without ADAHRS. Added [1] regarding Flight Stream 510 and [2] regarding OAT selection.
2.2.4	Added GDU 1210 description, control, and operation section.
3.1	Added statement regarding no additional airworthiness limitations.
4.1	Added troubleshooting steps for blank GDU 1210 screen to Table 4-1 G500/G600 TXi Failures.
4.2.1	Noted that GDU 1210 is identical to GDU 700/1060 except where noted.
	Added Figure 4-3 GDU 1060 Connectors and Figure 4-4 GDU 1210 Connectors.
	Added [1] regarding pins that are not applicable to GDU 1210 to Table 4-3 GDU J1/P1 Connector.
4.2.13	Clarified what the GTP can interface to.
5.1	Added Figure 5-1 GDU 1210 Installation.
5.17.1.3	Added new method of capturing screen shots.

REVISION 12 DESCRIPTION OF CHANGES

Section	Description
1.5	Added documents related to Textron Aviation (Cessna) Model 525 to Table 1-1 Reference Documentation.
1.7.1	Added "Textron Aviation (Cessna) Model 525(A)" reference.
3.1	Clarified airworthiness limitations and added Textron Aviation (Cessna) Model 525(A) limitations.
3.2.2	Added signal conditioner as a required special tool for Textron Aviation (Cessna) Model 525(A).
3.3	Included Textron Aviation (Cessna) Model 525 to applicable checks in Table 3-1 Periodic Maintenance. Added new N2 Anti-Ice Discrete Checks for Textron Aviation (Cessna) Model 525 and Textron Aviation (Cessna) Model 525A.
3.6.2	Added Textron Aviation (Cessna) Model 525 RVSM periodic maintenance section.
5.14	Added Textron Aviation (Cessna) Model 525 to removal and re-installation section.
5.17.2.2	Added Note for Textron Aviation (Cessna) Model 525.
5.17.2.3	Added Note for Textron Aviation (Cessna) Model 525.
B.1	Updated section to include Textron Aviation (Cessna) Model 525.
B.1.3	Combined altitude, airspeed, and mach number tables into one for Textron Aviation (Cessna) Model 525A.
B.1.5	Added Appendix Section B.1.5 N2 Anti-Ice Discrete Output Checks.

REVISION 11 DESCRIPTION OF CHANGES

Section	Description
2.1.6	Clarified that configuration files can only be loaded with compatible software versions.
5.1.6	Added references to other procedures when installing GDUs with software versions that aren't compatible with the system software.
5.1.7	Added procedure for installing a GDU with software prior to v3.80 into a system with software v3.80 or later.
5.1.8	Added procedure for installing a GDU with software v3.80 or later into a system with software prior to v3.80.
5.13.4	Included Twin Commander in statement that requires TXi configuration update when replacing Fuel Flow sensor.
5.15.9	Included replacing Twin Commander torque indicator as reason to perform the torque sensor calibration.
5.13.3	Updated pipe coupling part number in Figure 5-26 Brass Sensor Installation (Coupling Mount Example) and Figure 5-28 GPT Sensor Installation.
5.15.13	Added Section 5.15.13 Fuel Flow (Twin Commander Only).
5.16	Added procedures for updating software from versions prior to v3.80 and for downgrading software v3.80 or later to older software.
A.9	Updated some GDU 1060 gauge layout templates.
A.11	Updated some GDU 700L gauge layout templates.

DEFINITIONS OF WARNINGS, CAUTIONS, AND NOTES



WARNING

Warnings indicate that injury or death is possible if the instructions are disregarded.



CAUTION

Cautions indicate that damage to the equipment is possible.



NOTE

Notes provide additional information.



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WARNING

*Perchlorate Material – special handling may apply.
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WARNING

Failure to properly configure the EIS gauges per the POH/AFM and other approved data could result in serious injury, damage to equipment, or death.



CAUTION

To avoid damage to the GDU, take precautions to prevent electrostatic discharge (ESD) when handling the unit, connectors, and associated wiring. ESD damage can be prevented by touching an object of the same electrical potential as the unit before handling the unit itself.



CAUTION

The GDU has a special anti-reflective coated display that is sensitive to skin oils, waxes, and abrasive cleaners. CLEANERS CONTAINING AMMONIA WILL HARM THE ANTI-REFLECTIVE COATING. Clean the display with a clean, lint-free cloth, and a cleaner that is safe for anti-reflective coatings.



CAUTION

Do not store any G500/G600 TXi components in or near water.

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1.1 Purpose

This document is designed for use by the installing agency of the Garmin G500/G600 TXi PFD/MFD/EIS system as a Maintenance Manual and Instructions for Continued Airworthiness in response to FAR Part 23.1529 and Part 23 Appendix G. This ICA includes information required by the operator to adequately maintain the Garmin G500/G600 TXi system installed under AML STC SA02571SE.

1.2 Scope

This document provides maintenance instructions and identifies the Instructions for Continued Airworthiness for the modification of the aircraft for installation of the Garmin G500/G600 TXi PFD/MFD/EIS system installed under the AML STC.

1.3 Organization

The following outline briefly describes the organization of this manual:

Section 2.1: System Overview

Provides a description of the G500/G600 TXi system equipment installed by this STC.

Section 2.2: LRU Description, Control, and Operation

Provides basic control and operation information specifically tailored to maintenance practices.

Section 3: Instructions for Continued Airworthiness

Provides Instructions for Continued Airworthiness of the G500/G600 TXi system LRUs.

Section 4: Troubleshooting

Provides troubleshooting information, including connector information, pinouts, and flowcharts to aid in diagnosing and resolving problems with G500/G600 TXi system equipment.

Section 5: Equipment Maintenance and Checkout Procedures

Provides instructions for the removal and replacement of G500/G600 TXi system LRUs, including system checkout procedures.

Appendix A: Installation-Specific Information

Provides a template to record aircraft-specific installation and configuration data for the G500/G600 TXi system.

Appendix B: Model-Specific Data

Provides periodic maintenance and check procedures for specific aircraft models modified by this STC.

1.4 Applicability

This document applies to all aircraft with the G500/G600 TXi system installed in accordance with AML STC SA02571SE. Modification of an aircraft by this STC obligates the aircraft operator to include the maintenance information provided by this document in the operator's Aircraft Maintenance Manual and the operator's Aircraft Scheduled Maintenance Program.

1.5 Publications

In addition to this manual, the following documents are recommended for performing maintenance on the G500/G600 TXi system. It is the responsibility of the owner/operator to ensure the latest applicable versions of these documents are used during operation, servicing, or maintenance of the G500/G600 TXi system.

Table 1-1 Reference Documentation

Document	Part Number
<i>G500/G600 TXi Part 23 AML STC Equipment List</i>	005-00795-D1
<i>AFMS, G500/G600 TXi Part 23 AML STC</i>	190-01717-B2
<i>G500/G600 TXi Part 23 AML STC Installation Manual</i>	190-01717-B3
<i>G500/G600 TXi Part 23 AML STC IMA Pilatus PC-12</i>	190-01717-B5
<i>G500/G600 TXi Part 23 AML STC IMA Piper PA-46-500TP</i>	190-01717-B6
<i>G500/G600 TXi Part 23 AML STC IMA, Textron Aviation Inc. (Cessna), Model 525A, S/N 525A-0001 Thru -0299</i>	190-01717-B7
<i>G600 TXi Mechanical Install, Textron Aviation Inc. (Cessna), Model 525A, S/N 525A-0001 Thru -0299</i>	190-01717-B9
<i>G600 TXi Part 23 AML STC MMA, Textron Aviation Inc. (Cessna), Model 525A, S/N 525A-0001 Thru -0299</i>	190-01717-BE
<i>G600 TXi Mechanical Install, Textron Aviation Inc. Model 525, S/N 525-0360 thru -0599 Exc. -0473</i>	190-01717-BJ
<i>G500/G600 TXi Part 23 AML STC IMA, Textron Aviation Inc. (Cessna), Model 525, SN 525-0360 Thru -0599</i>	190-01717-BG
<i>Procedures for Reduced Vertical Separation Minimum Initial and Continued Airworthiness in G600 TXi Equipped Textron Aviation Model 525 Aircraft, S/N 525-0360 Thru -0599 Except -0473</i>	190-01717-BN

1.6 Revision and Distribution

This document is required for maintaining the continued airworthiness of the aircraft. Garmin dealers may obtain the latest revision of this document at the Garmin [Dealer Resource Center](#) website. Dealers are notified of manual revision changes via Garmin Service Bulletins posted to the Dealer Resource Center. Owners and operators may obtain the latest revision of this document at flyGarmin.com or by contacting a Garmin dealer. Garmin contact information is available at flyGarmin.com.

1.7 Terminology and Acronyms

1.7.1 Terminology

Except where specifically noted:

- References made to “GDU” refer to GDU 700P, GDU 700L, GDU 1060, and GDU 1210.
- References made to “G500/G600 TXi system” apply to an installed system with one or more GDU 700/1060/1210s and all LRUs interfaced to the GDUs.
- References made to Garmin products with a “()” designation after the model number refer to all sub-models in that series (e.g., a reference to GDU 700() refers to both the GDU 700P and the GDU 700L variants).
- References made to “GMU 44(B)” refer to both GMU 44 and GMU 44B.
- References made to “GEA 110” refer to both P/Ns 011-03454-00 and 011-03454-01.
- References made to “GEA 71B Enhanced” refer to both P/Ns 011-03682-02 and 011-03682-05.
- References made to “Textron Aviation (Cessna) Model 525(A)” refer to both Model 525 and Model 525A aircraft.
- All units of measure are US standard units.

Throughout this document, references will be made to metallic aircraft. For the purposes of this manual, metallic aircraft will be those with an aluminum skin. Nonmetallic aircraft refers to all other aircraft (e.g., wooden aircraft, aircraft with composite skin, or aircraft with tube-and-fabric construction).

1.7.2 Acronyms

The following terminology is used within this document.

A	
AC	Alternating Current
ADAHRS	Air Data Attitude Heading Reference System
ADC	Air Data Computer
ADF	Automatic Direction Finder
ADS-B	Automatic Dependent Surveillance Broadcast
AFM	Aircraft Flight Manual
AFMS	Aircraft Flight Manual Supplement
AHRS	Altitude and Heading Reference System
AML	Approved Model List
AMM	Aircraft Maintenance Manual
ANPT	Aeronautical National Pipe Taper
A/P	Autopilot
ARINC	Aeronautical Radio Inc.
ASI	Airspeed Indicator
B	
BIT	Built-In Test
C	
CFR	Code of Federal Regulations
CHT	Cylinder Head Temperature
COM	Communications Radio
D	
DC	Direct Current
DME	Distance Measuring Equipment
E	
EGT	Exhaust Gas Temperature
EIS	Engine Indicating System
ES	Extended Squitter
ESD	Electro-Static Discharge
F	
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FD	Flight Director
FIS-B	Flight Information Services Broadcast
FQ	Fuel Quantity
G	
GAD	Garmin Interface Adapter
GBB	Garmin Backup Battery
GCU	Garmin Control Unit
GDC	Garmin Data Computer

GDL	Garmin Data Link
GDU	Garmin Display Unit
GEA	Garmin Engine Adapter
GI	Garmin Indicator
GMU	Garmin Magnetometer Unit
GP	General Purpose
GPS	Global Position System
GPT	Garmin Pressure Transducer
GPU	Graphics Processing Unit
GRS	Garmin Reference System
GS	Glideslope
GSU	Garmin Sensing Unit
GTN	Garmin Touch Navigator
GTP	Garmin Temperature Probe
GWX	Garmin Weather Radar
H	
HD	High Definition
hPA	Hectopascals
HSDB	High Speed Data Bus
HSI	Horizontal Situation Indicator
I	
IAS	Indicated Air Speed
ICA	Instructions for Continued Airworthiness
ILS	Instrument Landing System
IM	Installation Manual
IMA	Installation Manual Addendum
ITT	Inter-Turbine Temperature
L	
LCD	Liquid Crystal Display
LOC	Localizer
LRU	Line Replaceable Unit
LTE	Long-Term Evolution
M	
MFD	Multi-Function Display
MM	Maintenance Manual
MMA	Maintenance Manual Addendum
N	
NAV	Navigation Radio
NPT	National Pipe Taper
O	
OAT	Outside Air Temperature
ODA	Organization Designation Authorization

P	
PED	Personal Electronic Device
PFD	Primary Flight Display
P/N	Part Number
POH	Pilot's Operating Handbook
PPS	Pulse Per Second
PSIA	Pounds per Square Inch - Absolute
PSIG	Pounds per Square Inch - Gauge
R	
RAS	Remote Aircraft Status
RNAV	Area Navigation
RPM	Revolutions Per Minute
RS	Recommended Standard
RVSM	Reduced Vertical Separation Minimum
S	
SBAS	Satellite Based Augmentation System
SD	Secure Digital
SSEC	Static Source Error Correction
STC	Supplemental Type Certificate
T	
TAS	Traffic Advisory System
TAWS	Terrain Awareness System
TCAS	Traffic Collision Avoidance System
TCAD	Traffic Collision Avoidance Device
TNC	Threaded Neill-Concelman
TSO	Technical Standard Order
U	
UAT	Universal Access Transceiver
UNC	Unified Coarse Thread
UNJC	Unified Coarse Thread with Controlled Root Radius
UTC	Coordinated Universal Time
V	
VAC	Volts Alternating Current
VDC	Volts Direct Current
VOR	VHF Omni-Directional Range
VS	Vertical Speed
W	
WoW	Weight on Wheels

2 SYSTEM DESCRIPTION

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2.1 System Overview

The G500/G600 TXi installation can provide PFD, MFD, and EIS functions. Four display models (GDU 700P, GDU 700L, GDU 1060, and GDU 1210) are used to convey the information. The G500/G600 TXi system utilizes engine sensors and the GEA 110/71B Enhanced Engine Adapter to provide EIS functions.

2.1.1 PFD Functionality

The primary flight display provides attitude, heading, airspeed, altitude, and vertical speed. Optional features, such as Synthetic Vision, autopilot control and annunciation, HSI map overlays, and more, can also be provided by the PFD. The minimum PFD installation consists of:

- GDU 700/1060/1210
- ADAHRS capability (must have one of the following):
 - GRS 77 AHRS and GDC 74() ADC
 - GRS 79 AHRS and GDC 72() ADC
 - GSU 75() ADAHRS
 - Integrated ADAHRS (GDU 700/1060)
- GMU 44(B) Magnetometer
- Outside Air Temperature Probe
- External WAAS GPS navigation source

2.1.2 MFD Functionality

The multi-function display provides at a minimum a moving map display. The display can optionally provide traffic, terrain, audio, and weather functions depending on installed equipment. Additionally, the MFD can be used as an integrated standby PFD when installed in accordance with the integrated standby configuration described in *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

The MFD minimum system installation consists of:

- GDU 700P/1060/1210
- External WAAS GPS navigation source

2.1.3 EIS Functionality

EIS is applicable to single-engine and twin-engine reciprocating and turboprop equipped aircraft, as well as twin-engine turbofan equipped aircraft. For reciprocating engine aircraft, the EIS will display 4 and 6 cylinder engine data and select airframe parameters. The EIS can display engine and airframe operating parameters on the GDU. The EIS gauges include optional gauges and those required by the aircraft POH and manufacturer.

TXi EIS offers three aircraft timers: Flight Hours, Hobbs Timer, and Tach Time. Flight Hours accrue in-air, which is determined using airspeed (if available), then GPS speed, and then finally the engine speed reaching 1250 RPM. The Hobbs Timer (referred to as Engine Time in v3.11 and earlier) is activated by engine oil pressure. Tach Time (v3.12 or later) accrues relative to engine cruise RPM and is available only for reciprocating EIS.

This manual only provides information for the EIS sensors installed per the G500/G600 TXi AML STC. Table 2-1 lists the sensors that are maintained in this manual. Refer to the applicable maintenance data and/or TSO manual for other sensors that are interfaced to the EIS.

Table 2-1 AML STC Installed Sensors

Function	Manufacturer P/N, Description	Garmin P/N
Oil Press	Garmin 150 PSIG pressure, (Brass)	011-04202-30
	Garmin 150 PSIG pressure, (GPT)	011-05783-30
	Kulite APT-20GX-1000-150G (Stainless)	494-30032-00
Oil Temp	UMA T3B3-2.5G	494-70009-00
Manifold Press	Garmin 30 PSIA pressure, (Brass)	011-04202-00
	Garmin 30 PSIA pressure, (GPT)	011-05783-00
	Kulite APT-20GX-1000-25A	494-30030-00
Fuel Press	Garmin 75 PSIG pressure, (Brass)	011-04202-20
	Garmin 15 PSIG pressure, (Brass)	011-04202-10
	Garmin 75 PSIG pressure, (GPT)	011-05783-20
	Garmin 15 PSIG pressure, (GPT)	011-05783-10
	Kulite APT-20GX-1000-50G	494-30031-00
	Kulite APT-20GX-1000-15G	494-30029-00
	Kulite APT-20GX-1000-150G	494-30032-00
De-ice Press	Garmin 15 PSIG pressure, (Brass)	011-04202-10
	Garmin 15 PSIG pressure, (GPT)	011-05783-10
	Garmin 75 PSIG pressure, (Brass)	011-04202-20
	Garmin 75 PSIG pressure, (GPT)	011-05783-20
Fuel Flow	EI FT-60	494-10001-00
	EI FT-90	494-10001-01
RPM	N/A (Magneto P-lead)	N/A
Carb Air Temp	UMA T3B10-SG	494-70010-00
Torque	Kulite APTE-2B-2250-85D	N/A

2.1.4 Entering Configuration Mode

The Configuration mode of the GDU can be accessed by holding down the inner knob located at the bottom-right of the unit, as shown in Figure 2-1, upon initial power-up. The knob must be pressed until the Garmin logo with “Configuration Mode” below it appears.



Figure 2-1 Entering the Configuration Mode on the GDU

2.1.5 SD Card Location Options

The GDU has two SD card slots that can be used for various tasks. The following list describes what tasks can be performed from which SD card slot:

- Either slot
 - Installer unlock
 - Feature enablement
 - Screen shots (if a card is present in both slots, the screen shot will print to the top slot only)
 - Update databases
- Top/left slot only
 - Software updates
 - GSU/GRS log downloads
 - Flight log download
 - Save configuration to SD card
 - Save error log to SD card
 - Load configuration from SD card
- Bottom/right slot
 - Update databases (faster)

2.1.6 Save/Load SD

The aircraft configuration settings can be saved to an SD card, as well as loaded from an SD card using the following procedures. Software versions prior to v3.80 will only load configuration settings created using software versions prior to v3.80. Similarly, software versions 3.80 and later will only load configuration settings created using software versions 3.80 and later. Refer to Section 5.16 for instructions on loading software.

To save your aircraft configuration settings to an SD card:

1. Insert an SD card into the top/left slot of any GDU in the system.
2. Power on all GDUs in the G500/G600 TXi system in Configuration mode.
3. From the **Home** screen, select **SD save**.
4. Enter the name you would like the configuration saved as.
5. Select **Enter**.

To load your aircraft configuration settings from an SD card:



NOTE

An Installer Unlock Card is required to load configuration settings to an SD card. Installer Unlock Cards are only available for use by Garmin Dealers.



NOTE

Loading the system configuration from an SD card will overwrite the current system configuration and is not reversible. It is recommended to always save your current configuration to the SD card first before loading a new configuration.

1. Insert an SD card into the top/left slot of any GDU in the system.
2. Power on all GDUs in the G500/G600 TXi system in Configuration mode.
3. Ensure you have set the GDU IDs, SYS ID Sources, and feature enablements before continuing.
4. From the **Home** screen, select **SD load**.
5. Select the **Aircraft Configuration File** you want to load.
6. Select the **To GDU** to which you want to load configuration settings.



NOTE

Information not contained in the selected Aircraft Configuration File will be grayed out and cannot be selected.

7. Select the check box next to the configuration to be loaded.
8. Select **SD Load**.
9. Verify the loaded configuration(s) is identical to those recorded in the aircraft's permanent records.
10. Perform the Configuration Ground Check in Section 5.17.1. If any interfaces have a yellow triangle present on the system summary after loading a configuration from the SD card, verify the interface settings match the configuration settings stored with the permanent aircraft records. If the settings do not match, the configuration must be corrected by a Garmin dealer.

2.1.7 Electrical Load Information

Electrical load information for the G500/G600 TXi system LRUs is provided below. Appendix A of this document contains details specific to the load changes for the specific aircraft installation.

Table 2-2 G500/G600 TXi LRU Electrical Load

LRU	14 Volt Current Draw		28 Volt Current Draw	
	Typical	Maximum	Typical	Maximum
GDU 700 without Integrated ADAHRS	2.5 A	5.5 A [1]	3.0 A	2.8 A [1]
GDU 700 with Integrated ADAHRS	3.0 A	6.0 A [1]	1.5 A	3.0 A [1]
GDU 1060 without Integrated ADAHRS	4.5 A	7.5 A [1]	3.0 A	3.8 A [1]
GDU 1060 with Integrated ADAHRS	5.0 A	8.0 A [1]	2.5 A	4.0 A [1]
GDU 1210	4.0 A	5.0 A [1]	2.0 A	2.5 A [1]
GRS 79/GMU 44(B)	480 mA	958 mA	240 mA	479 mA
GRS 77/GMU 44(B)	600 mA	1.0 A	300 mA	1.0 A
GSU 75()/GMU 44(B)/OAT Probe [2]	760 mA	958 mA	380 mA	479 mA
GDC 72/GTP 59	420 mA	958 mA	210 mA	479 mA
GDC 74()/GTP 59	410 mA	480 mA	200 mA	235 mA
GAD 43	410 mA	720 mA	210 mA	350 mA
GAD 43e	790 mA	1.22 A	390 mA	590 mA
GCU 485	120 mA	357 mA	64 mA	179 mA
GEA 110	0.30 A	0.60 A	0.15 A	0.30 A
GEA 71B Enhanced (-02)	-	-	0.15 A	0.54 A
GEA 71B Enhanced (-05)	-	-	0.27 A	0.66 A

Notes:

[1] The Flight Stream 510 adds 0.1 A to the maximum current draw at both 14V and 28V.

[2] OAT selection does not affect current draw values.

2.2 LRU Description, Control, and Operation

2.2.1 GDU 700P Display

The GDU 700P is a 7-inch LCD portrait-oriented panel mount control and display unit. The GDU 700P can be configured as a PFD, MFD, EIS, or MFD/EIS display. The GDU 700P cannot be configured for Turboprop/Turbofan EIS with the MFD/EIS configuration. Turboprop/Turbofan EIS is only available on the GDU 700P EIS configuration. The GDU 700P is available with or without an integrated ADAHRS. The GDU 700P requires a compatible GPS/SBAS navigator for MFD and PFD functionality.



Figure 2-2 GDU 700P Display Configurations
(Clockwise from top left: MFD, PFD, Reciprocating EIS, Twin-Turboprop EIS, Single-Turboprop EIS, Twin-Turbofan EIS, and MFD/EIS)

The GDU 700P has numerous features and controls, as shown in Figure 2-3. These features and controls are as follows:

- **Power Button** - Pressing and releasing the power button with the unit powered on will cause a dialog box to appear that allows the display to be powered off or, under certain circumstances, switched to a backup display layout. Pressing and holding the button for 5 seconds will power off the display with no further prompt.
- **Photocell** - The photocell may be configured to be used by the display to automatically adjust the display backlighting in reference to ambient light conditions.
- **Top Card Slot** - A card slot in the display that accepts standard SD cards. Refer to Section 2.1.5 for more information on SD card options.
- **Bottom Card Slot** - A card slot in the display that accepts standard SD cards. Refer to Section 2.1.5 for more information on SD card options.
- **Dual Concentric Knobs** - Control knobs that can be used to scroll and select through various options on the display. The outer knob is used to scroll through available screens on the PFD or MFD. Pressing the knob acts as an enter or selection of the currently highlighted information.

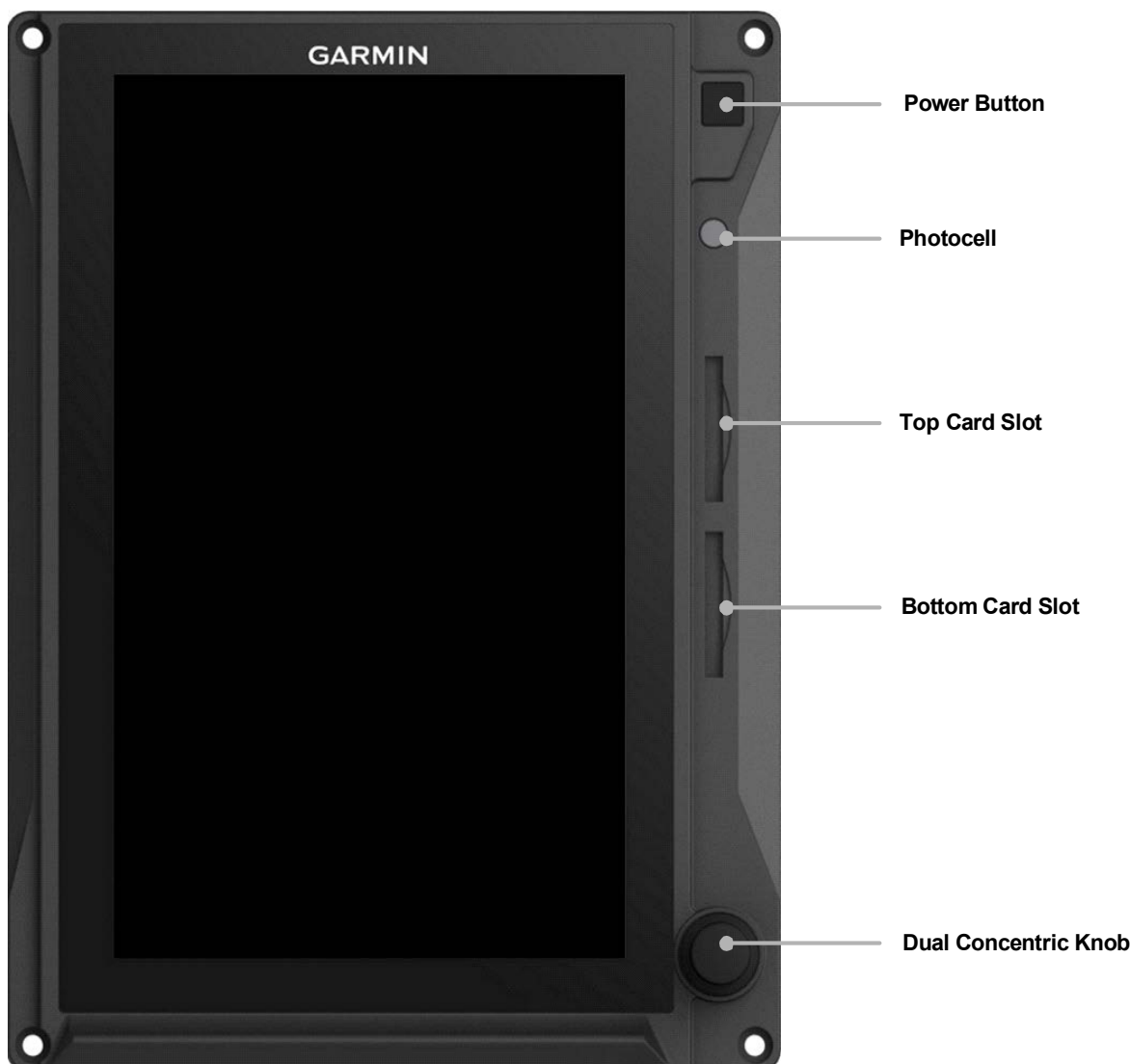


Figure 2-3 GDU 700P Features and Controls

2.2.2 GDU 700L Display

The GDU 700L is a 7-inch LCD landscape-oriented panel mount control and display unit. The GDU 700L can be configured as a PFD, EIS, or MFD/EIS split display. The GDU 700L cannot be configured for Turboprop/Turbofan EIS (only reciprocating engine EIS at this time). The GDU 700L is available with or without an integrated ADAHRS. The GDU 700L requires a compatible GPS/SBAS navigator for MFD and PFD functionality.



Figure 2-4 GDU 700L Display Configurations
(Clockwise from top left: PFD, EIS, and MFD/EIS)

The GDU 700L has numerous features and controls, as shown in Figure 2-5. These features and controls are as follows:

- **Power Button** - Pressing and releasing the power button with the unit powered on will cause a dialog box to appear that allows the display to be powered off or, under certain circumstances, switched to a backup display layout. Pressing and holding the button for 5 seconds will power off the display with no further prompt.
- **Photocell** - The photocell may be configured to be used by the display to automatically adjust the display backlighting in reference to ambient light conditions.
- **Left Card Slot** - A card slot in the display that accepts standard SD cards. Refer to Section 2.1.5 for more information on SD card options.
- **Right Card Slot** - A card slot in the display that accepts standard SD cards. Refer to Section 2.1.5 for more information on SD card options.
- **Dual Concentric Knobs** - Control knobs that can be used to scroll and select through various options on the display. Pressing the knob acts as an enter or selection of the currently highlighted information.



Figure 2-5 GDU 700L Features and Controls

2.2.3 GDU 1060 Display

The GDU 1060 is a 10.6-inch LCD panel mount control and display unit capable of displaying PFD and/or MFD data with optional EIS display. The GDU 1060 may be optionally equipped with an integrated ADAHRS or must be interfaced to an external ADC/AHRS LRU. The GDU 1060 requires interface with a compatible GPS/SBAS navigator.



Figure 2-6 GDU 1060 Display Configurations
(PFD/MFD, PFD/MFD/EIS with Reciprocating EIS, MFD/MFD/EIS with Turboprop EIS)

The GDU 1060 has numerous features and controls, as shown in Figure 2-7. These features and controls are as follows:

- **Power Button** - Pressing and releasing the power button with the unit powered on will cause a dialog box to appear that allows the display to be powered off or, under certain circumstances, switched to a backup display layout. Pressing and holding the button for 5 seconds will power off the display with no further prompt.
- **Photocell** - The photocell may be configured to be used by the display to automatically adjust the display backlighting in reference to ambient light conditions.
- **Top Card Slot** - A card slot in the display that accepts standard SD cards. Refer to Section 2.1.5 for more information on SD card options.
- **Bottom Card Slot** - A card slot in the display that accepts standard SD cards. Refer to Section 2.1.5 for more information on SD card options.
- **Dual Concentric Knobs** - Control knobs that can be used to scroll and select through various options on the display.

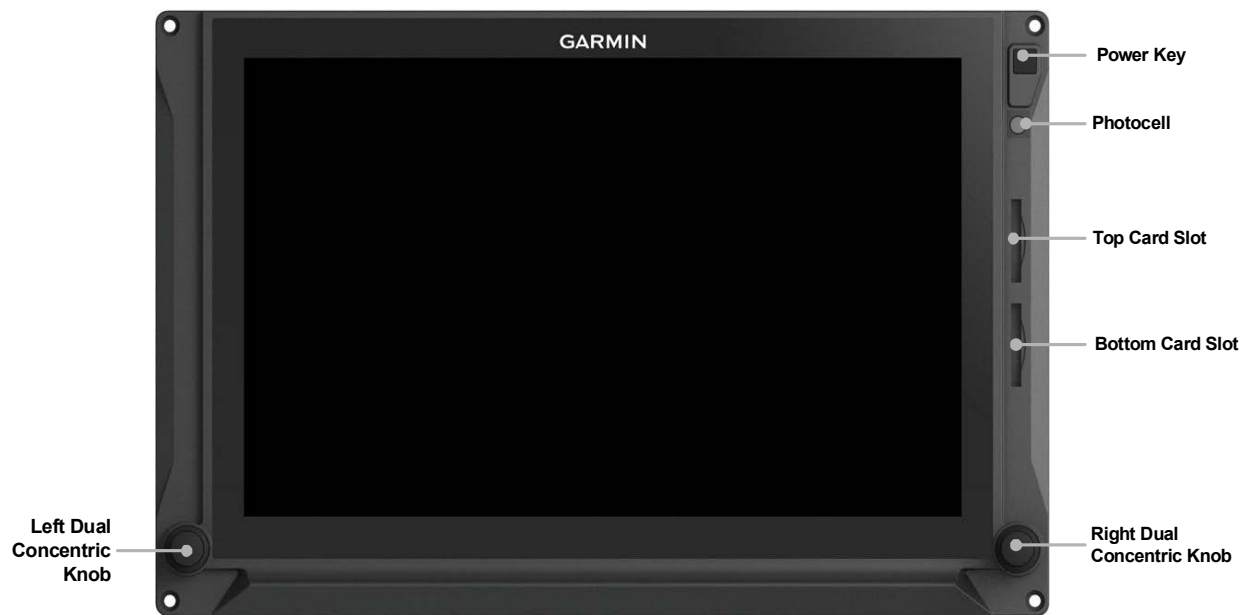


Figure 2-7 GDU 1060 Features and Controls

2.2.4 GDU 1210 Display

The GDU 1210 is a 12.1-inch LCD panel mount control and display unit capable of displaying PFD and/or MFD data with optional EIS display. The GDU 1210 requires interface with a compatible GPS/SBAS navigator.



Figure 2-8 GDU 1210 Display Configurations
(PFD/MFD, MFD/MFD/EIS with Reciprocating EIS, PFD/MFD/EIS with Turboprop EIS)

The GDU 1210 has numerous features and controls, as shown in Figure 2-9. These features and controls are as follows:



NOTE

The bezel does not have a physical power button. To turn the display on/off, use the applicable circuit breaker for the display. Hold down the right inner knob during power up to enter Configuration mode.

- **Photocell** - The photocell may be configured to be used by the display to automatically adjust the display backlighting in reference to ambient light conditions.
- **Left Card Slot** - A card slot in the display that accepts standard SD cards. Refer to Section 2.1.5 for more information on SD card options.
- **Right Card Slot** - A card slot in the display that accepts standard SD cards. Refer to Section 2.1.5 for more information on SD card options.
- **Dual Concentric Knobs** - Control knobs that can be used to scroll and select through various options on the display.

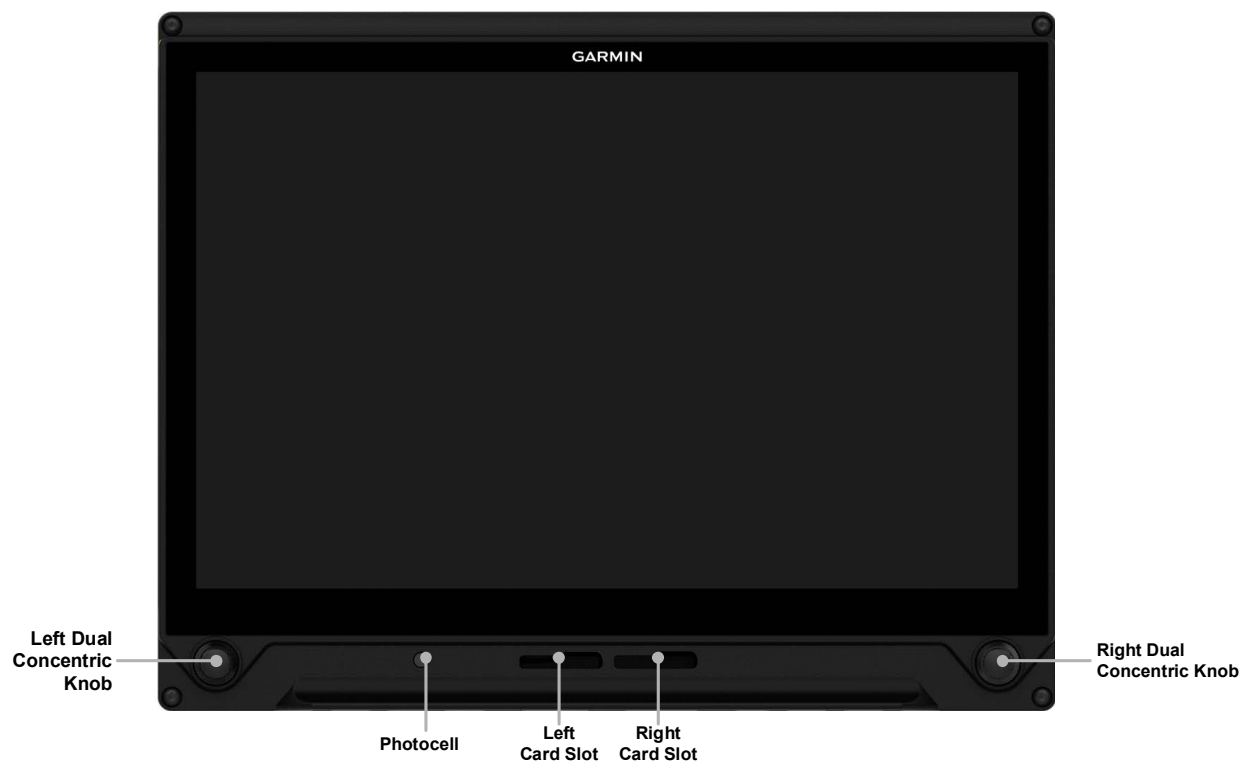


Figure 2-9 GDU 1210 Features and Controls

2.2.5 GCU 485 Control Unit

The GCU 485 is a panel mount remote control unit that provides an alternate method of controlling the G500/G600 TXi PFD display parameters. The GCU 485 Control Unit is available in variations containing different numbers of buttons.



**Figure 2-10 GCU 485
(P/N 011-03582-01 Shown)**

2.2.6 Backup GPS Antenna

GDU PFDs and MFDs have an optional backup GPS. If a backup GPS antenna is installed, the backup GPS is automatically used when the primary GPS source is lost. The backup GPS antenna is located on the instrument panel glare shield.

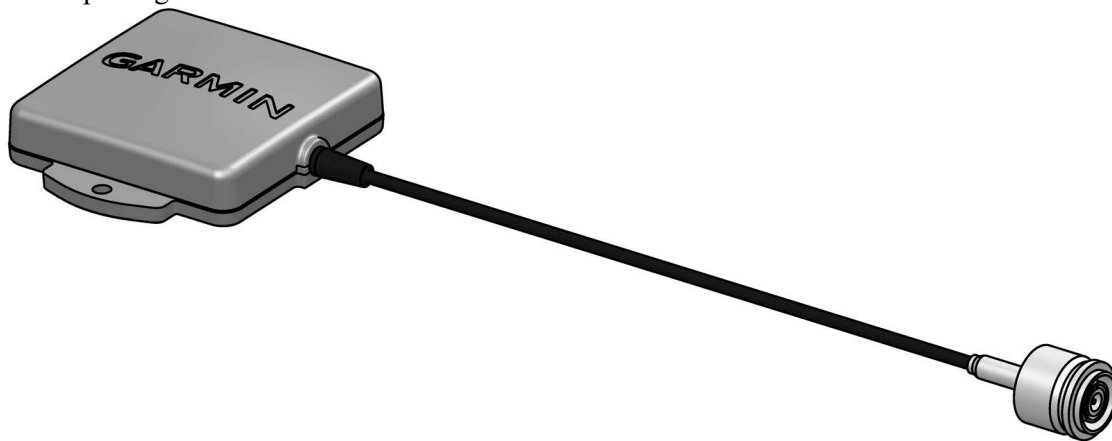


Figure 2-11 Garmin Backup GPS Antenna

2.2.7 Integrated ADAHRS Unit

The GDU 700/1060 has an optional integrated ADAHRS unit that provides flight altitude, vertical speed, airspeed, attitude, OAT, and heading data for flight instrumentation. The AHRS portion is contained internally within the GDU 700/1060. An Integrated ADC module is then plugged into the AHRS board and attached to the back of the GDU 700/1060. The integrated ADAHRS receives data from the GMU 44(B) and GTP 59 that are connected to the GDU 700/1060. The integrated ADAHRS utilizes GPS signals sent from the GPS/SBAS navigator. Attitude, heading, and air data can be sent using ARINC 429 digital signals to external LRUs and the GAD43/43e.

2.2.8 GSU 75() ADAHRS Unit

The GSU 75(B) ADAHRS is a remote LRU that provides flight altitude, vertical speed, airspeed, attitude, OAT, and heading data for flight instrumentation. The GSU 75/75B receives data from the GMU 44(B) Magnetometer and OAT Probe. The GSU 75(B) utilizes GPS signals sent from the GPS/SBAS navigator. Attitude, heading, and air data is sent using ARINC 429 digital signals to the GDU and GAD 43(e). An RS-232 digital connection is used for maintenance and configuration information. The GSU 75B is configured through the GDU 700 using a feature unlock card that contains airframe specific air data corrections suitable for RVSM functionality in select applications.



Figure 2-12 GSU 75(B) ADAHRS Unit

2.2.9 GRS 79 AHRS Unit

The GSU 79 AHRS is a remote LRU that provides attitude and heading data for flight instrumentation. The GSU 79 receives data from the GMU 44(B) Magnetometer. The GSU 79 utilizes GPS signals sent from the GPS/SBAS navigator. Attitude and heading data is sent using ARINC 429 digital signals to the GDU and GAD 43(e). An RS-232 digital connection is used for maintenance and configuration information.



Figure 2-13 GRS 79 AHRS Unit

2.2.10 GDC 72 ADC Unit

The GDC 72 Air Data Computer receives information from the existing aircraft pitot-static system and the GTP 59 OAT Probe. The GDC 72 provides pressure altitude, airspeed, vertical speed, and OAT data to the G500/G600 TXi system. The GDC 72 provides data to the G500/G600 TXi using ARINC 429 digital interfaces, as well as RS-232 for maintenance and configuration information.



Figure 2-14 GDC 72 ADC Unit

2.2.11 GMU 44 Magnetometer

The GMU 44 Magnetometer senses magnetic field information and sends the data to the GSU 75(B), integrated ADAHRS, or GRS 77/79 AHRS to determine aircraft magnetic heading. The GMU 44 receives power directly from the AHRS source and communicates with the AHRS via RS-485 and RS-232.



Figure 2-15 GMU 44 Magnetometer

2.2.12 GMU 44B Magnetometer

The GMU 44B Magnetometer senses magnetic field and provides data to the AHRS to determine aircraft magnetic heading. The GMU 44B receives power directly from the AHRS source and communicates with the AHRS via RS-485 and RS-232.



Figure 2-16 GMU 44B Magnetometer

2.2.13 GTP 59 OAT Probe

The GTP 59 is a remote mount temperature probe that interfaces to the ADC or GEA for OAT display and true airspeed computations. The GTP 59 is mounted externally on the aircraft, usually near or inside air inlet ducts, the underside of wing access panels, or on the empennage below the horizontal stabilizer.

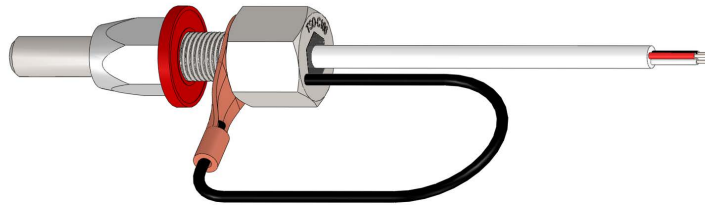


Figure 2-17 GTP 59 Outside Air Temperature Probe

2.2.14 GBB 54 Backup Battery

The GBB 54 supplies power to the GDU 700P, integrated ADAHRS, essential EIS sensors, and a single GEA 110 in the event of total electrical power loss.



Figure 2-18 GBB 54 Backup Battery

2.2.15 GEA 110 Engine Interface

The GEA 110 is a remote mount engine interfacing and monitoring module used for gathering sensor input parameters from the engine and processing the signals for the G500/G600 TXi system. The GEA 110 can be mounted to the back assembly of the GDU 1060/1210 or it can be remotely mounted in the fuselage or in the engine compartment. The GEA 110 communicates with the G500/G600 TXi using an RS-485 digital interface.



Figure 2-19 GEA 110 Engine Interface

2.2.16 GEA 71B Enhanced Engine Interface

The GEA 71B Enhanced is an engine interface and monitoring module for turboprop and turbofan engines that collects signals from the engine sensors and communicates the engine parameters to the GDU 700P/1060/1210 display via RS-485 digital interface. The GEA 71B Enhanced is remotely mounted.



Figure 2-20 GEA 71B Enhanced Engine

2.2.17 GAD 43(e) Adapter

The GAD 43 Adapter is an optional adapter that provides attitude, heading, and yaw input information for third-party autopilot systems. It also provides a synchro heading output that can be used to provide synchro heading to other systems.

The GAD 43(e) can provide the following information in analog format:

- Pitch and roll for the autopilot (synchro)
- Pitch and roll for weather radar stabilization (50 and 200 mV/degree)
- Heading (synchro)
- Yaw rate (100, 200, 333, and 600 mV/degree/sec)

OR

- The GAD 43(e) can provide an analog baro-correction output like the Honeywell KEA 130/130A and KEA 346 (P/Ns 006-0362-0008 through -0011 only) encoding altimeters

With the GDU in Configuration mode, the GAD 43(e) also allows the installer to set the analog attitude and heading outputs to specific values without the need for removing any gyros and using a tilt table.

The GAD 43e provides all of the functions of the GAD 43. In addition, it allows the G500/G600 TXi to receive data from marker beacon receivers, synchro (ARINC 407) ADF receivers, DME systems, and analog radar altimeters. It also allows the G500/G600 TXi to provide altitude preselect and vertical speed control to compatible autopilots.

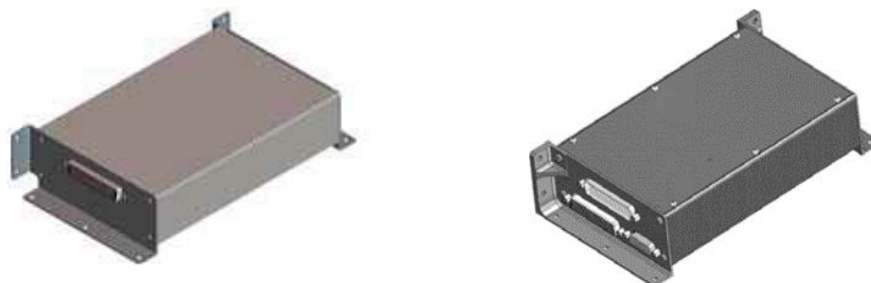


Figure 2-21 GAD 43 (Left) and GAD 43e (Right)

2.2.18 EIS Components

2.2.18.1 Engine Annunciator

An engine annunciator will only be installed if the EIS display is not installed within 8 inches of the center of the pilot's field-of-view.

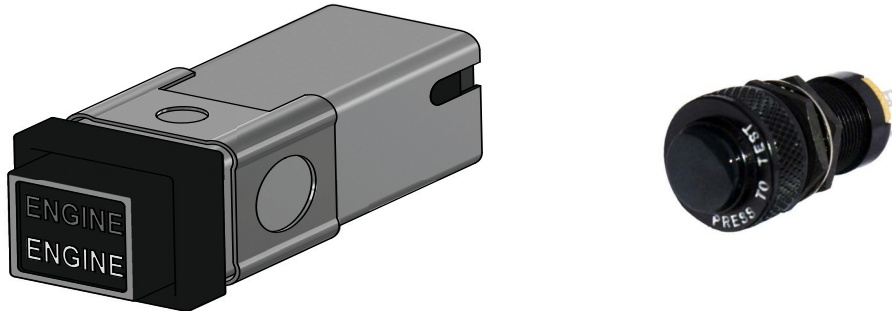


Figure 2-22 Engine Annunciators

2.2.18.2 Carburetor Temperature Probe

The carburetor temperature probe is a Type-K thermocouple (Chromel and Alumel) probe.



Figure 2-23 Carburetor Temperature Probe

2.2.18.3 Oil Temperature Probe

The oil temperature probe is a Type-K thermocouple (Chromel and Alumel) probe.

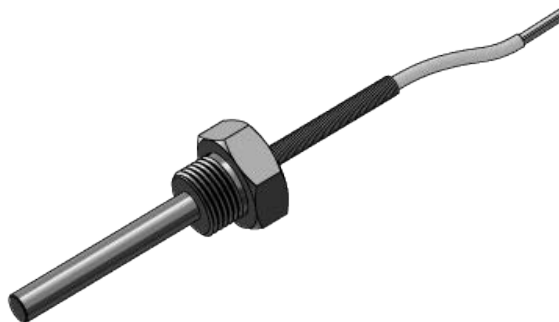


Figure 2-24 Oil Temperature Probe

2.2.18.4 Fuel Flow Sensors

The fuel flow sensor is incorporated in an aluminum housing that is installed in-line to the engine fuel supply. There are two STC approved options available for installation to suit most aircraft applications.



Figure 2-25 Fuel Flow Sensor FT-60 (Left) and FT-90 (Right)

2.2.18.5 Pressure Sensors

The Garmin GPT and brass pressure sensors have NPT pressure ports and Packard style electrical connectors. They are interchangeable, however the sensor configuration must be updated if they are swapped. The mil-spec style sensors are a durable all-metal design featuring a 37 degree flared fitting and round electrical connector.



Figure 2-26 Pressure Sensors

2.2.18.6 Torque Sensor

The Piper Cheyenne PA-31T and PA-31T1 torque sensor was replaced by this Kulite APTE-2B-2250-85D. Purchase replacements directly from Blackhawk Aerospace.



Figure 2-27 Torque Sensor

2.2.18.7 P-Lead RPM Pickup

A wire with two parallel resistors in-line connects from each P-lead, at the Magneto or the ignition switch, to the GEA 110 to sense RPM.

2.2.19 GDL 60

The Garmin GDL 60 serves as a security gateway and is the primary means of connecting Garmin-equipped aircraft with Garmin's service offerings. The GDL 60 is connected to a GTN Xi, G500/G600TXi, or GI 275 EIS through HSDB for database synchronization and display of avionics information to a PED. A GA 60 Antenna is used to connect to Garmin servers over LTE. WiFi antennas are used for Crew PED access and for the GDL 60 to connect to an external WiFi network. Refer to *GDL 60 Part 23 AML STC Installation Manual* (P/N 190-02525-10) for more information.



Figure 2-28 GDL 60

3 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

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3.1 Airworthiness Limitations

The G500/G600 TXi system is airworthy when installed, configured, and maintained in accordance with this section.

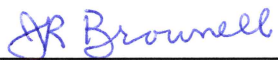
The G500/G600 TXi system possesses the following maintenance airworthiness limitations. The interval for the airworthiness limitations are shown in maximum number of hours between checks, as required for certification.

1. For Textron Aviation (Cessna) Model 525 models, perform the N2 Anti-Ice Discrete Check every 8,400 hours in accordance with Appendix Section B.1.5.1.
2. For Textron Aviation (Cessna) Model 525A models, perform the N2 Anti-Ice Discrete Check every 20,000 hours in accordance with Appendix Section B.1.5.2.

There are no additional airworthiness limitations associated with this equipment and/or installation.

The Airworthiness Limitations section is FAA approved and specifies maintenance required under §§ 43.16 and 91.403 of Title 14 of the Code of Federal Regulations unless an alternative program has been FAA approved.

FAA APPROVED



JR Brownell

ODA STC Unit Administrator

ODA-240087-CE

7/31/2025
Date

3.2 Servicing Information

There are no servicing requirements for the G500/G600 TXi system. In the event of a system or LRU failure, troubleshoot the G500/G600 TXi system in accordance with Section 4.

3.2.1 Periodic Maintenance Instructions

G500/G600 TXi system LRUs are designed to detect internal failures. A thorough self-test is executed automatically upon application of power to the units, and built-in tests are continuously executed while the LRUs are operating. Detected errors are indicated on the GDU via failure annunciations, system messages, or a combination of the two. A list of reported errors for the system can be printed in the form of a maintenance log using the instructions provided in Section 4.1.

3.2.2 Special Tools

A calibrated milliohm meter with an accuracy of $\pm 0.1 \text{ m}\Omega$ (or better) is required to measure the electrical bonding between the G500/G600 TXi system components and aircraft ground.

A calibrated pitot-static test set is required for ADC and standby instrument checkout procedures and maintenance.

A calibrated signal conditioner is required for N2 Anti-Ice Discrete Output Check for the Textron Aviation (Cessna) Model 525(A).

3.3 Maintenance Intervals

Table 3-1 Periodic Maintenance

Item	Description/ Procedure	Interval
G500/G600 TXi System Visual Inspection	All installed system LRUs, switches, knobs, and wiring harnesses must be inspected to ensure continued integrity of the installation. The inspection must be performed in accordance with Section 3.4.	12 Calendar Months
GBB 54 Backup Battery Check	Perform a Backup Battery Check as described in Section 5.15.5. If the GBB 54 does not pass the Backup Battery Check, the battery cell must be replaced using the procedure found in Section 5.9.2.	12 Calendar Months
EIS Annunciator Lamp Check	If an EIS annunciator is installed, perform a check of the annunciator lamps using the following procedure: 1. Power on the GDU in Configuration mode per the instructions in Section 2.1.4. 2. Navigate to Diagnostics → Discrete Outputs. 3. Toggle the state of the Engine Caution and Engine Warning discrete outputs to ON (the bar at the bottom of the State button on the GDU will illuminate green). 4. Verify that the respective engine annunciator lights have illuminated. 5. Toggle the state of the Engine Caution and Engine Warning discrete outputs to OFF.	12 Calendar Months
RVSM Checks (TBM 700/850 and Textron Aviation (Cessna) Model 525(A) Only)	Perform the checks specified in Section 3.6.	24 Calendar Months
AHRS Magnetic Field Model Update	The GSU 75(), GRS 79, and GDU 700/1060 Integrated ADAHRS utilize an Earth magnetic field model that is updated once every 5 years as part of the Aviation Database maintained by the owner/operator. If the magnetic model is not up-to-date, the unit will issue an alert upon start-up indicating the model has expired. A Service Bulletin containing the updated magnetic field model and instructions for installation can be obtained from the Dealer Resource Center or by contacting Garmin.	Every 5 years
Electrical Bonding Check	Perform an electrical bonding check of the G500/G600 TXi system LRUs in accordance with Section 3.5.	Every 2000 flight hours or 10 years, whichever comes first

Item	Description/ Procedure	Interval
GDU Cooling Fan Replacement	It is recommended that the cooling fan on the GDU be replaced every 3000 fan-operating hours. The number of hours the fan has been operating can be viewed using the following procedure: 1. Power on the GDU in Configuration mode per the instructions in Section 2.1.4. 2. Navigate to Diagnostics → Temp & Power Stats. 3. The cooling fan operating hours can be found under Power Statistics as “Fan OPER Hours”. The cooling fan replacement procedure is contained in Section 5.1.2.	Recommended every 3000 fan-operating hours
Altimeter Checks	Test according to 14 CFR §43 Appendix E. See the pitot-static checkout procedure in Section 5.17.2 for system specific checkout procedure.	Interval must be in accordance with Title 14 CFR §91.411 and §91.413
Lightning Damage Check	Conduct an inspection of the G500/G600 TXi system in accordance with Section 3.8.	After a suspected or actual lightning strike
Equipment Removal and Replacement	Removal and replacement of the G500/G600 TXi system LRUs can be accomplished by referring to Section 5 for instructions.	On Condition
Cleaning GDU Front Panel	The front bezel, keypad, and display can be cleaned with a soft cotton cloth dampened with clean water. DO NOT use any chemical cleaning agents. Care should be taken to avoid scratching the surface of the display.	On Condition
Display Backlight	The display backlight LEDs are rated by the manufacturer as having a usable life of at least 36,000 hours. This life may be more or less than the rated time depending on the operating conditions of the GDU. Over time, the backlight lamp may dim and the display may not perform as well in direct sunlight conditions. The user must determine by observation when the display brightness is not suitable for its intended use. Contact a Garmin factory repair station when the backlight lamp requires service.	On Condition
Pitot-Static Systems Functional Checks (Textron Aviation (Cessna) Model 525(A) Only)	Perform pitot-static systems functional checks as described in Appendix Section B.1.1 through Appendix Section B.1.3.	24 Calendar Months
Fuel Indicating System Functional Check (Textron (Cessna) Model 525(A) Only)	Perform a fuel indicating systems functional check as described in Appendix Section B.1.4.	1200 Flight Hours or 36 Calendar Months, whichever comes first.

Item	Description/ Procedure	Interval
N2 Anti-Ice Discrete Check (Textron Aviation (Cessna) Model 525 Only)	Perform a N2 Anti-ice Discrete Check as described in Appendix Section B.1.5.1.	Every 8400 flight hours*
N2 Anti-Ice Discrete Check (Textron Aviation (Cessna) Model 525A Only)	Perform a N2 Anti-ice Discrete Check as described in Appendix Section B.1.5.2.	Every 20000 flight hours*

*Denotes airworthiness limitation.

3.4 Visual Inspection

Operation of the G500/G600 TXi system is not permitted unless an inspection, as described in this section, has been completed within the preceding 12 calendar months. Conduct the following visual inspection of the G500/G600 TXi system LRUs and associated wiring harnesses to ensure installation integrity:



WARNING

Ensure the GBB 54 vent tube is not pointed towards personnel or equipment before blowing shop air through the tube. Any obstructions in the tube will be ejected at high speed and can cause serious injury or property damage.

1. Inspect all units for security of attachment, including visual inspection of brackets and other supporting structure attaching all units to the airframe.
2. Inspect all switches, annunciators, knobs, and buttons for legibility.
3. Visually inspect each unit's wiring (including electrical bonding straps), overbraid, and connectors for chafing, deterioration, damage, or wear.
4. Visually check for any signs of corrosion.
5. Visually inspect the GBB 54 vent tube and connectors for damage/corrosion and ensure there are no obstructions in the vent tube. The vent tube can be checked for obstructions by disconnecting the vent tube from the GBB 54 and blowing shop air through the tube from the battery connector side to the exterior of the aircraft.

3.4.1 Aluminum Foil Tape (Non-metallic Aircraft Only)

Any aluminum foil tape used in the G500/G600 TXi installation for grounding of a GSU 75/75B, GDC 72, GRS 79, GAD 43/43e, GEA 110, GEA 71B Enhanced, or GBB 54 (refer to Appendix A of this document) must be inspected every 12 calendar months.

The inspection must verify that the foil tape is not torn, damaged, or showing signs of corrosion. If any of these conditions are found, the tape must be replaced in accordance with Section 4 of *G500/G600 TXi Part 23 AML STC Installation Manual*.

3.5 Electrical Bonding Check

G500/G600 TXi LRU electrical bonding must be checked every 2,000 flight hours or 10 years, whichever occurs first. During the check, any cables normally attached to the LRU must be disconnected from the LRU. Resistance must be measured from a bare metal portion of the LRU to an airframe grounding location. The airframe grounding location should be as close to the LRU as possible, unless otherwise noted in the following table. If the measured resistance is greater than applicable values in the following table, bonding must be improved to meet applicable requirements for a new installation in accordance with Section 4 of *G500/G600 TXi Part 23 AML STC Installation Manual*.

Table 3-2 Electrical Bonding Requirements

LRU	Maintenance Requirement
GDU 700/1060/1210 GCU 485 Engine Annunciator	20 mΩ
GSU 75/75B GDC 72 GRS 79 GAD 43/43e GEA 71B Enhanced	5 mΩ
GEA 110	5 mΩ (remote-mounted) N/A (GDU 1060/1210 mounted)
GTP 59	5 mΩ (or electrically isolated per Appendix D of <i>G500/G600 TXi Part 23 AML STC Installation Manual</i>)
GMU 44(B)	5 mΩ (or electrically isolated per Appendix D of <i>G500/G600 TXi Part 23 AML STC Installation Manual</i>)
Kulite APTE-2B-2250-85D torque transducer	5 mΩ measured between sensor and reduction gearbox flange

Notes:

- [1] For remote LRUs bonded to the back of the instrument panel via an installed aluminum foil ground plane, the bonding measurement must be taken between the remote LRU and the instrument panel.

3.6 RVSM Periodic Maintenance

3.6.1 Socata TBM 700/850

Maintain all RVSM equipment in accordance with the manufacturer's maintenance and performance requirements. The encoding altimeter must be checked as specified in the *Socata Maintenance Manual* Section 05-10-01, ATA Chapter 34. The RVSM critical areas must be inspected as specified in *Socata Maintenance Manual* Section 05-10-01, ATA Chapter 53.

The air data systems must be checked within the preceding 24 months, as specified in the *Socata Maintenance Manual* Section 34-11-00, except for the altitude displays and altitude alerter. The altitude displays and altitude alerter must be checked in accordance with Section 5.17.3 of this manual. *Socata Maintenance Manual* test procedures may be adapted to complete all other air data system checks required in Section 5.17.2.

The autopilot altitude hold performance must be checked within the preceding 24 months in accordance with the RVSM In-flight altitude hold check described in Section 5.17.3.3.

3.6.2 Textron Aviation (Cessna) Model 525

Maintain all RVSM equipment in accordance with the manufacturer's maintenance and performance requirements. Specific requirements and checks for equipment installed by this STC are contained in *Procedures for Reduced Vertical Separation Minimum Initial and Continued Airworthiness in G600 TXi Equipped Textron Aviation Model 525 Aircraft, S/N 525-0360 Thru -0599 Except -0473* (P/N 190-01717-BN).

3.6.3 Textron Aviation (Cessna) Model 525A

Maintain all RVSM equipment in accordance with the manufacturer's maintenance and performance requirements. Specific requirements and checks for equipment installed by this STC are contained in *G600 TXi Part 23 AML STC Maintenance Manual Addendum, RVSM, Textron Aviation Inc. (Cessna), Model 525A, S/N 525A-0001 Thru -0299* (P/N 190-01717-BE).

3.7 Overhaul Period

The system does not require overhaul at a specific time period. Power on self-test and continuous BIT will monitor the health of the G500/G600 TXi system. If any LRU indicates an internal failure, the unit may be removed and replaced. See Section 4 of this document for fault corrective actions.

3.8 Special Inspection Requirements

After a suspected lightning strike, the following actions must be performed for the specified LRU.

GTP 59 OAT

Inspect the GTP 59 OAT for signs of lightning damage. Check the self-sealing washer (P/N 212-00026-00) used on the probe tip outside of the aircraft for any evidence of melting or lack of seal. Replace the washer if damaged. If there is evidence of lightning strike to the OAT or any lightning damage, replace the GTP 59 OAT.

Tube-and-fabric aircraft must replace the OAT bond strap (if installed) in accordance with Section 4.6.2 of *G500/G600 TXi Part 23 AML STC Installation Manual*.

GMU 44(B)

Aircraft with a GMU mounted in the wingtip of metallic aircraft with non-metallic wingtip covers must inspect the magnetometer installation for the following conditions:

1. Check the GMU 44(B) Magnetometer body and mount for scorching, soot, melting, pitting, denting, or discoloration.
2. Check P441/P442 and J441/J442 for melting or pin damage.
3. Check the cable overbraid for pinching, melting, or evidence of arcing.
4. Check the lug for evidence of arcing and verify that the lug is still secured to the overbraid.
5. Check electrical bonding between the GMU 44(B) overbraid and adjacent aircraft structure. Resistance should be less than 5 mΩ.
6. If any of these checks shows evidence of a lightning strike, replace the overbraid assembly in accordance with Figure 4-54 of *G500/G600 TXi Part 23 AML STC Installation Manual*.

Perform the Magnetic Interference Check in accordance with Section 6.6.4 of *G500/G600 TXi Part 23 AML STC Installation Manual*. The purpose of this check is to ensure the structure around the GMU 44(B) did not get magnetized by the lightning event to the point of affecting GMU 44(B) performance.

GBB 54 Battery Vent Tube

Aircraft with a GBB 54 battery must inspect the battery vent tube using the following procedure:

1. Gain access to the GBB 54 and both ends of the vent tube.
2. Check the battery vent grounding strap for evidence of arcing or damage.
3. Check the end of the vent tube that protrudes through the aircraft skin for scorching, soot, melting, pitting, denting, or discoloration.

If any of these checks show evidence of a lightning strike, replace the vent tube and grounding strap in accordance with Section 4.5.6 of *G500/G600 TXi Part 23 AML STC Installation Manual*.

3.9 Application of Protective Treatments

None.

3.10 Data Relative to Structural Fasteners

Data relative to structural fasteners, such as type, torque, and installation requirements can be found in Section 5 of this manual.

3.11 Additional Instructions

None.

4 TROUBLESHOOTING

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This section provides information to assist troubleshooting if fault codes are displayed on the GDU or problems occur after completing system maintenance. Refer to Appendix A of this document retained in the aircraft permanent records for a list of the interfaced equipment and system configuration data. When troubleshooting the G500/G600 TXi system, refer to wire routing drawings and interconnect diagrams retained in Appendix A of this document or with the aircraft's permanent records.

4.1 General System Troubleshooting

Before troubleshooting the G500/G600 TXi system, use the configuration log tool to print the current configuration log to ensure that system configuration settings match those recorded in the aircraft's permanent records.

If the current aircraft configuration does not match the configuration log retained with the aircraft permanent records, load the saved configuration from the SD card retained with the aircraft records. If this cannot be accomplished, or does not correct the configuration, the configuration must be corrected by a Garmin dealer using an Installer Unlock Card and the configuration instructions provided in Section 5 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3). Basic troubleshooting of the G500/G600 TXi system can be accomplished using the instructions provided in Table 4-1.

Table 4-1 G500/G600 TXi Failures

Symptom	Recommended Action
GDU 700/1060 blank	1) Check power/ground wiring for GDU. 2) Press the Power button until the Garmin logo is visible.
GDU 1210 blank	1) Check power/ground wiring for GDU. 2) Close the associated circuit breaker to power the unit.
Configuration mode pages grayed out with an Installer Unlock Card	1) Ensure a GDU master configuration module is selected. 2) Ensure a functional configuration module is present. 3) Ensure the GDU IDs are set for all GDUs.
EIS gauge fault/failure	Troubleshoot the problem using the EIS gauge troubleshooting flowchart provided in Section 4.3.
An Alert message is displayed on the GDU or present in the maintenance log	Troubleshoot the alert message using the flowcharts provided in Section 4.3.
RAS fails	1) If the GDL 60 has been disconnected from battery power for more than 2 hours, it may be necessary to re-establish GPS signal for RAS functionality. 2) Ensure GDL 60 is registered and is in Always On mode. 3) Refer to <i>GTN Xi Part 23 AML STC Maintenance Manual/ICA</i> (P/N 190-01007-C1).

4.1.1 System Maintenance Log

The G500/G600 TXi system has a maintenance and error log that can be accessed or printed to assist with system maintenance and troubleshooting. The maintenance and error log can be accessed using the following procedure:

1. Power all GDUs into Configuration mode in accordance with Section 2.1.4.
2. On GDU #1, navigate to **Diagnostics** → **Logs** → **Maintenance Log**.

The maintenance and error log can be printed using the following procedure:

1. Power all GDUs into Configuration mode in accordance with Section 2.1.4.
2. Insert an SD card into the top/left SD card slot.
3. Press the **SD Save** button.
4. Enter a name for the configuration file to be saved as, and then select **Enter**.
5. Once the save process is completed, eject the SD card from the GDU and insert it into a computer.
6. On the computer, navigate to the SD card drive and open the “maintenance_logs” directory.
7. Open the .htm file with the name that you entered in step 4.
8. The file should open in your computer internet browser and can be printed using your selected internet browser print function (in most cases, pressing the **Ctrl** and **P** buttons simultaneously will access this function).

The maintenance log will display reported system faults. The alert message that is displayed on the GDU for that fault (if any) will display frequency, most recent occurrence time of the fault, and any additional information about the fault that might be helpful. If any faults are reported on the maintenance log, refer to the troubleshooting flowcharts contained in Section 4.3.

4.1.2 Exceedance Log

Fixed wing aircraft with variable Vne/Vmo/Mmo will record airspeed exceedances. Turboprop aircraft with EIS will record Torque, Propeller RPM, NG, ITT, Fuel Flow, Oil Temperature, Oil Pressure, and Fuel Pressure exceedances, if configured. Turbofan aircraft with EIS will record N1, N2, ITT, Fuel Flow, Oil Temperature, and Oil Pressure exceedances, if configured.

An exceedance will generate an advisory message to notify the crew of the occurrence and will create a new entry in the log. The message will appear 30 seconds after the exceedance ends. The system will provide an **Exceedance Summary** page to view and acknowledge exceedance advisories. Exceedances can be exported in Normal Mode menu (**System** → **Logs** → **Exceedances**). Exceedances can be cleared in Configuration mode with an Installer Unlock Card.



CAUTION

Exceedances are advisory only and are not to be used to determine the need for maintenance, accept maintenance, or return the aircraft to service.

4.2 Connector Information

This section contains connector information and description of pin functions for all LRUs that can be installed as part of G500/G600 TXi STC.

All D-sub connectors follow a similar pin numbering scheme as that shown in Figure 4-1.

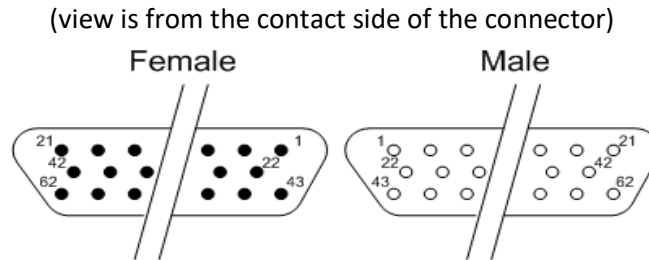


Figure 4-1 62 Pin D-sub Connectors Numbering Scheme for Female/Male Contacts

4.2.1 GDU 700/1060/1210



NOTE

GDU 700 and GDU 1060 displays have identical connectors and pin functions. The GDU 1210 is identical except where noted.

The GDU 700/1060/1210 has seven connectors. The mating designators, part numbers, and associated connector kits are listed in Table 4-2.

Table 4-2 G500/G600 TXi - GDU Connectors

REF. DES.	DESCRIPTION	CONN P/N	KIT P/N
P1	Conn, HD D-Sub, Male, Str, Mil Crmp Pins, 26 Ckt	330-00626-26	011-03527-00
P2	Conn, HD D-Sub, Male, Str, Mil Crmp Pins, 44 Ckt	330-00626-44	011-03527-00
P3	Conn, HD D-Sub, Male, Str, Mil Crmp Pins, 62 Ckt	330-00626-62	011-03527-00
P4	Conn, HD D-Sub, Male, Str, Mil Crmp Pins, 78 Ckt	330-00626-78	011-03527-00
P5	TNC, Male		
P6	TNC, Male		
P7	TNC, Male	Supplied with antenna	

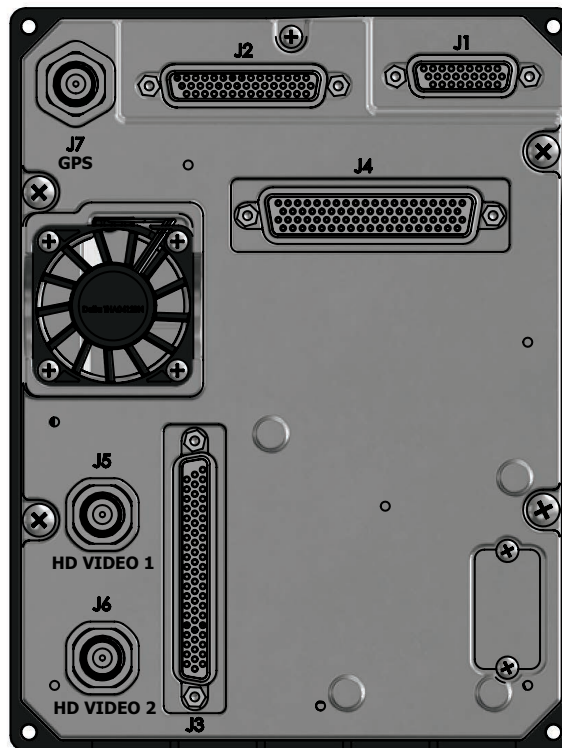


Figure 4-2 GDU 700 Connectors

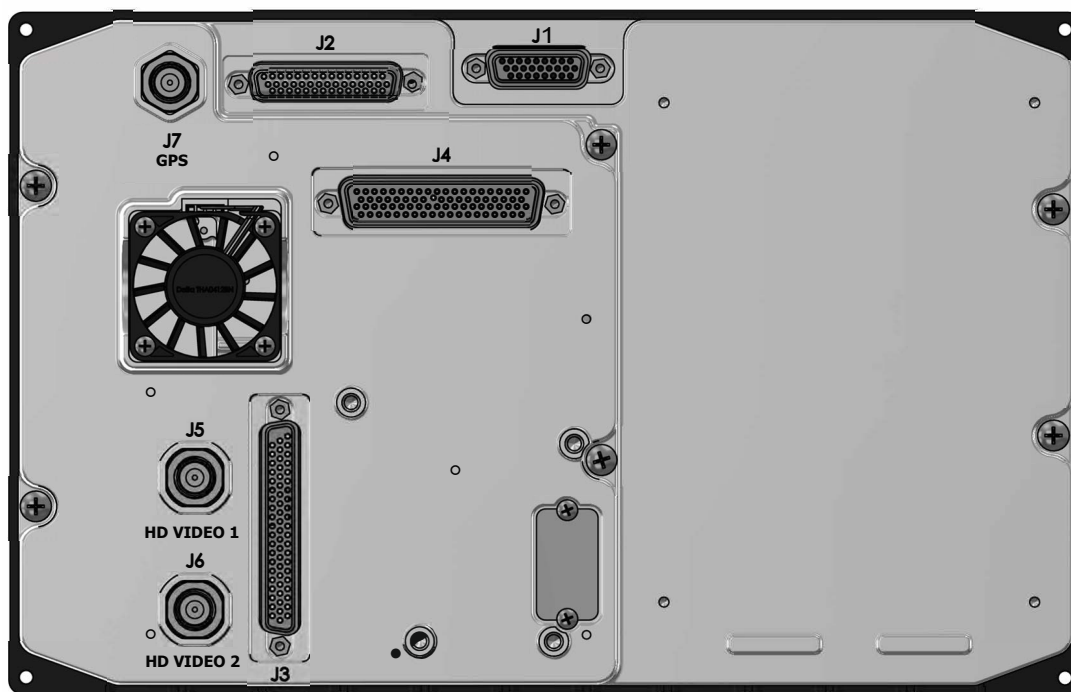


Figure 4-3 GDU 1060 Connectors



Figure 4-4 GDU 1210 Connectors

Table 4-3 GDU J1/P1 Connector

Pin	Function	I/O	Pin	Function	I/O
1	AIRCRAFT POWER 2	IN	14	BATTERY CHARGE OUT [1]	OUT
2	AIRCRAFT POWER 2	IN	15	BATTERYGROUND [1]	--
3	AIRCRAFT POWER 2	IN	16	BATTERY RS-232 GROUND [1]	--
4	AIRCRAFT POWER 2	IN	17	USE BATTERY OUT [1]	OUT
5	BATTERY CHARGE OUT [1]	OUT	18	BATTERY POWER IN [1]	IN
6	BATTERY GROUND [1]	--	19	AIRCRAFT POWER 1	IN
7	BATTERY RS-232 IN [1]	IN	20	AIRCRAFT POWER 1	IN
8	BATTERY GROUND [1]	--	21	AIRCRAFT POWER 1	IN
9	BATTERY POWER IN [1]	IN	22	AIRCRAFT POWER 1	IN
10	AIRCRAFT GROUND	--	23	BATTERY GROUND [1]	--
11	AIRCRAFT GROUND	--	24	BATTERY RS-232 OUT [1]	OUT
12	AIRCRAFT GROUND	--	25	STANDBY POWER IN [1]	IN
13	AIRCRAFT GROUND	--	26	BATTERY POWER IN [1]	IN

Notes:

[1] Not applicable to GDU 1210.

Table 4-4 GDU J2/P2 Connector

Pin	Function	I/O	Pin	Function	I/O
1	RS-485 1A	I/O	23	ETHERNET OUT 4A	OUT
2	RS-485 1B	I/O	24	GND	--
3	LIGHTING BUS HI	IN	25	RESERVED	--
4	LIGHTING BUS LO	IN	26	MAGNETOMETER GND	--
5	OAT POWER	OUT	27	RS-232 IN 2	IN
6	OAT PROBE IN HI	IN	28	RS-232 IN 1	IN
7	OAT PROBE IN LO	IN	29	CONFIG MODULE GND	--
8	COMPOSITE VIDEO IN 2	IN	30	CONFIG MODULE CLOCK	OUT
9	AUDIO OUT LO	OUT	31	ETHERNET IN 1B	IN
10	AUDIO OUT HI	OUT	32	ETHERNET OUT 1B	OUT
11	GND	--	33	ETHERNET IN 2B	IN
12	RS-232 GND 2	--	34	ETHERNET OUT 2B	OUT
13	RS-232 GND 1	--	35	ETHERNET IN 3B	IN
14	COMPOSITE VIDEO IN 1	IN	36	ETHERNET OUT 3B	OUT
15	CONFIG MODULE PWR	OUT	37	ETHERNET IN 4B	IN
16	ETHERNET IN 1A	IN	38	ETHERNET OUT 4B	OUT
17	ETHERNET OUT 1A	OUT	39	DEMO MODE SELECT*	IN
18	ETHERNET IN 2A	IN	40	LRU POWER OUT 1	OUT
19	ETHERNET OUT 2A	OUT	41	MAGNETOMETER PWR OUT	OUT
20	ETHERNET IN 3A	IN	42	RS-232 OUT 2	OUT
21	ETHERNET OUT 3A	OUT	43	RS-232 OUT 1	OUT
22	ETHERNET IN 4A	IN	44	CONFIG MODULE DATA	I/O

* Indicates Active-Low

Table 4-5 GDU J3/P3 Connector

Pin	Function	I/O	Pin	Function	I/O
1	DISC OUT 3 HI	OUT	32	LATERAL - FLAG OUT	OUT
2	DISC OUT 4 HI	OUT	33	VERTICAL - FLAG OUT	OUT
3	RS-232 OUT 3	OUT	34	DISC IN 1 LO	IN
4	RS-232 IN 3	IN	35	DISC IN 2 LO	IN
5	RS-232 OUT 4	OUT	36	DISC IN 3 LO	IN
6	RS-232 IN 4	IN	37	DISC IN 4 LO	IN
7	VERTICAL SUPERFLAG OUT	OUT	38	ANALOG IN 1B	IN
8	LATERAL SUPERFLAG OUT	OUT	39	ANALOG IN 1A	IN
9	LATERAL +LEFT OUT	OUT	40	A/P AC REF LO	IN
10	LATERAL + RIGHT OUT	OUT	41	A/P AC REF HI	IN
11	LATERAL +FLAG OUT	OUT	42	FD PITCH UP	IN
12	VERTICAL +FLAG OUT	OUT	43	DISC OUT 1 LO	OUT
13	VERTICAL +UP OUT	OUT	44	RS-485 2A	I/O
14	VERTICAL +DOWN OUT	OUT	45	RS-485 2B	I/O
15	A/P COURSE ERROR LO	--	46	RS-485 3A	I/O
16	A/P COURSE ERROR HI	OUT	47	RS-485 3B	I/O
17	A/P HEADING ERROR LO	--	48	DISC OUT 7 LO	OUT
18	A/P HEADING ERROR HI	OUT	49	DISC OUT 2 LO	OUT
19	FD ROLL LEFT	IN	50	DISC OUT 5 LO	OUT
20	FD ROLL RIGHT	IN	51	DISC OUT 6 LO	OUT
21	FD PITCH DOWN	IN	52	RESERVED	--
22	LRU POWER OUT 2	OUT	53	DISC OUT 2 HI	OUT
23	GND	--	54	DISC OUT 1 HI	OUT
24	GND	--	55	DISC OUT 3 LO	OUT
25	RS-232 GND 3	--	56	DISC OUT 4 LO	OUT
26	RS-232 GND 4	--	57	DISC IN 1 HI	IN
27	LRU POWER OUT 3	OUT	58	DISC IN 2 HI	IN
28	TIME MARK IN 2A	IN	59	DISC IN 3 HI	IN
29	TIME MARK IN 2B	IN	60	DISC IN 4 HI	IN
30	TIME MARK IN 1A	IN	61	RS-485 4A	I/O
31	TIME MARK IN 1B	IN	62	RS-485 4B	I/O

Table 4-6 GDU J4/P4 Connector

Pin	Function	I/O	Pin	Function	I/O
1	ARINC 429 IN 1A	IN	40	GLIDESLOPE #2 +FLAG	IN
2	ARINC 429 IN 2A	IN	41	GLIDESLOPE #2 -FLAG	IN
3	ARINC 429 IN 3A	IN	42	GLIDESLOPE #1 +FLAG	IN
4	ARINC 429 IN 4A	IN	43	GLIDESLOPE #1 -FLAG	IN
5	ARINC 429 IN 5A	IN	44	ANALOG OUT 1B	OUT
6	ARINC 429 IN 6A	IN	45	ANALOG OUT 1A	OUT
7	ARINC 429 IN 7A	IN	46	RS-485 5A	I/O
8	ARINC 429 IN 8A	IN	47	ARINC 708/453 IN 1A	IN
9	ARINC 429 IN 9A	IN	48	ARINC 708/453 IN 1B	IN
10	ARINC 429 IN 10A	IN	49	ARINC 708/453 IN TERM A	IN
11	ARINC 429 IN 11A	IN	50	ARINC 708/453 IN TERM B	--
12	RS-232 GND 7	--	51	DISC OUT 9 LO	OUT
13	RS-232 IN 7	IN	52	DISC OUT 10 LO	OUT
14	RS-232 OUT 7	OUT	53	ARINC 429 OUT 1A	OUT
15	RS-232 GND 6	--	54	ARINC 429 OUT 2A	OUT
16	RS-232 IN 6	IN	55	ARINC 429 OUT 3A	OUT
17	RS-232 OUT 6	OUT	56	ARINC 429 OUT 4A	OUT
18	RS-232 GND 5	--	57	ADF X/COS IN	IN
19	RS-232 IN 5	IN	58	ADF Y/SIN IN	IN
20	RS-232 OUT 5	OUT	59	ADF DC REF IN	IN
21	ARINC 429 IN 1B	IN	60	DISC OUT LOW 13	OUT
22	ARINC 429 IN 2B	IN	61	DISC OUT LOW 8	OUT
23	ARINC 429 IN 3B	IN	62	GLIDESLOPE #2 +UP IN	IN
24	ARINC 429 IN 4B	IN	63	GLIDESLOPE #2 +DN IN	IN
25	ARINC 429 IN 5B	IN	64	GLIDESLOPE #1 +UP IN	IN
26	ARINC 429 IN 6B	IN	65	GLIDESLOPE #1 +DN IN	IN
27	ARINC 429 IN 7B	IN	66	RS-485 5B	I/O
28	ARINC 429 IN 8B	IN	67	VOR/LOC COMPOSITE #1 LO	IN
29	ARINC 429 IN 9B	IN	68	VOR/LOC COMPOSITE #1 HI	IN
30	ARINC 429 IN 10B	IN	69	VOR/LOC COMPOSITE #2 LO	IN
31	ARINC 429 IN 11B	IN	70	VOR/LOC COMPOSITE #2 HI	IN
32	RESERVED	--	71	DISC OUT LO 11	OUT
33	RS-232 GND 8	--	72	DISC OUT LO 12	OUT
34	RS-232 IN 8	IN	73	ARINC 429 OUT 1B	OUT
35	RS-232 OUT 8	OUT	74	ARINC 429 OUT 2B	OUT
36	DISC IN 5 LO	IN	75	ARINC 429 OUT 3B	OUT
37	DISC IN 6 LO	IN	76	ARINC 429 OUT 4B	OUT
38	DISC IN 7 LO	IN	77	ARINC 429 OUT 5A	OUT
39	DISC IN 8 LO	IN	78	ARINC 429 OUT 5B	OUT

Table 4-7 GDU J5/P5 Connector

Pin	Name	I/O
N/A	HD VIDEO IN 1	--

Table 4-8 GDU J6/P6 Connector

Pin	Name	I/O
N/A	HD VIDEO IN 2	--

Table 4-9 GDU J7/P7Connector

Pin	Name	I/O
N/A	BACKUP GPS ANT	--

4.2.2 GCU 485

The GCU 485 has one connector. The mating designator, part number, and associated connector kit are listed in Table 4-10.

Table 4-10 G500/G600 TXi - GCU 485 Connectors

REF. DES.	DESCRIPTION	CONN P/N	KIT P/N
P4851	Conn, Male, HD D-Sub, 15 Ckt	330-00366-15	011-01824-00

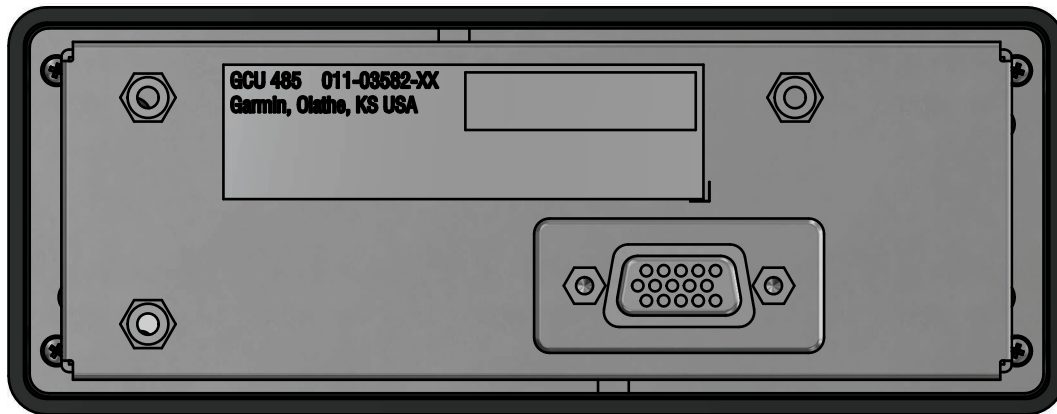


Figure 4-5 GCU 485 Connector

Table 4-11 GCU 485 J4851/P4851 Connector

Pin	Function	I/O
1	RS-232 OUT 1	OUT
2	RS-232 IN 1	IN
3	RS-232 OUT 2	OUT
4	RS-232 IN 2	IN
5	POWER GROUND	--
6	SIGNAL GROUND	--
7	AIRCRAFT_POWER_1	IN
8	SIGNAL GROUND	--
9	AIRCRAFT_POWER_2	IN
10	RESERVED	--
11	LIGHTING BUS HI	IN
12	LIGHTING BUS LO	IN
13	RESERVED*	--
14	RESERVED	--
15	POWER GROUND	--

4.2.3 GDC 72

The GDC 72 has one connector. The mating designator, part number, and associated connector kit are listed in Table 4-12.

Table 4-12 G500/G600 TXi - GDC 72 Connectors

REF. DES.	DESCRIPTION	CONN P/N	KIT P/N
P721	Conn, HD D-Sub, Male, Str, Mil Crp, Sealed, w/ GND Indents, 78 Pin	330-00776-78	011-03735-00

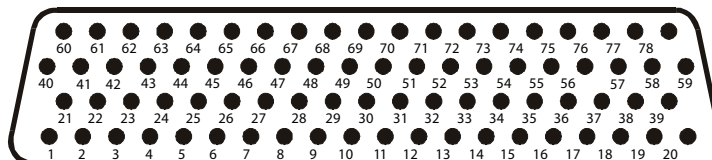


Figure 4-6 View of J721 Connector Looking at GDC 72

Table 4-13 GDC 72 J721/P721 Connector

Pin	Function	I/O	Pin	Function	I/O
1	ARINC 429 OUT 1A	OUT	40	RESERVED	--
2	ARINC 429 OUT 1B	OUT	41	RESERVED	--
3	ARINC 429 OUT 2A	OUT	42	ARINC 429 IN 1A	IN
4	OAT LO	IN	43	ARINC 429 IN 1B	IN
5	OAT HI	IN	44	ARINC 429 IN 2A	IN
6	OAT POWER	OUT	45	RESERVED	--
7	ARINC 429 OUT 1B	OUT	46	RESERVED	--
8	ARINC 429 OUT 3A	OUT	47	RESERVED	--
9	ARINC 429 OUT 3B	OUT	48	SIGNAL GROUND	--
10	RESERVED	--	49	ARINC 429 OUT 2A	OUT
11	RESERVED	--	50	ARINC 429 OUT 2B	OUT
12	RESERVED	--	51	RESERVED	--
13	RESERVED	--	52	RESERVED	--
14	AIRCRAFT POWER 1	IN	53	CONFIG MODULE POWER	OUT
15	SIGNAL GROUND	--	54	CONFIG MODULE DATA	I/O
16	AIRCRAFT POWER 2	IN	55	CONFIG MODULE CLOCK	OUT
17	RS232 OUT 2	OUT	56	DISCRETE IN 1*	IN
18	RS232 IN 2	IN	57	SYS ID 2*	IN
19	RESERVED	--	58	RESERVED	--
20	RESERVED	--	59	RESERVED	--
21	ARINC 429 OUT 3A	OUT	60	RESERVED	--
22	ARINC 429 OUT 3B	OUT	61	RESERVED	--
23	ARINC 429 OUT 2B	OUT	62	ARINC 429 IN 3A	IN
24	SIGNAL GROUND	--	63	ARINC 429 IN 3B	IN
25	RESERVED	--	64	ARINC 429 IN 2B	IN
26	SIGNAL GROUND	--	65	RESERVED	--

Pin	Function	I/O
27	ARINC 429 OUT 1A	OUT
28	RESERVED	--
29	RESERVED	--
30	SIGNAL GROUND	--
31	SIGNAL GROUND	--
32	SIGNAL GROUND	--
33	SIGNAL GROUND	--
34	AIRCRAFT GROUND 1	--
35	SPARE	--
36	AIRCRAFT GROUND 2	--
37	SIGNAL GROUND	--
38	RESERVED	--
39	RESERVED	--

Pin	Function	I/O
66	RESERVED	--
67	RESERVED	--
68	SIGNAL GROUND	--
69	RS 232 OUT 1	OUT
70	RS 232 IN 1	IN
71	RESERVED	--
72	RESERVED	--
73	SIGNAL GROUND	--
74	CONFIG MODULE GROUND	--
75	SYS ID 1*	IN
76	DISCRETE IN 3*	IN
77	DISCRETE IN 4	IN
78	DISCRETE IN 2*	IN

*Indicates Active-Low

4.2.4 GSU 75()

The GSU 75 has one connector. The mating designator, part number, and associated connector kit are listed in Table 4-14.

Table 4-14 G500/G600 TXi - GSU 75 Connectors

REF. DES.	DESCRIPTION	CONN P/N	KIT P/N
P751	Conn, HD D-Sub, Male, Str, Mil Crp, Sealed, w/ GND Indents, 78 Pin	330-00776-78	011-03109-00

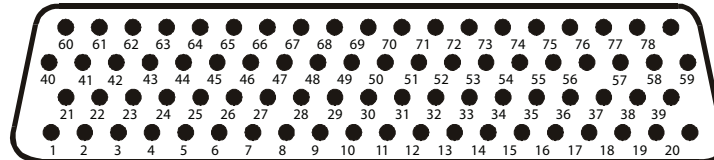


Figure 4-7 View of J751 Connector Looking at GSU 75()

Table 4-15 GSU 75 J751/P751 Connector

Pin	Function	I/O	Pin	Function	I/O
1	ARINC 429 OUT ADC 1A	OUT	40	PPS IN 1 B	IN
2	ARINC 429 OUT ADC 1B	OUT	41	PPS IN 2 A	IN
3	ARINC 429 OUT ADC 2A	OUT	42	ARINC 429 IN ADC 1A	IN
4	OAT LO	IN	43	ARINC 429 IN ADC 1B	IN
5	OAT HI	IN	44	ARINC 429 IN ADC 2A	IN
6	OAT POWER	OUT	45	ARINC 429 IN AHRS 1A	IN
7	ARINC 429 OUT ADAHRS 1B	OUT	46	ARINC 429 IN AHRS 1B	IN
8	ARINC 429 OUT ADAHRS 3A	OUT	47	ARINC 429 IN AHRS 3A	IN
9	ARINC 429 OUT ADAHRS 3B	OUT	48	SIGNAL GROUND	--
10	RS-422 IN A	IN	49	ARINC 429 OUT ADAHRS 2A	OUT
11	RS-422 IN B	IN	50	ARINC 429 OUT ADAHRS 2B	OUT
12	RS-232 OUT AHRS 3	OUT	51	RS-232 OUT AHRS 1	OUT
13	MAGNETOMETER POWER OUT	OUT	52	RS232 IN AHRS 1	IN
14	AIRCRAFT POWER 1	IN	53	CONFIG MODULE POWER	OUT
15	SIGNAL GROUND	--	54	CONFIG MODULE DATA	I/O
16	AIRCRAFT POWER 2	IN	55	CONFIG MODULE CLOCK	OUT
17	RS-232 OUT ADC 2	OUT	56	DISCRETE IN 1*	IN
18	RS-232 IN ADC 2	IN	57	SYS ID 2*	IN
19	RESERVED	--	58	RESERVED	IN
20	RESERVED	--	59	RESERVED	I/O
21	ARINC 429 OUT ADC 3A	OUT	60	PPS IN 1A	IN
22	ARINC 429 OUT ADC 3B	OUT	61	PPS IN 2B	IN
23	ARINC 429 OUT ADC 2B	OUT	62	ARINC 429 IN ADC 3A	IN
24	SIGNAL GROUND	--	63	ARINC 429 IN ADC 3B	IN
25	PPS SELECT	IN	64	ARINC 429 IN ADC 2B	IN
26	SIGNAL GROUND	--	65	ARINC 429 IN AHRS 2A	IN

Pin	Function	I/O
27	ARINC 429 OUT ADAHRS 1A	OUT
28	ARINC 429 OUT ADAHRS 3A	OUT
29	ARINC 429 OUT ADAHRS 3B	OUT
30	SIGNAL GROUND	--
31	RS-232 AHRS 3 GROUND	--
32	RS-232 AHRS 1 GROUND	--
33	MAGNETOMETER GROUND	--
34	AIRCRAFT GROUND 1	--
35	RESERVED	--
36	AIRCRAFT GROUND 2	--
37	RS-232 ADC 2 GROUND	--
38	RESERVED	--
39	RESERVED	I/O

Pin	Function	I/O
66	ARINC 429 IN AHRS 2B	IN
67	ARINC 429 IN AHRS 3B	IN
68	RS-232 ADC 1 GROUND	--
69	RS-232 OUT ADC 1	OUT
70	RS-232 IN ADC 1	IN
71	RS-232 OUT AHRS 2	OUT
72	RS-232 IN AHRS 2	IN
73	RS-232 AHRS 2 GROUND	--
74	CONFIG MODULE GROUND	--
75	SYS ID 1*	IN
76	DISCRETE IN 3*	IN
77	DISCRETE IN 4	IN
78	DISCRETE IN 2*	IN

*Indicates Active-Low

4.2.5 GRS 79

The GRS 79 has one connector. The mating designator, part number, and associated connector kit are listed in Table 4-16.

Table 4-16 G500/G600 TXi - GRS 79 Connectors

REF. DES.	DESCRIPTION	CONN P/N	KIT P/N
P791	Conn, HD D-Sub, Male, Str, Mil Crmp, Sealed, w/ GND Indents, 78 Pin	330-00776-78	011-03733-00

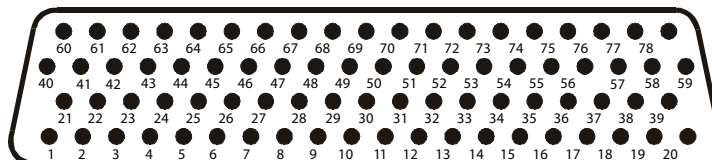


Figure 4-8 View of J791 Connector Looking at GRS 79

Table 4-17 GRS 79 J791/P791 Connector

Pin	Function	I/O	Pin	Function	I/O
1	ARINC 429 OUT 1A	OUT	40	PPS IN 1 B	IN
2	ARINC 429 OUT 1B	OUT	41	PPS IN 2 A	IN
3	ARINC 429 OUT 2A	OUT	42	RESERVED	--
4	RESERVED	--	43	RESERVED	--
5	RESERVED	--	44	RESERVED	--
6	RESERVED	--	45	ARINC 429 IN 1A	IN
7	ARINC 429 OUT 1B	OUT	46	ARINC 429 IN 1B	IN
8	ARINC 429 OUT 3A	OUT	47	ARINC 429 IN 3A	IN
9	ARINC 429 OUT 3B	OUT	48	SIGNAL GROUND	--
10	RS-422 IN A	IN	49	ARINC 429 OUT 2A	OUT
11	RS-422 IN B	IN	50	ARINC 429 OUT 2B	OUT
12	RS-232 OUT 3	OUT	51	RS-232 OUT 1	OUT
13	MAGNETOMETER POWER OUT	OUT	52	RS-232 IN 1	IN
14	AIRCRAFT POWER 1	IN	53	CONFIG MODULE POWER	OUT
15	SIGNAL GROUND	--	54	CONFIG MODULE DATA	I/O
16	AIRCRAFT POWER 2	IN	55	CONFIG MODULE CLOCK	OUT
17	RESERVED	--	56	DISCRETE IN 1*	IN
18	RESERVED	--	57	SYS ID 2*	IN
19	RESERVED	--	58	RESERVED	IN
20	RESERVED	--	59	RESERVED	I/O
21	ARINC 429 OUT 3A	OUT	60	PPS IN 1A	IN
22	ARINC 429 OUT 3B	OUT	61	PPS IN 2B	IN
23	ARINC 429 OUT 2B	OUT	62	RESERVED	--
24	SIGNAL GROUND	--	63	RESERVED	--
25	PPS SELECT	IN	64	RESERVED	--
26	SIGNAL GROUND	--	65	ARINC 429 IN 2A	IN

Pin	Function	I/O
27	ARINC 429 OUT 1A	OUT
28	RESERVED	--
29	RESERVED	--
30	SIGNAL GROUND	--
31	SIGNAL GROUND	--
32	SIGNAL GROUND	--
33	MAGNETOMETER GROUND	--
34	AIRCRAFT GROUND 1	--
35	SPARE	--
36	AIRCRAFT GROUND 2	--
37	SIGNAL GROUND	--
38	RESERVED	--
39	RESERVED	I/O

Pin	Function	I/O
66	ARINC 429 IN 2B	IN
67	ARINC 429 IN 3B	IN
68	SIGNAL GROUND	--
69	RESERVED	--
70	RESERVED	--
71	RS-232 OUT 2	OUT
72	RS-232 IN 2	IN
73	SIGNAL GROUND	--
74	CONFIG MODULE GROUND	--
75	SYS ID 1*	IN
76	DISCRETE IN 3*	IN
77	DISCRETE IN 4	IN
78	DISCRETE IN 2*	IN

*Indicates Active-Low

4.2.6 GAD 43

The GAD 43 has one connector. The mating designator, part number, and associated connector kit are listed in Table 4-18.

Table 4-18 G500/G600 TXi - GAD 43 Connectors

REF. DES.	DESCRIPTION	CONN P/N	KIT P/N
P431	Conn, D-Sub, Mil Crimp Socket, 50 Ckt	330-00502-50	011-01990-00

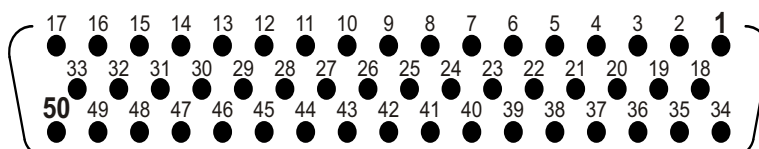


Figure 4-9 GAD 43/43e J431/P431 Connector Looking at Unit

Table 4-19 GAD 43 J431/P431 Connector

Pin	Function	I/O	Pin	Function	I/O
1	RESERVED	--	26	WXR ROLL OUT LO (50 mV/deg)	--
2	HEADING VALID OUT*	OUT	27	SPARE DISC IN* 2	IN
3	ATTITUDE VALID RELAY NO	--	28	WXR ROLL OUT HI (50 mV/deg)	OUT
4	ATTITUDE VALID RELAY NC	--	29	ROLL DC OUT	OUT
5	AP INTERLOCK RELAY COMMON	--	30	ROLL SYNCHRO OUT X	OUT
6	+26 VDC OUT	OUT	31	PITCH SYNCHRO OUT X	OUT
7	HDG SYNCHRO OUT Y	OUT	32	ARINC 429 IN B	IN
8	HDG SYNCHRO OUT X	OUT	33	RS-232 OUT	OUT
9	10VAC REF IN HI	IN	34	26VAC LO	--
10	10VAC REF IN LO	IN	35	5VAC OUT LO	--
11	SPARE DISC OUT* 2	OUT	36	5VAC OUT HI	OUT
12	WXR PITCH OUT HI (50mV/deg)	OUT	37	115VAC REF IN LO	IN
13	PITCH DC OUT	OUT	38	115VAC REF IN HI	IN
14	ROLL SYNCHRO OUT Y	OUT	39	26VAC REF IN HI	IN
15	PITCH SYNCHRO OUT Y	OUT	40	YAW RATE / BARO CORRECTION GND	--
16	ARINC 429 IN A	IN	41	HDG SYNCHRO OUT Z	OUT
17	RS-232 IN	IN	42	PITCH AC OUT LO (60 Mv/DEG OR 200 Mv/DEG)	--
18	26VAC OUT HI	OUT	43	WXR PITCH OUT LO (50 mV/deg)	--
19	YAW RATE / BARO CORRECTION OUT	OUT	44	ROLL SYNCHRO OUT Z	--
20	ATTITUDE VALID RELAY COMMON	--	45	PITCH SYNCHRO OUT Z	OUT
21	AP INTERLOCK RELAY VALID NC	--	46	RS-232 GND	--
22	AP INTERLOCK RELAY VALID NO	--	47	AIRCRAFT GROUND	--
23	ROLL AC OUT HI (54 mV/deg or 200 mV/deg)	OUT	48	AIRCRAFT GROUND	--

Pin	Function	I/O
24	PITCH AC OUT HI (60 mV/deg or 200 mV/deg)	OUT
25	ROLL AC OUT LO (54 mV/deg or 200 mV/deg)	--

Pin	Function	I/O
49	AIRCRAFT POWER 1	IN
50	AIRCRAFT POWER 2	IN

*Indicates Active-Low

4.2.7 GAD 43e

The GAD 43e has three connectors. The mating designators, part numbers, and associated connector kit are listed in Table 4-20. Refer to Section 4.2.6 for J431/P431 pinout.

Table 4-20 G500/G600 TXi - GAD 43e Connectors

REF. DES.	DESCRIPTION	CONN P/N	KIT P/N
P431	Conn, D-Sub, Mil Crimp Socket, 50 Ckt	330-00502-50	011-02350-00
P432	Conn, HD D-Sub, Male, Str, Mil Crmp Pins, 78 Ckt	330-00626-78	011-02350-00
P433	Conn, HD D-Sub, Male, Str, Mil Crmp Pins, 26 Ckt	330-00626-26	011-02350-00

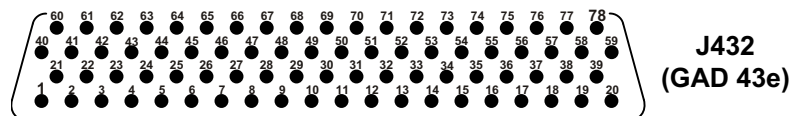


Figure 4-10 GAD 43e J432/P432 Connector Looking at Unit

Table 4-21 GAD 43e J432/P432 Connector

Pin	Function	I/O	Pin	Function	I/O
1	ALTITUDE PRESELECT DATA	I/O	40	DME RQST HI / DME SYNC IN HI	I/O
2	GROUND	--	41	DME RQST LO / DME SYNC IN LO	I/O
3	RS-232 IN 2	IN	42	DME RNAV RQST OUT	OUT
4	RS-232 OUT 2	OUT	43	ARINC 429 OUT 1A	OUT
5	RS-232 GND 2	--	44	ARINC 429 OUT 1B	OUT
6	OUTER MARKER EXT LAMP IN	IN	45	GROUND	--
7	MIDDLE MARKER EXT LAMP IN	IN	46	ILS ENERGIZE #1 IN*	IN
8	INNER MARKER EXT LAMP IN	IN	47	ILS ENERGIZE #2 IN*	IN
9	RADAR ALT VALID IN	IN	48	GLIDESLOPE #1 VALID IN	IN
10	GROUND	--	49	GLIDESLOPE #2 VALID IN	IN
11	RESERVED	--	50	DME EXT TUNE K50 IN	IN
12	RESERVED	--	51	DME SUPERFLAG IN	IN
13	RESERVED	--	52	DME HOLD OUT*	OUT
14	RESERVED	--	53	ALT HOLD*	OUT
15	GROUND	--	54	GROUND	--
16	RESERVED	--	55	RESERVED	--
17	VS CMD	OUT	56	RESERVED	--
18	GROUND	--	57	RESERVED	--
19	ALTITUDE ERROR OUT +	OUT	58	PRESELECT MON+ POWER	IN
20	ALTITUDE ERROR OUT -	OUT	59	PRESELECT MON+ OUT	OUT
21	ALTITUDE PRESELECT CLOCK	I/O	60	DME CLOCK HI	I/O
22	GROUND	--	61	DME CLOCK LO	I/O
23	DME ARINC 429 IN A	IN	62	DME DATA HI	I/O
24	DME ARINC 429 IN B	IN	63	DME DATA LO	I/O
25	GROUND	--	64	AIRCRAFT GROUND	--
26	RESERVED	--	65	DME EXT TUNE M8/MA/M0 IN	IN

Pin	Function	I/O
27	RESERVED	--
28	RESERVED	--
29	RESERVED	--
30	PRESELECT ADDR 0 / AP DISC SW	IN
31	PRESELECT ADDR 1	IN
32	GROUND	--
33	RESERVED	--
34	VS SELECT CTRL* / KNOB IN MOTION*	OUT
35	DME COM NAV 1* / CH 1-2 SELECT*	I/O
36	DME COM NAV 2*	I/O
37	RESERVED	--
38	GROUND	--
39	RESERVED	--

Pin	Function	I/O
66	DME EXT TUNE M4/ME/M1 IN	IN
67	DME EXT TUNE M2/MC/M2 IN	IN
68	DME EXT TUNE M1/MD/M3 IN	IN
69	DME EXT TUNE K800/KA/K0 IN	IN
70	DME EXT TUNE K400/KE/K1 IN	IN
71	DME EXT TUNE K200/KC/K2 IN	IN
72	DME EXT TUNE K100/KD/K3 IN	IN
73	GROUND	--
74	RESERVED	--
75	RESERVED	--
76	GROUND	--
77	RESERVED	--
78	RESERVED	--

*Indicates Active-Low

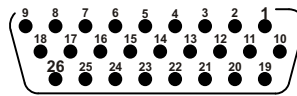


Figure 4-11 GAD 43e J433/P433 Connector Looking at Unit

Table 4-22 GAD 43e J433/P433 Connector

Pin	Function	I/O
1	VOR/LOC COMPOSITE #1 HI	IN
2	VOR/LOC COMPOSITE #1 LO	IN
3	VOR/LOC COMPOSITE #2 HI	IN
4	VOR/LOC COMPOSITE #2 LO	IN
5	GROUND	--
6	GLIDESLOPE #1 +UP IN	IN
7	GLIDESLOPE #1 +DN IN	IN
8	GLIDESLOPE #2 +UP IN	IN
9	GLIDESLOPE #2 +DN IN	IN
10	RESERVED	--
11	GROUND	--
12	ADF BEARING X	IN
13	ADF BEARING Y	IN
14	ADF BEARING Z (GND)	--
15	RADAR ALT IN HI	IN
16	RADAR ALT IN LO	IN
17	GROUND	--
18	GROUND	--
19	FD PITCH UP OUT/GS #2 VALID OUT	OUT
20	FD PITCH DOWN OUT (GND)	--
21	FD ROLL RIGHT OUT/GS #1 VALID OUT	OUT
22	FD ROLL LEFT OUT (GND)	--
23	FD PITCH UP IN/GS #2 +FLAG	IN
24	FD PITCH DOWN IN/GS #2 -FLAG	IN
25	FD ROLL RIGHT IN/GS #1 +FLAG	IN
26	FD ROLL LEFT IN/GS #2 -FLAG	IN

4.2.8 GEA 110

The GEA 110 has two connectors. The mating designators, part numbers, and associated connector kits are listed in Table 4-23.

Table 4-23 G500/G600 TXi - GEA 110 Connectors

REF. DES.	DESCRIPTION	CONN P/N	KIT P/N
P1101	Conn, Hi Dens, D-Sub, Mil Crmp, 15 Ckt	330-00185-15	011-03527-50
	Conn, HD D-Sub, Male, Str, Mil Crp contacts included, sealed, 15 Pin	330-01384-00	011-03527-51
P1102	Conn, Hi Dens, D-Sub, Mil Crp, 78 Ckt	330-00185-75	011-03527-50
	Conn, HD D-Sub, Male, Str, Mil Crp, Sealed, w/ GND Indents, 78 Pin	330-00776-78	011-03527-51



Figure 4-12 GEA 110 Connectors

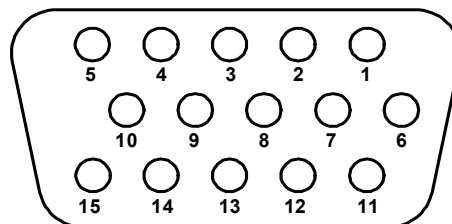


Figure 4-13 GEA 110 J1101/P1101 Connector Looking at Unit

Table 4-24 GEA 110 J1101/P1101 Connector

Pin	Function	I/O
1	AV PWR IN 1	IN
2	RESERVED	--
3	DISCRETE OUT 1	OUT
4	RS 485 2A	I/O
5	RS 485 1A	I/O
6	AV PWR IN 2	IN
7	RESERVED	--
8	DISCRETE OUT 2	OUT

Pin	Function	I/O
9	RS 485 2B	I/O
10	RS 485 1B	I/O
11	DISCRETE IN 5	IN
12	SYS ID #1	IN
13	SYS ID #2	IN
14	GND	--
15	GND	--

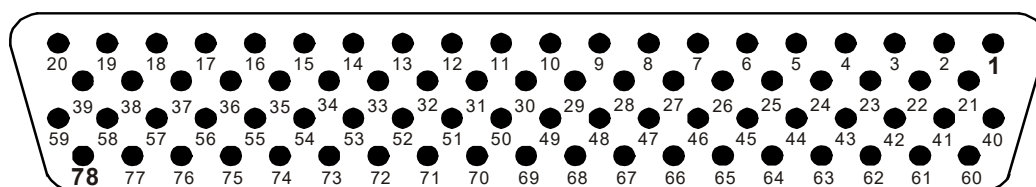


Figure 4-14 GEA 110 J1102/P1102 Connector Looking at Unit

Table 4-25 GEA 110 J1102/P1102 Connector

Pin	Function	I/O
1	CHT 1 (+)	IN
2	CHT 2 (+)	IN
3	CHT 3 (+)	IN
4	CHT 4 (+)	IN
5	CHT 5 (+)	IN
6	CHT 6 (+)	IN
7	GENERAL PURPOSE 1 (+)	IN
8	GENERAL PURPOSE 2 (+)	IN
9	+10 VDC	OUT
10	FUEL PRESSURE (+)	IN
11	DISCRETE IN 1	IN
12	FUEL QUANTITY 1 / GENERAL PURPOSE 3 (+)	IN
13	FUEL QUANTITY 3 / GENERAL PURPOSE 5 (+)	IN
14	GND	IN
15	FUEL FLOW 1	IN
16	FUEL FLOW 2	IN
17	+12 VDC	OUT
18	RPM IN 1 (+)	IN
19	RPM IN 2 (+)	IN
20	CONFIG. MOD PWR	OUT
21	CHT 1 (-)	IN
22	CHT 2 (-)	IN
23	CHT 3 (-)	IN
24	CHT 4 (-)	IN
25	CHT 5 (-)	IN
26	CHT 6 (-)	IN
27	GENERAL PURPOSE 1 (-)	IN
28	GENERAL PURPOSE 2 (-)	IN
29	+5 VDC	OUT
30	FUEL PRESSURE (-)	IN
31	DISCRETE IN 2	IN

Pin	Function	I/O
40	EGT 1 (+)	IN
41	EGT 2 (+)	IN
42	EGT 3 (+)	IN
43	EGT 4 (+)	IN
44	EGT 5 (+)	IN
45	EGT 6 (+)	IN
46	CARB TEMP (+)	IN
47	OIL TEMP (+)	IN
48	OIL PRESSURE (+)	IN
49	GND	--
50	MANIFOLD PRESSURE (+)	IN
51	DISCRETE IN 3	IN
52	FUEL QUANTITY 2 / GENERAL PURPOSE 4 (+)	IN
53	FUEL QUANTITY 4 / GENERAL PURPOSE 6 (+)	IN
54	GND	--
55	SHUNT 1 (-)	IN
56	SHUNT 2 (-)	IN
57	BUS 1	IN
58	BUS 2	IN
59	CONFIG MOD CLOCK	OUT
60	EGT 1 (-)	IN
61	EGT 2 (-)	IN
62	EGT 3 (-)	IN
63	EGT 4 (-)	IN
64	EGT 5 (-)	IN
65	EGT 6 (-)	IN
66	CARB TEMP (-)	IN
67	OIL TEMP (-)	IN
68	OIL PRESSURE (-)	IN
69	+12 VDC	OUT
70	MANIFOLD PRESSURE (-)	IN

Pin	Function	I/O
32	FUEL QUANTITY 1 / GENERAL PURPOSE 3 (-)	IN
33	FUEL QUANTITY 3 / GENERAL PURPOSE 5 (-)	IN
34	GND	--
35	SHUNT 1 (+)	IN
36	SHUNT 2 (+)	IN
37	RPM IN 1 (-)	IN
38	RPM IN 2 (-)	IN
39	CONFIG MOD DATA	I/O

Pin	Function	I/O
71	DISCRETE IN 4	IN
72	FUEL QUANTITY 2 / GENERAL PURPOSE 4 (-)	IN
73	FUEL QUANTITY 4 / GENERAL PURPOSE 6 (-)	IN
74	GND	--
75	SPARE	--
76	+5 VDC	OUT
77	BUS 3	IN
78	CONFIG MOD GND	--

4.2.9 GEA 71B Enhanced

The GEA 71B Enhanced has two connectors. The mating designators, part numbers, and associated connector kits are listed in Table 4-26.

Table 4-26 G500/G600 TXi - GEA 71B Enhanced Connectors

REF. DES.	DESCRIPTION	CONN P/N	KIT P/N
J701	Conn, Hi Dens, D-Sub, Mil Crp, 78 Ckt	330-00185-78	011-00797-03
J702	Conn, Hi Dens, D-Sub, Mil Crp, 78 Ckt	330-00185-78	011-00797-03

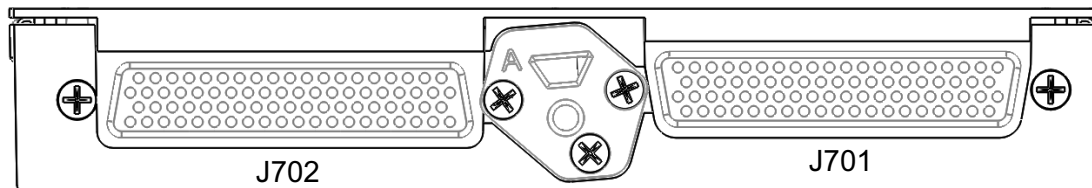


Figure 4-15 GEA 71B Enhanced Connectors

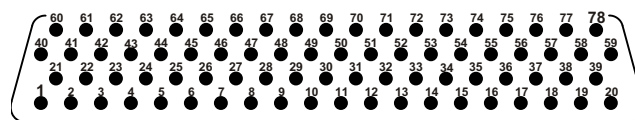


Figure 4-16 GEA 71B Enhanced J701/P701 Connector Looking at Unit

Table 4-27 GEA 71B Enhanced J701/P701 Connector

Pin	Function	I/O	Pin	Function	I/O
1	CONFIG MODULE GROUND	--	40	CONFIG MODULE DATA	I/O
2	DIGITAL IN* 1	IN	41	DIGITAL IN*3	IN
3	DIGITAL IN* 2	IN	42	GEN PURP ANALOG IN 3 HI	IN
4	SIGNAL GROUND	--	43	GEN PURP ANALOG IN 3 LO	IN
5	RS-485 1 A	I/O	44	GEN PURP ANALOG IN 4 HI	IN
6	RS-485 1 B	I/O	45	GEN PURP ANALOG IN 4 LO	IN
7	RS-485 2 A	I/O	46	GEN PURP ANALOG IN 5 HI	IN
8	RS-485 2 B	I/O	47	GEN PURP ANALOG IN 5 LO	IN
9	GEA SYS ID PROGRAM* 1 [1]	IN	48	ENGINE TEMP ANALOG IN 7 HI [1]	IN
	FUEL QTY EXCITATION 1 [2]	OUT		CAPACITIVE FUEL QTY 5 [2]	IN
10	GEA SYS ID PROGRAM* 2 [1]	IN	49	ENGINE TEMP ANALOG IN 7 LO [1]	IN
	FUEL QTY EXCITATION 2 [2]	OUT		CAPACITIVE FUEL QTY 6 [2]	IN
11	TRANSDUCER PWR OUT LO (GND)	--	50	ENGINE TEMP ANALOG IN 8 HI [1]	IN
12	TRANSDUCER PWR OUT LO (GND)	--		CAPACITIVE FUEL QTY 7 [2]	IN
13	TRANSDUCER PWR OUT LO (GND)	--	51	ENGINE TEMP ANALOG IN 8 LO [1]	IN
14	+10 VDC TRANSDUCER PWR OUT	OUT		CAPACITIVE FUEL QTY 8 [2]	IN
15	+5 VDC TRANSDUCER PWR OUT	OUT	52	ENGINE TEMP ANALOG IN 9 HI [1]	IN
				FILTERED FUEL QTY HI [2]	IN
			53	ENGINE TEMP ANALOG IN 9 LO [1]	IN
				FILTERED FUEL QTY LO [2]	IN
			54	TURBINE ENGINE TEMP HI (ENGINE TEMP ANALOG IN 10 HI)	IN

Pin	Function	I/O
16	+12 VDC TRANSDUCER PWR OUT	OUT
17	ENGINE TEMP ANALOG IN 6 HI [1]	IN
	CAPACITIVE FUEL QTY 1 [2]	IN
18	ENGINE TEMP ANALOG IN 6 LO [1]	IN
	CAPACITIVE FUEL QTY 2 [2]	IN
19	SIGNAL GROUND	--
20	POWER GROUND	--
21	CONFIG MODULE POWER	OUT
22	GEN PURP ANALOG IN 1 HI	IN
23	GEN PURP ANALOG IN 1 LO	IN
24	GEN PURP ANALOG IN 2 HI	IN
25	GEN PURP ANALOG IN 2 LO	IN
26	OAT HI (ENG TEMP ANALOG IN 1 HI)	IN
	RESISTIVE FQ 1 HI [2]	IN
27	OAT LO (ENG TEMP ANALOG IN 1 LO)	IN
	RESISTIVE FQ 1 LO [2]	IN
28	ENGINE TEMP ANALOG IN 2 HI	IN
29	ENGINE TEMP ANALOG IN 2 LO	IN
30	ENGINE TEMP ANALOG IN 3 HI [1]	IN
	CAPACITIVE FUEL QTY 3 [2]	IN
31	ENGINE TEMP ANALOG IN 3 LO [1]	IN
	CAPACITIVE FUEL QTY 4 [2]	IN
32	SIGNAL GROUND	--
33	FUEL FLOW TEMP HI (ENGINE TEMP ANALOG IN 4 HI)	IN
	RESISTIVE FQ 2 HI [2]	IN
34	FUEL FLOW TEMP LO (ENGINE TEMP ANALOG IN 4 LO)	IN
	RESISTIVE FQ 2 LO [2]	IN
35	AIRCRAFT POWER 1	IN
36	ENGINE TEMP ANALOG IN 5 HI	IN
	RESISTIVE FQ 3 HI [2]	IN
37	AIRCRAFT POWER 2	IN
38	ENGINE TEMP ANALOG IN 5 LO	IN
	RESISTIVE FQ 3 LO [2]	IN
39	SIGNAL GROUND	--

Pin	Function	I/O
55	TURBINE ENGINE TEMP LO (ENGINE TEMP ANALOG IN 10 LO)	IN
56	ENGINE TEMP ANALOG IN 11 HI [1]	IN
	FILTERED GAS GEN RPM HI [2]	IN
57	ENGINE TEMP ANALOG IN 11 LO [1]	IN
	FILTERED GAS GEN RPM LO [2]	IN
58	ENGINE TEMP ANALOG IN 12 HI [1]	IN
	FILTERED PROP RPM HI [2]	IN
59	ENGINE TEMP ANALOG IN 12 LO [1]	IN
	FILTERED PROP RPM LO [2]	IN
60	CONFIG MODULE CLOCK	OUT
61	DIGITAL IN* 4	IN
62	GEN PURP ANALOG IN 6 HI	IN
63	GEN PURP ANALOG IN 6 LO	IN
64	GEN PURP ANALOG IN 7 HI	IN
65	GEN PURP ANALOG IN 7 LO	IN
66	GEN PURP ANALOG IN 8 HI	IN
67	GEN PURP ANALOG IN 8 LO	IN
68	THERMOCOUPLE REF IN HI	IN
69	THERMOCOUPLE REF IN LO	IN
70	DISCRETE IN* 1	IN
71	DISCRETE IN* 2	IN
72	GEN PURP ANALOG IN 9 HI	IN
73	GEN PURP ANALOG IN 9 LO	IN
74	GEN PURP ANALOG IN 10 HI	IN
75	GEN PURP ANALOG IN 10 LO	IN
76	DISCRETE IN* 3	IN
77	GEA REMOTE POWER OFF	IN
78	POWER GROUND	--

* Indicates Active-Low

Notes:

[1] GEA 71B Enhanced P/N 010-01405-02 only.

[2] GEA 71B Enhanced P/N 010-01405-05 only.

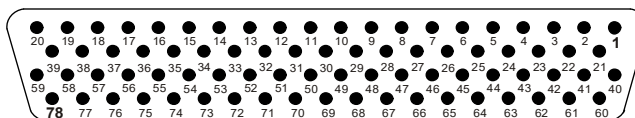


Figure 4-17 GEA 71B Enhanced J702/P702 Connector Looking at Unit

Table 4-28 GEA 71B Enhanced J702/P702 Connector

Pin	Function	I/O	Pin	Function	I/O
1	ANNUNCIATE* 1A	OUT	40	DISCRETE IN* 17A	IN
2	ANNUNCIATE* 2A	OUT	41	DISCRETE IN* 18A	IN
3	ANNUNCIATE* 3A	OUT	42	DISCRETE IN* 19A	IN
4	ANNUNCIATE* 4A	OUT	43	DISCRETE IN* 20A	IN
5	RESERVED	--	44	ANLG/CURRENT MONITOR IN 1A HI	IN
6	RESERVED	--	45	ANLG/CURRENT MONITOR IN 1A LO	IN
7	RESERVED	--	46	ANLG/CURRENT MONITOR IN 2A HI	IN
8	EXTENDED COMMON MODE ANALOG IN 1A HI	IN	47	ANLG/CURRENT MONITOR IN 2A LO	IN
9	EXTENDED COMMON MODE ANALOG IN 1A LO	IN	48	ANLG/CURRENT MONITOR IN 3A HI	IN
10	RESERVED	--	49	ANLG/CURRENT MONITOR IN 3A LO	IN
11	TRANSDUCER PWR OUT LO (GND)	--	50	ANLG/CURRENT MONITOR IN 4A HI	IN
12	TRANSDUCER PWR OUT LO (GND)	--	51	ANLG/CURRENT MONITOR IN 4A LO	IN
13	TRANSDUCER PWR OUT LO (GND)	--	52	GEN PURP ANALOG IN 1A HI (GP11)	IN
14	+10 VDC TRANSDUCER PWR OUT A	OUT	53	GEN PURP ANALOG IN 1A LO (GP11)	IN
15	+5 VDC TRANSDUCER PWR OUT A	OUT	54	GEN PURP ANALOG IN 2A HI (GP12)	IN
16	+12 VDC TRANSDUCER PWR OUT A	OUT	55	GEN PURP ANALOG IN 2A LO (GP12)	IN
17	RESERVED	--	56	GEN PURP ANALOG IN 3A HI (GP13)	IN
18	EXTENDED COMMON MODE ANALOG IN 1A HI	IN	57	GEN PURP ANALOG IN 3A LO (GP13)	IN
19	EXTENDED COMMON MODE ANALOG IN 1A LO	IN	58	GEN PURP ANALOG IN 4A HI (GP14)	IN
20	RESERVED	--	59	GEN PURP ANALOG IN 4A LO (GP14)	IN
21	RESERVED	--	60	DISCRETE IN* 1A	IN
22	RESERVED	--	61	DISCRETE IN* 2A	IN
23	RESERVED	--	62	DISCRETE IN* 3A	IN
24	RESERVED	--	63	DISCRETE IN* 4A	IN
25	DISCRETE IN* 11A	IN	64	DISCRETE IN* 5A	IN
26	DISCRETE IN* 12A	IN	65	DISCRETE IN* 6A	IN
27	DISCRETE IN* 13A	IN	66	DISCRETE IN* 7A	IN
28	DISCRETE IN* 14A	IN	67	DIGITAL IN* 5A	IN
29	DISCRETE IN* 15A	IN	68	DIGITAL IN* 6A	IN
30	DISCRETE IN* 16A	IN	69	DIGITAL IN* 7A	IN

Pin	Function	I/O
31	SIGNAL GROUND	--
32	SIGNAL GROUND	--
33	SIGNAL GROUND	--
34	SIGNAL GROUND	--
35	SIGNAL GROUND	--
36	SIGNAL GROUND	--
37	SIGNAL GROUND	--
38	SIGNAL GROUND	--
39	SIGNAL GROUND	--

Pin	Function	I/O
70	DIGITAL IN* 8A	IN
71	DISCRETE IN* 8A	IN
72	DISCRETE IN* 9A	IN
73	DISCRETE IN* 10A	IN
74	FUEL FLOW IN 1 (DIGITAL IN* 1A)	IN
75	FUEL FLOW RETURN (DGTL IN* 2A)	IN
76	PROPELLER RPM (DIGITAL IN* 3A)	IN
77	GAS GEN RPM (DIGITAL IN* 4A)	IN
78	SIGNAL GROUND	--

* Indicates Active-Low

4.2.10 GBB 54

The GBB 54 has one connector. The mating designator, part number, and associated connector kit are listed in Table 4-29.

Table 4-29 G500/G600 TXi - GBB 54 Connectors

REF. DES.	DESCRIPTION	CONN P/N	KIT P/N
P541	Conn, Std D-Sub, Male, Crimp, No Contacts, 15 Pos	330-01437-00	011-03527-70

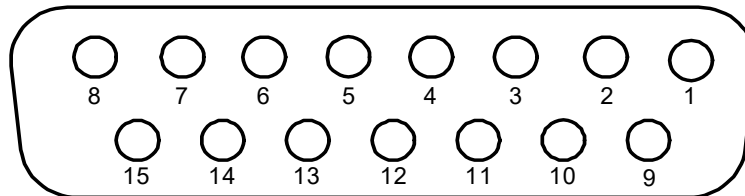


Figure 4-18 GBB 54 J541/P541 Connector Looking at Unit

Table 4-30 GBB 54 J541/P541 Connector

Pin	Function	I/O
1	POWER IN	IN
2	POWER IN	IN
3	GROUND	--
4	STANDBY	OUT
5	GROUND	--
6	GROUND	--
7	BATTERY POWER	OUT
8	BATTERY POWER	OUT
9	POWER IN	IN
10	GROUND	--
11	RS-232 TX	OUT
12	RS-232 RX	IN
13	PWR ON REQ	IN
14	GROUND	--
15	BATTERY POWER	OUT

4.2.11 GMU 44

The GMU 44 has one connector. The mating designator, part number, and associated connector kit are listed in Table 4-31.

Table 4-31 G500/G600 TXi - GMU 44 Connectors

REF. DES.	DESCRIPTION	CONN P/N	KIT P/N
P441	Conn, Circular, Female, 9 Ckt	330-00360-00	011-00871-00

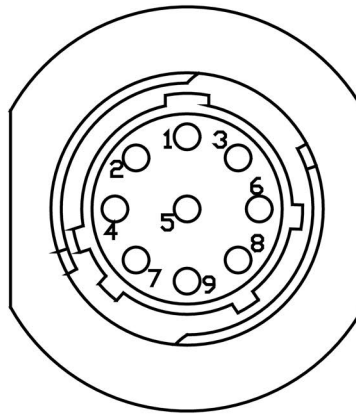


Figure 4-19 J441/P441 Connector Looking at Pigtail

Table 4-32 GMU 44 J441/P441 Connector

Pin	Function	I/O
1	SIGNAL GROUND	--
2	RS-485 OUT B	OUT
3	SIGNAL GROUND	--
4	RS-485 OUT A	OUT
5	SPARE	--
6	POWER GROUND	--
7	SPARE	--
8	RS-232 IN	IN
9	+12 VDC POWER	IN

4.2.12 GMU 44B

The GMU 44B has one connector. The mating designator, part number, and associated connector kit are list in Table 4-33.

Table 4-33 G500/G600 TXi - GMU 44B Connectors

REF. DES.	DESCRIPTION	CONN P/N	KIT P/N
P442	Conn, Rcpt, WTW, D369 Series, 6 position, Socket Insert, Key N	330-01430-01	011-04205-00

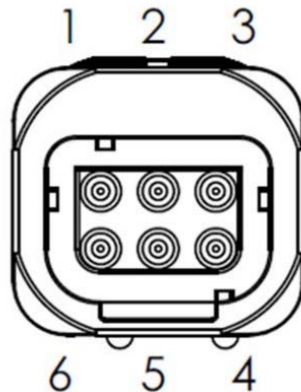


Figure 4-20 J442/P442 Connector Looking at Pigtail

Table 4-34 GMU 44B J442/P442 Connector

Pin	Function	I/O
1	SHIELD GROUND	--
2	RS-422 OUT B	OUT
3	RS-422 OUT A	OUT
4	POWER GROUND	--
5	RS-232 IN	IN
6	MAG POWER INPUT	IN

4.2.13 GTP 59

The GTP 59 Temperature Probe does not have a connector. Rather, a 3-conductor shielded cable extends from the sensor for interface with a GDU 700/1060, GSU 75, GDC 72/74, or GEA 110/71B Enhanced.

Table 4-35 GTP 59 3-Conductor Shielded Cable

Conductor Color	Name	I/O
White	Probe Power Lead	IN
Blue	Resistive Element HI	OUT
Orange	Resistive Element LO	OUT

4.3 Troubleshooting Flow Charts

This section provides troubleshooting flow charts for most system failures and alert messages. It is recommended that system troubleshooting and repair only be completed by a Garmin dealer. If a specific alert or fault condition is not listed, or the fault still exists after completing the given corrective action, contact Garmin Aviation Technical Support at the number listed for your specific region on the “Support” tab of the flyGarmin.com website. For GDL 60 troubleshooting, refer to *GTN Xi Part 23 AML STC Maintenance Manual/ICA* (P/N 190-01007-C1).

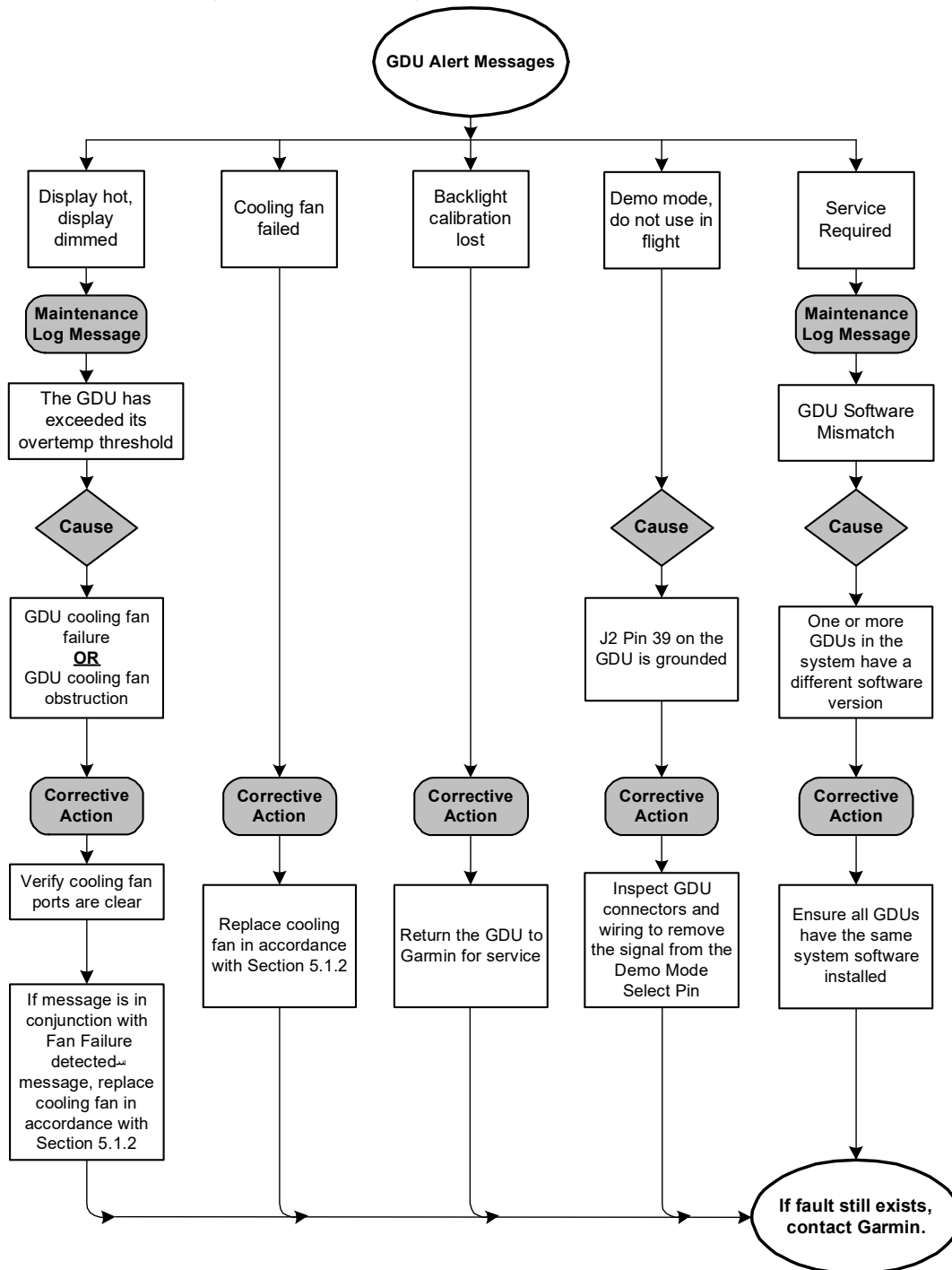


Figure 4-21 GDU Alert Message Troubleshooting

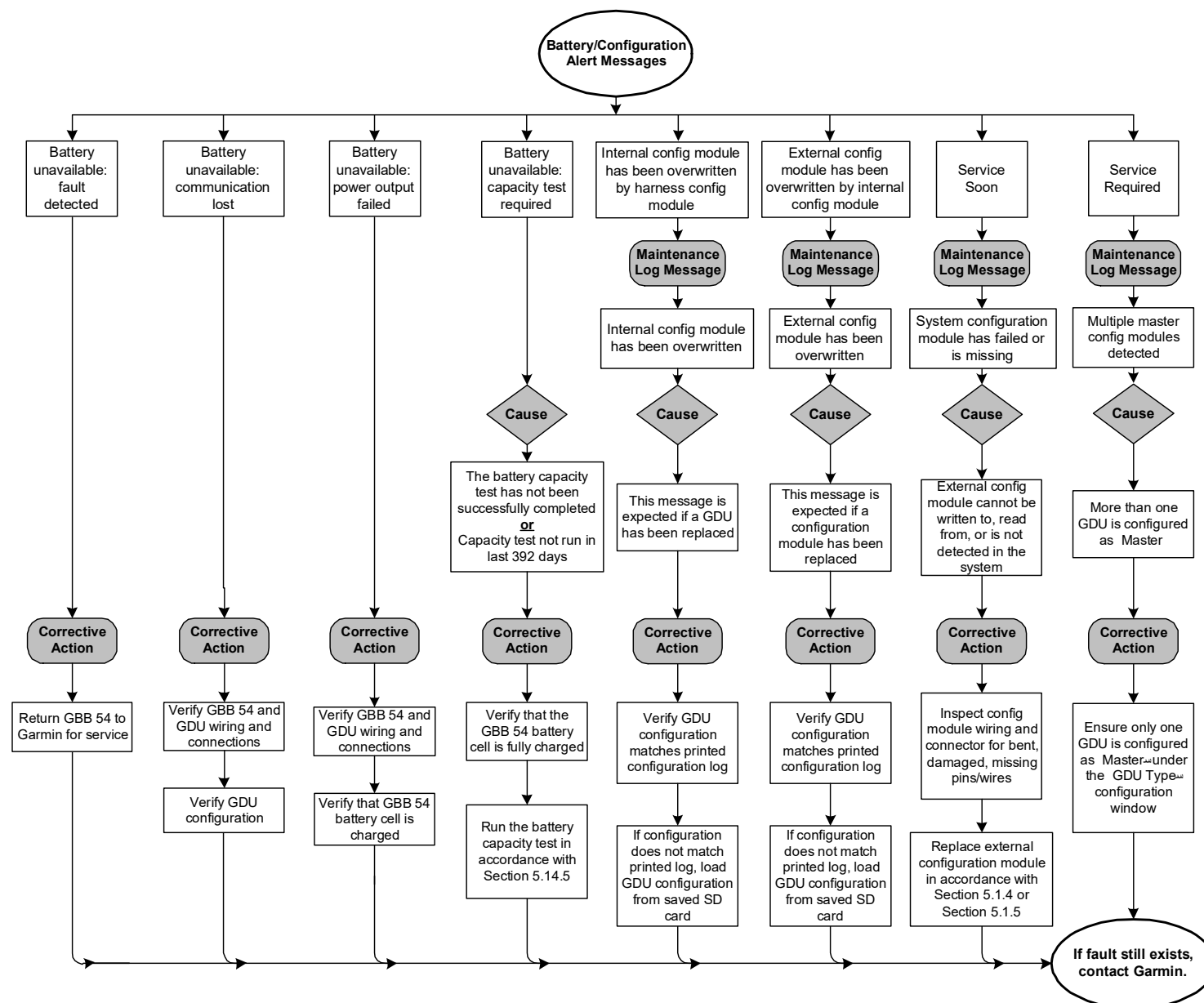


Figure 4-22 GDU Config and Battery Alert Message Troubleshooting

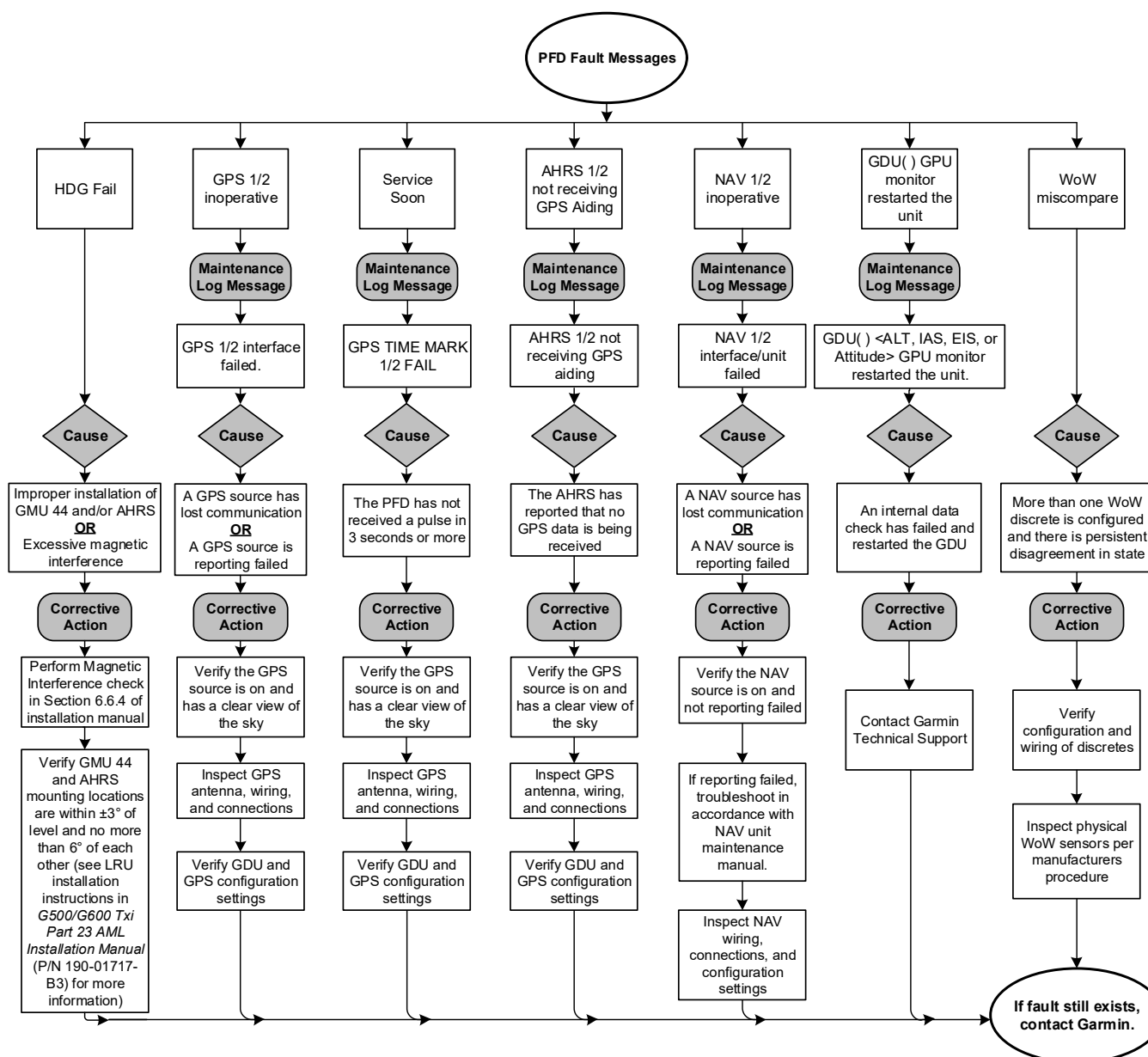


Figure 4-23 PFD Alert Message Troubleshooting

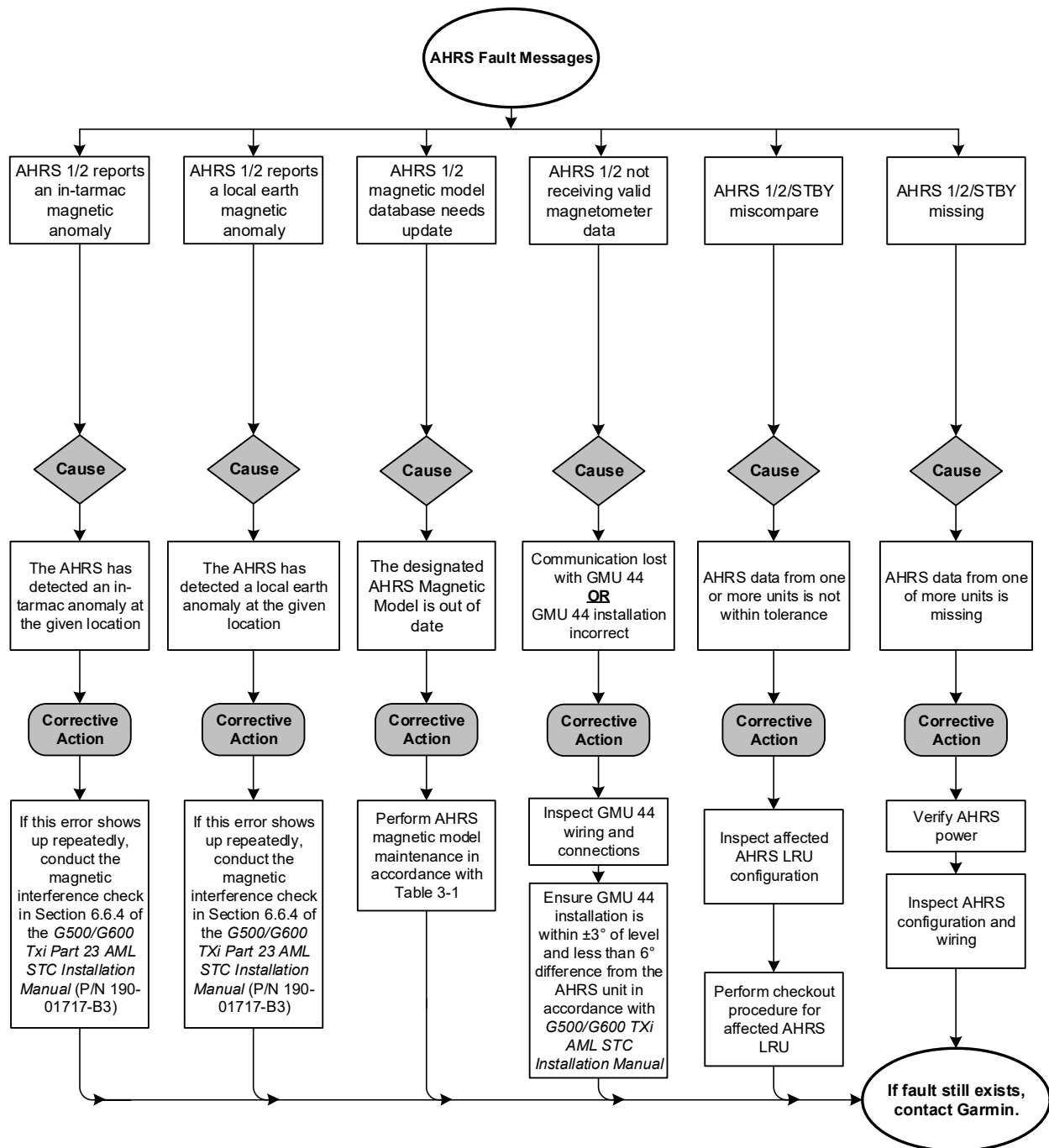


Figure 4-24 AHRS Alert Message Troubleshooting

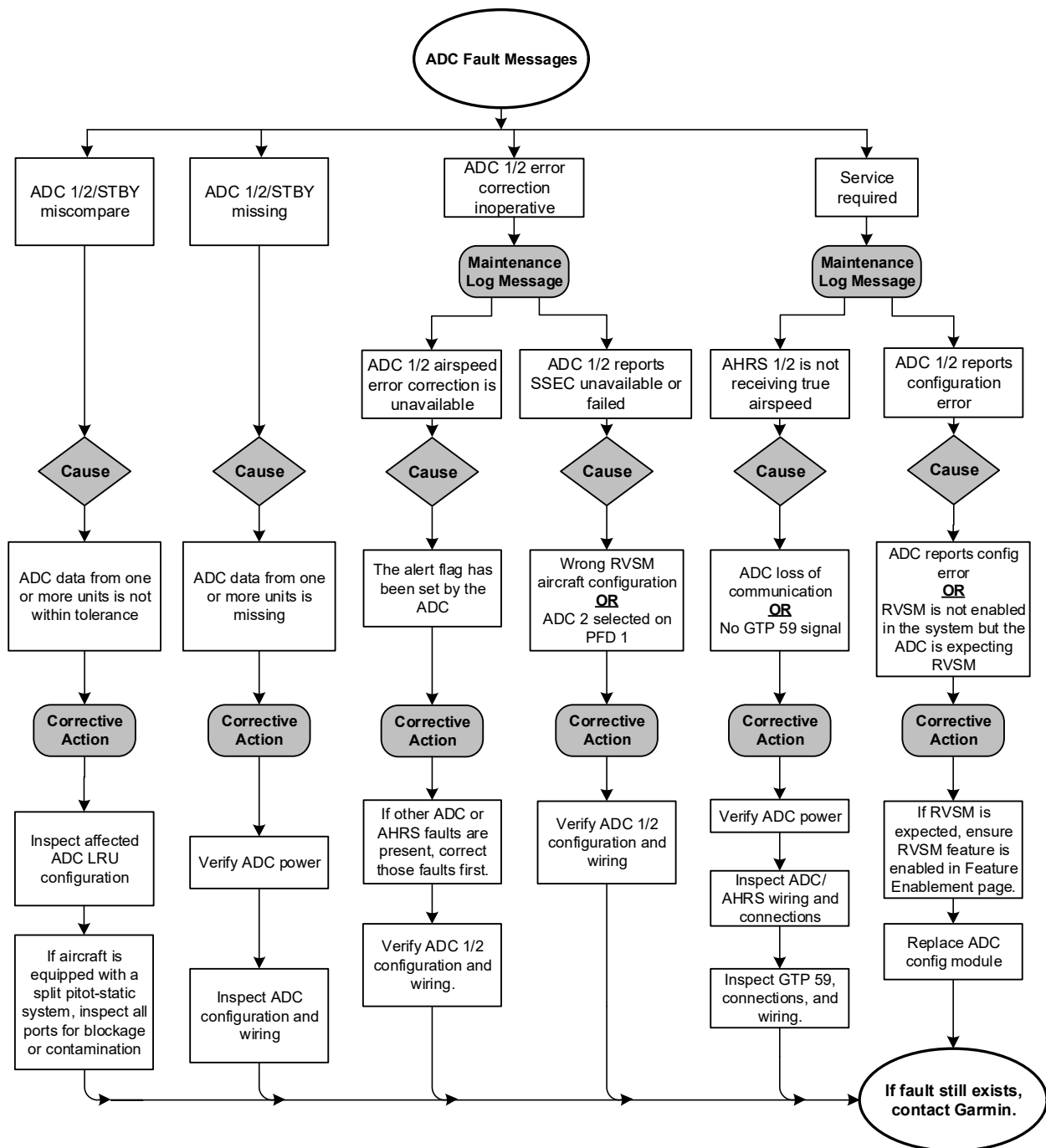


Figure 4-25 ADC Alert Message Troubleshooting

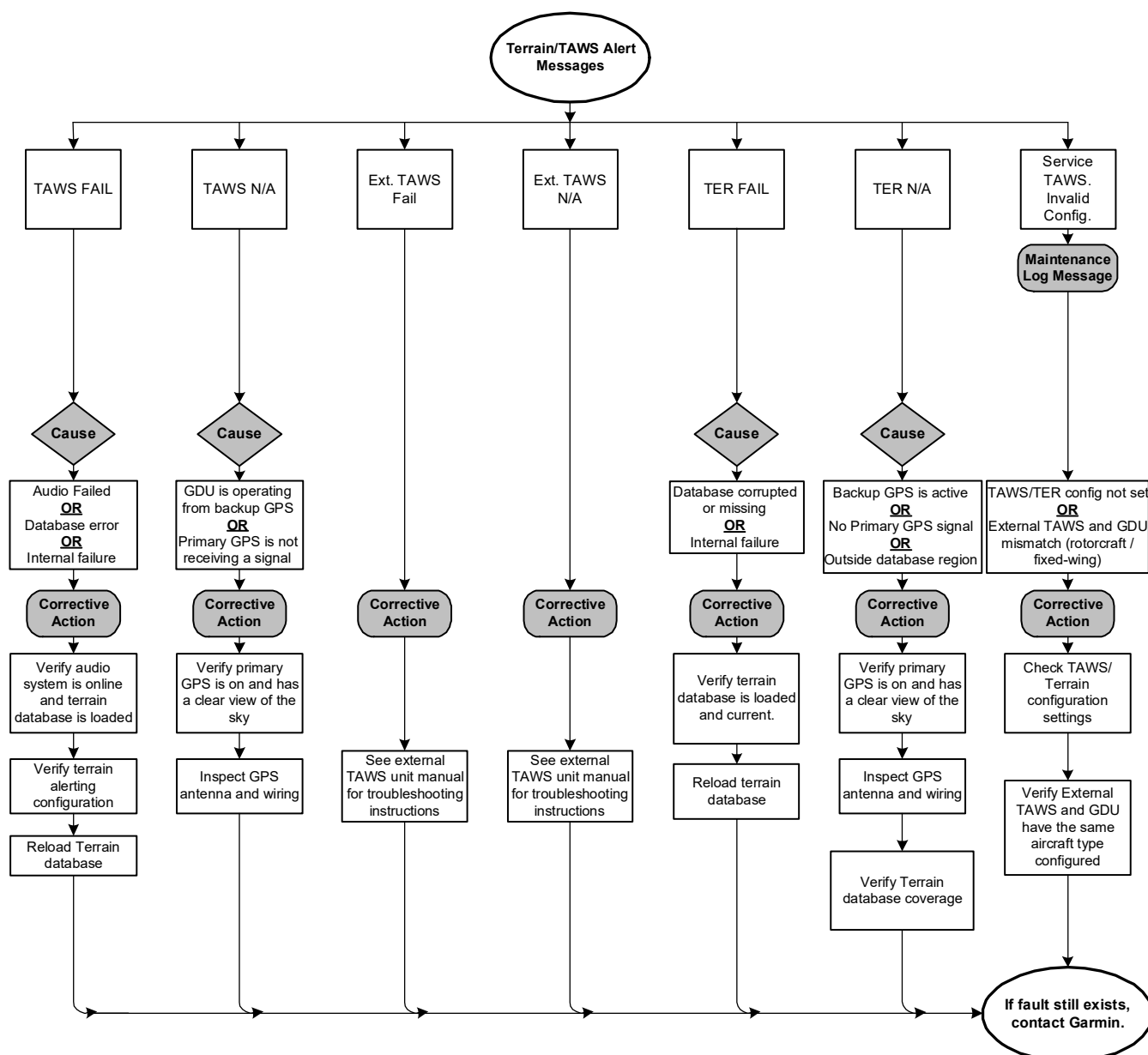


Figure 4-26 Terrain Alert Message Troubleshooting

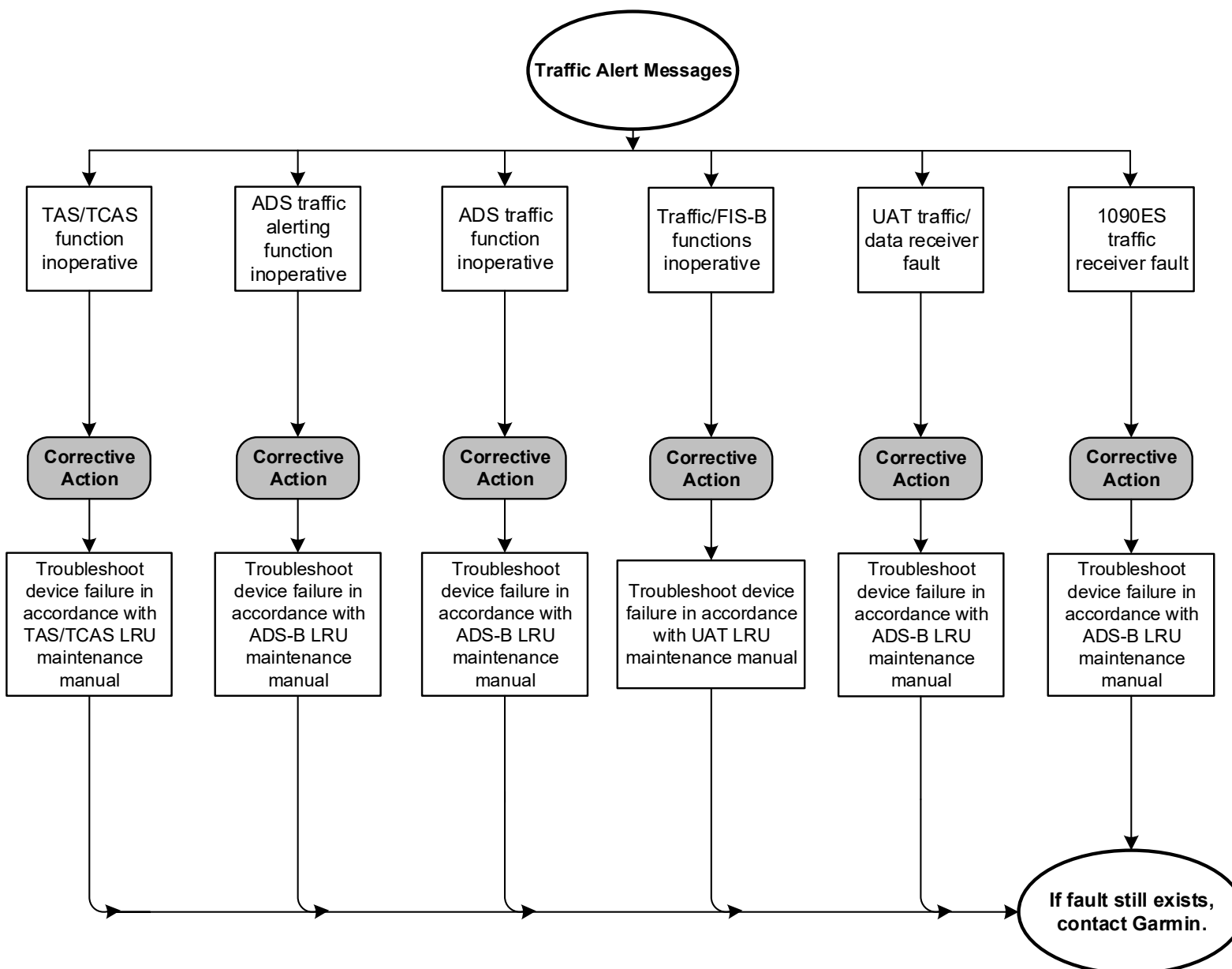


Figure 4-27 Traffic Alert Message Troubleshooting

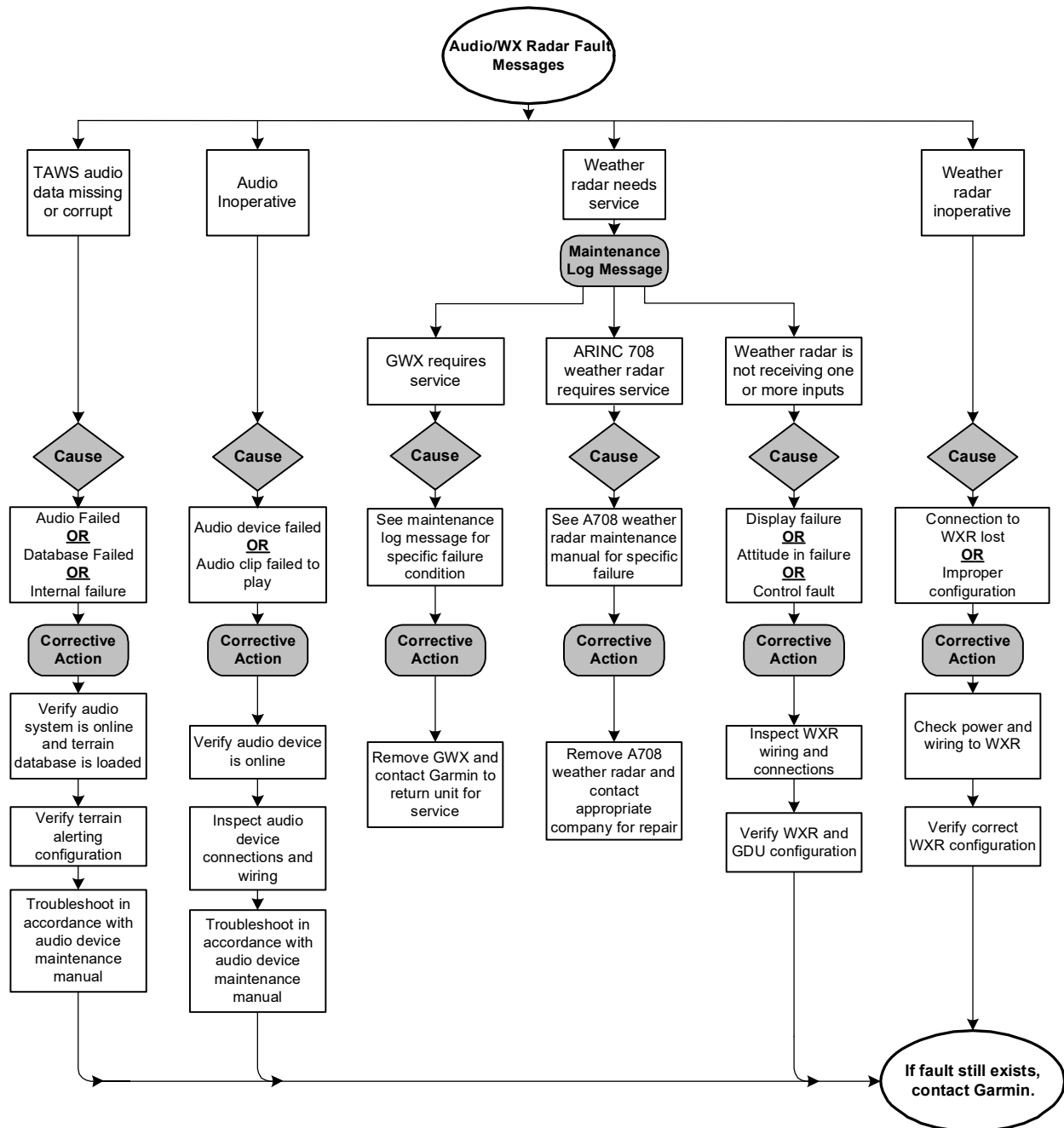


Figure 4-28 Audio/Weather Alert Message Troubleshooting

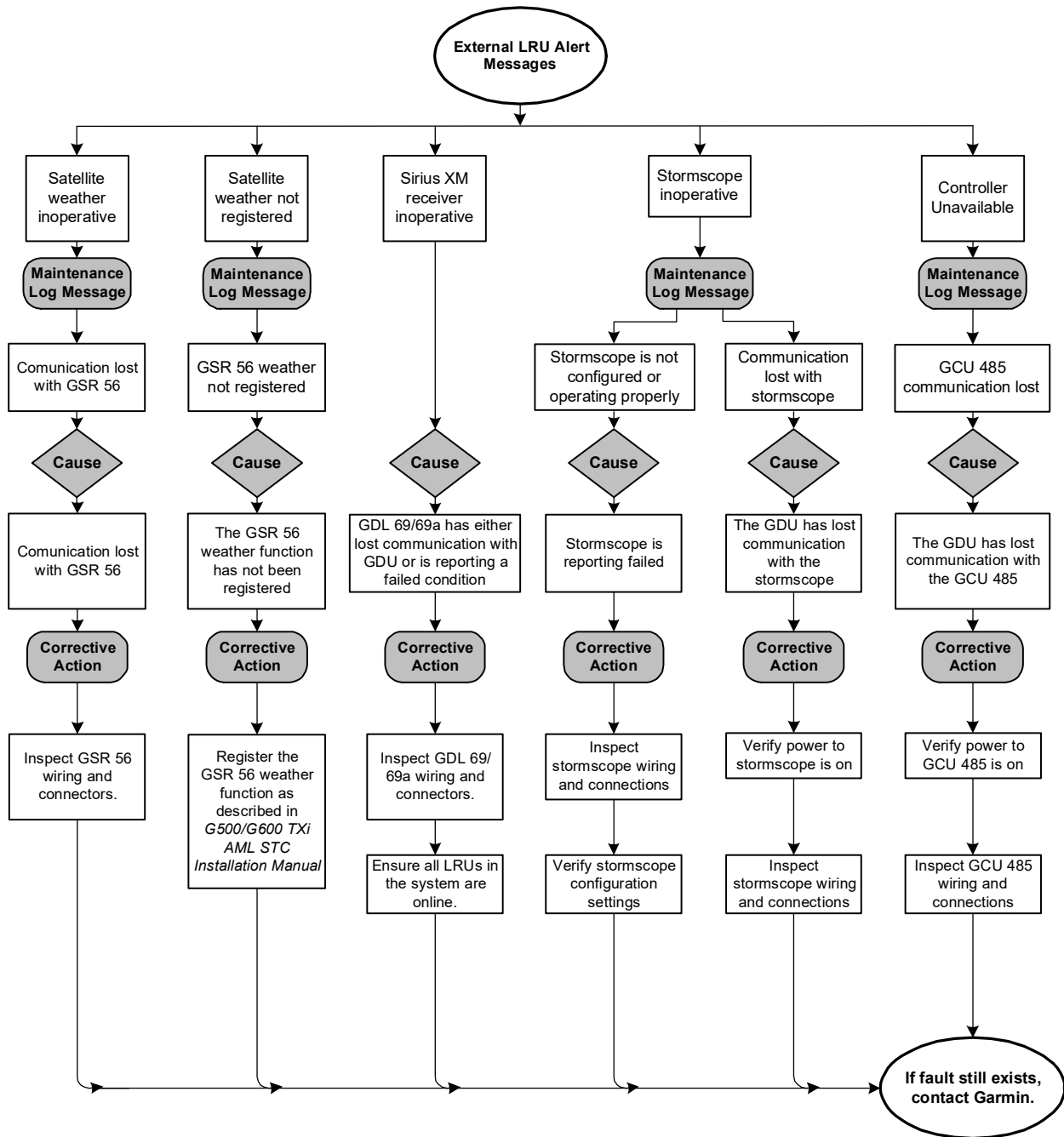


Figure 4-29 External LRU Failure Message Troubleshooting

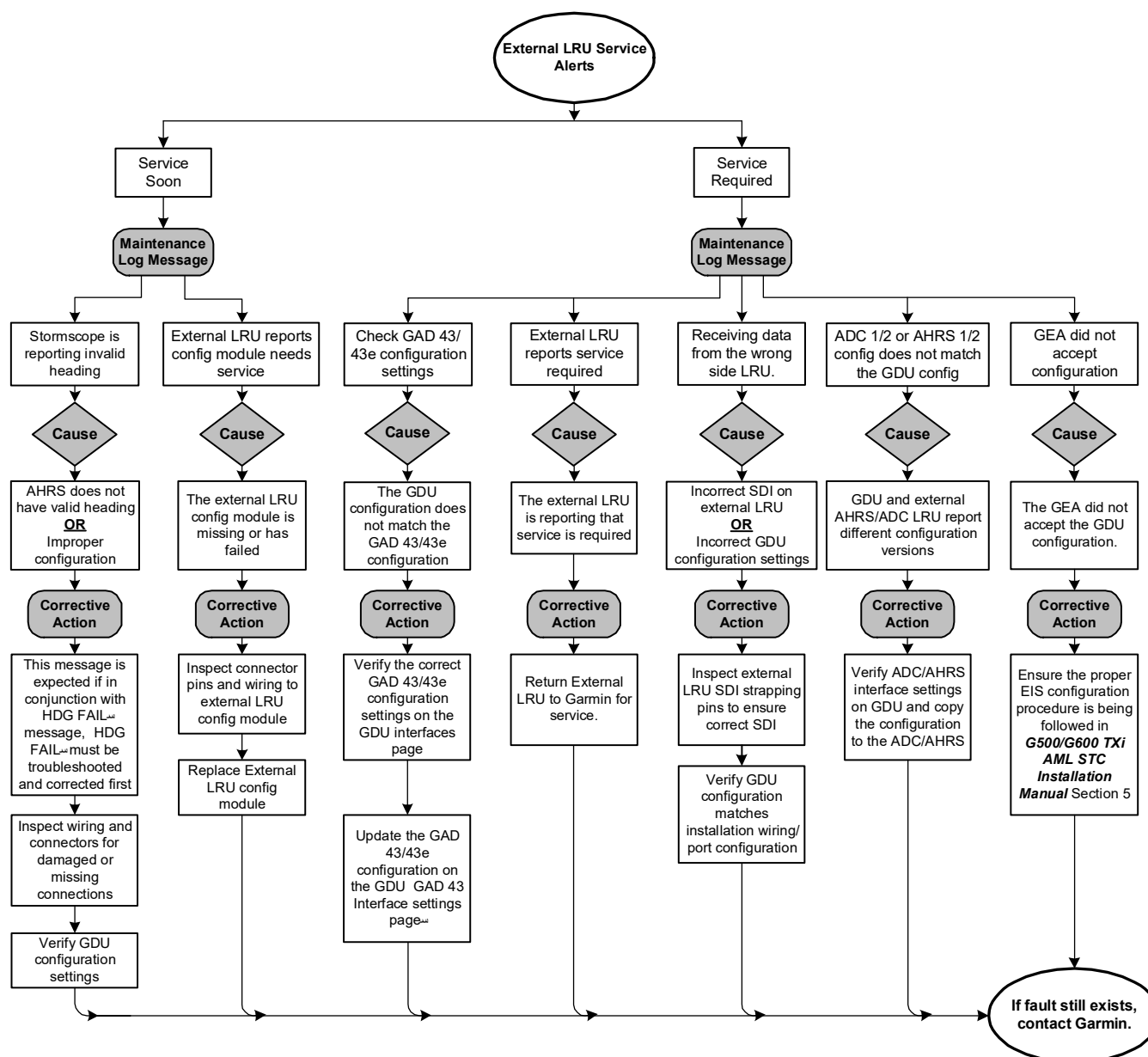


Figure 4-30 External LRU Service Message Troubleshooting

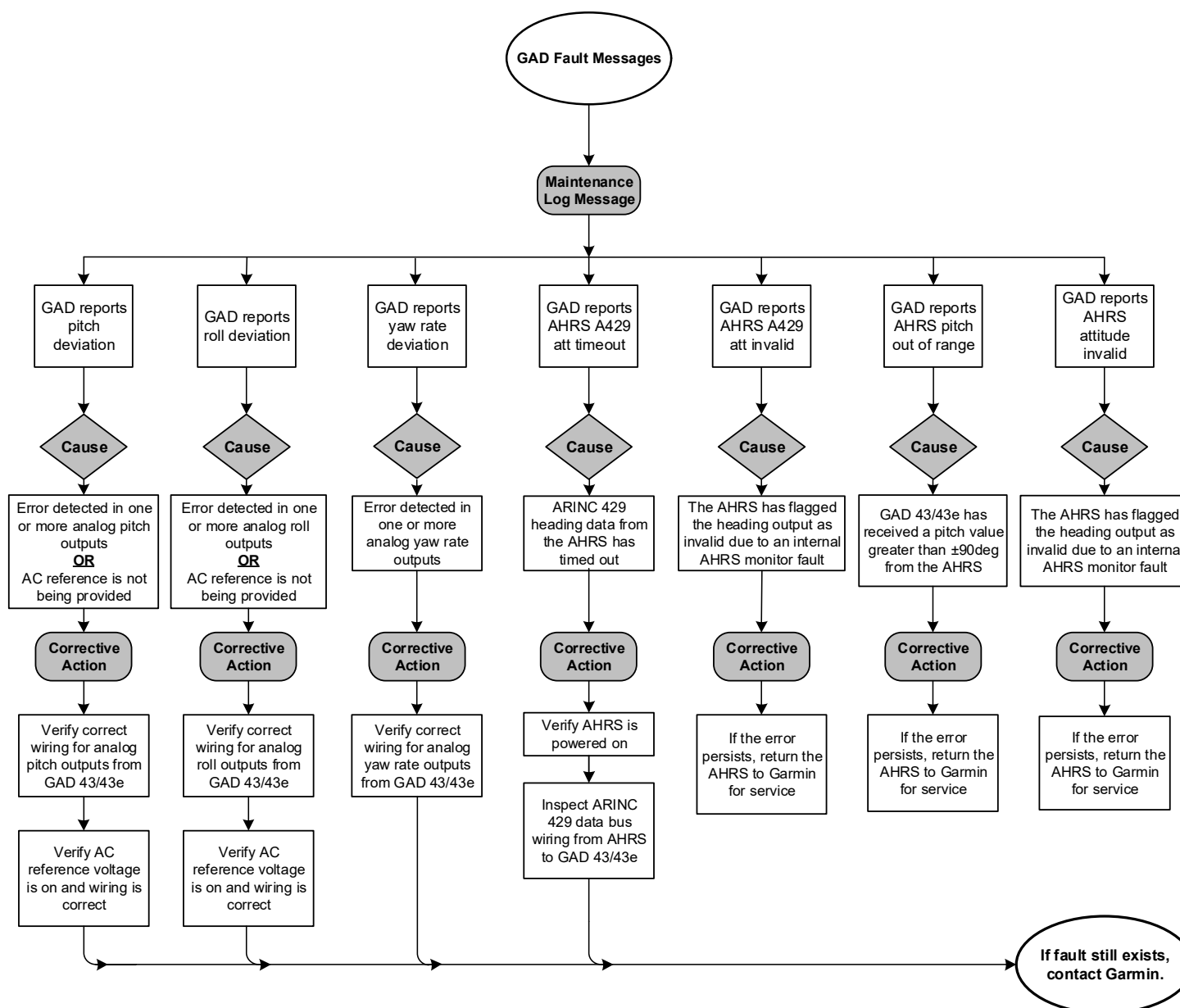


Figure 4-31 GAD Fault Message Troubleshooting

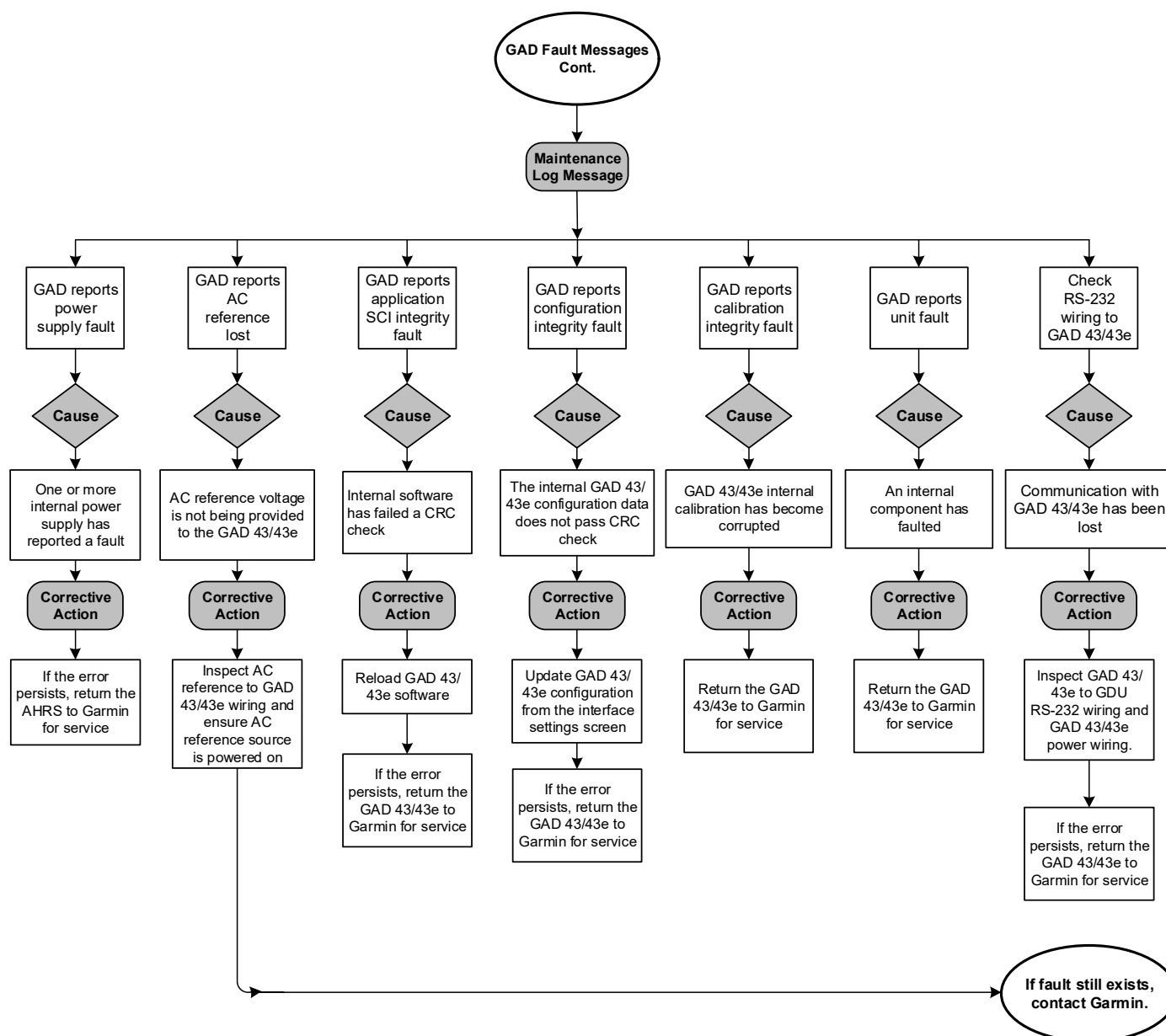


Figure 4-32 GAD Fault Message Troubleshooting Continued

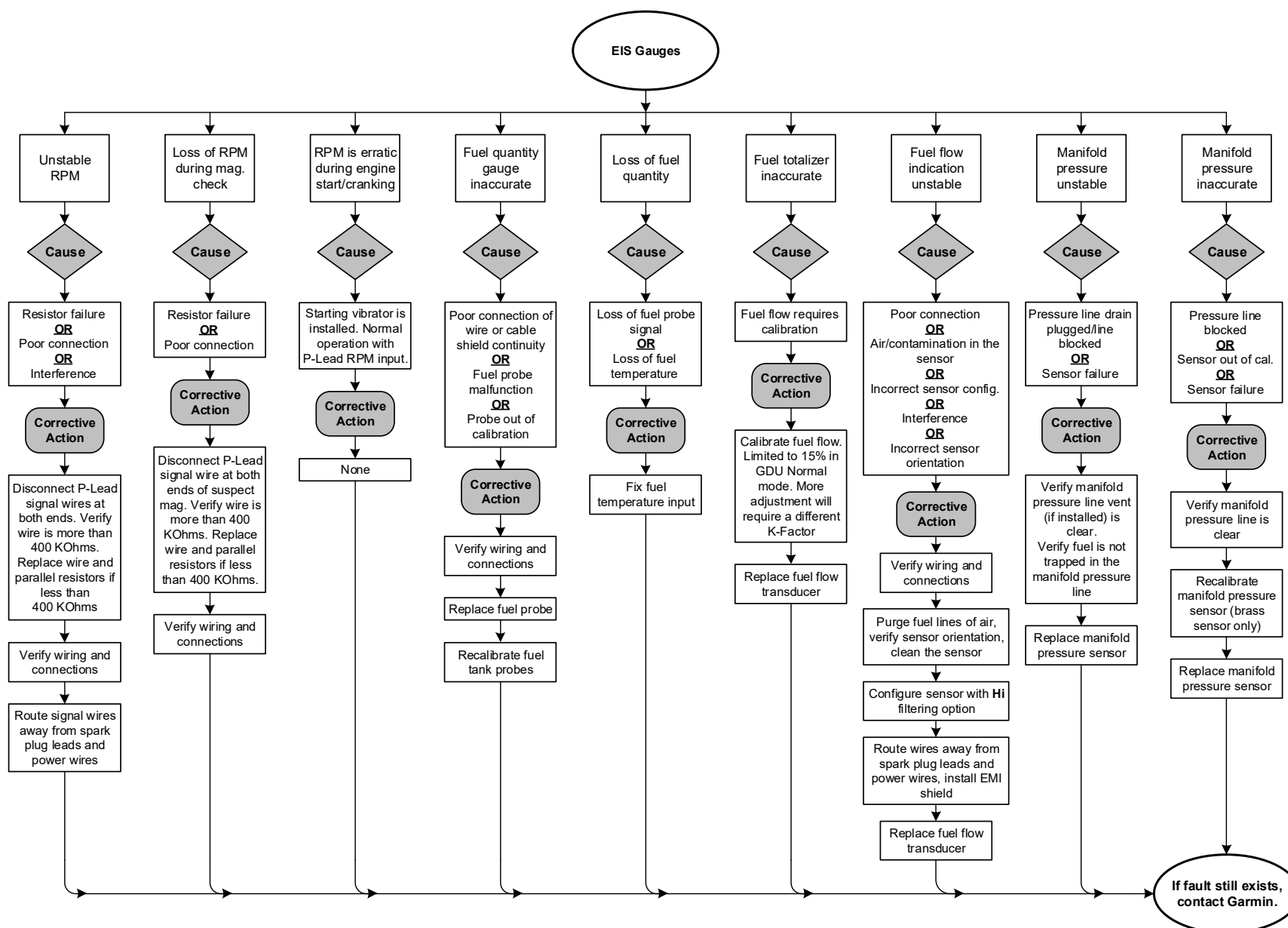


Figure 4-33 EIS Gauge Troubleshooting

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This section provides the procedures to remove, replace, or install required and optional LRUs that are part of the G500/G600 TXi system. Refer to Section 4 for the definition of connectors and pin functions for G500/G600 TXi system LRUs. Before performing any maintenance on the G500/G600 TXi system, all information in Appendix A must be filled out. It is highly recommended to save the system configuration to an SD card and print the configuration log before replacing any system LRUs.



CAUTION

If the aircraft is equipped with a GDL 60, pull the CNXT BATT circuit breaker when performing maintenance tasks. Failure to do so may result in damage to equipment.



NOTE

A GDU without an integrated ADAHRS may be removed, replaced with a new GDU, or have the old GDU re-installed without an Installer Unlock Card as long as the configuration module is not replaced.



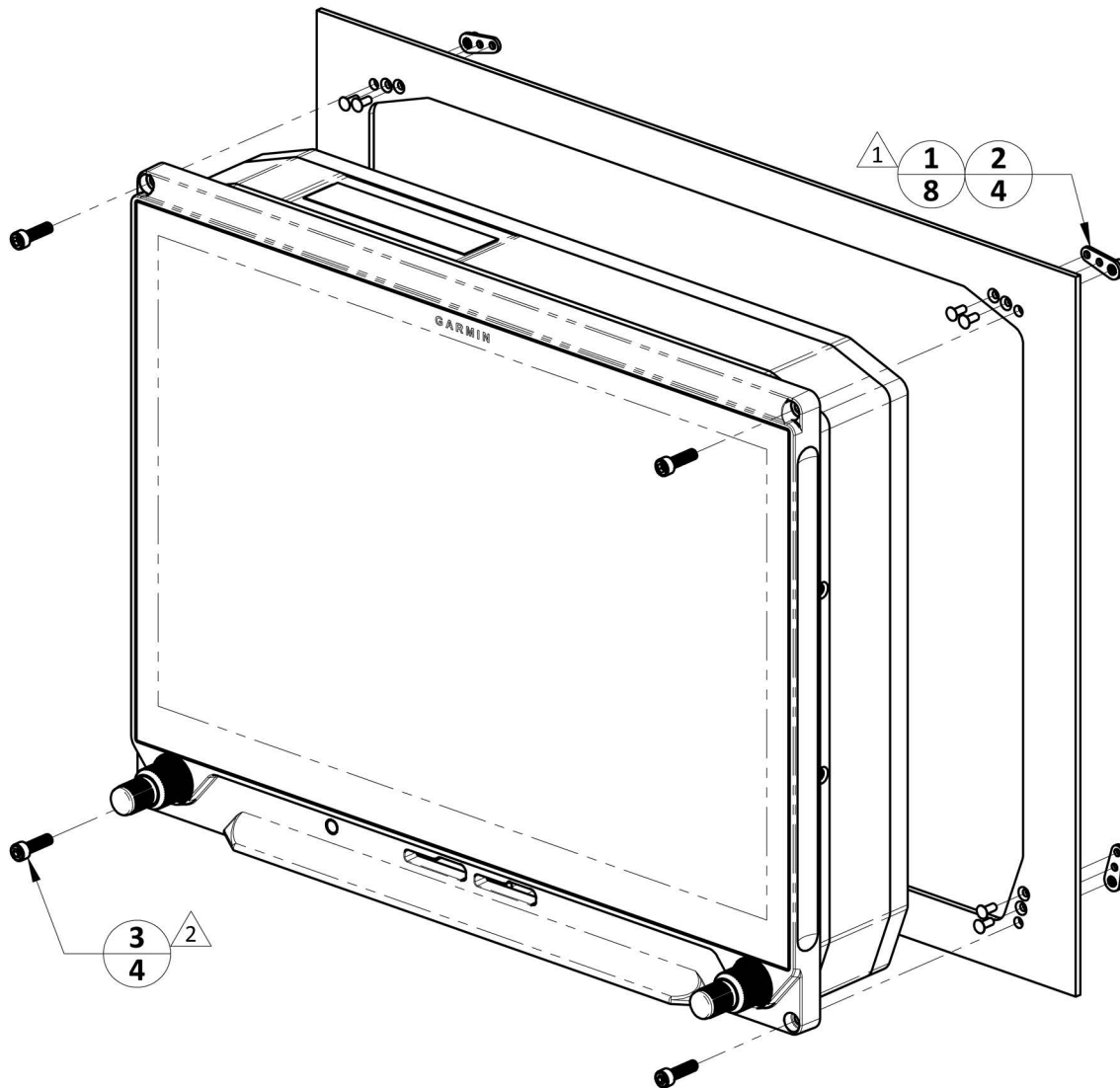
NOTE

Any AHRS unit (including a GDU 700/1060 with an integral ADAHRS) may be removed or replaced without using an Installer Unlock Card as long as the unit mounting brackets or support structure (e.g., instrument panel, mounting bracket, avionics shelf) is not loosened or removed. If the mounting is loosened, additional calibrations and configurations that require the use of an Installer Unlock Card will be necessary. Installer Unlock Cards are only available for use by Garmin Dealers.

Whenever an LRU is replaced, it is important to verify that the software versions are compatible. To verify replacement LRU software compatibility:

1. Find the GDU Main Software Version in Appendix A or use the **MFD** page in Normal mode (**System** → **System Status** → Main Software Version).
2. Using the [Dealer Resource Center](#) website, select Support → Service & Installation Bulletins → Search by Keyword. Search for the Main Software Version number (e.g., 3.50). Open the TXi TSO Software Service Bulletin for the Main Software Version that is installed. The acceptable LRU software versions are listed in the Loader Card Table.
3. If the software version of the LRU being installed does not match the version in the TSO Software Service Bulletin, download and create a loader card. Backload the matching LRU software version per Section 5.16.

5.1 GDU 700/1060/1210

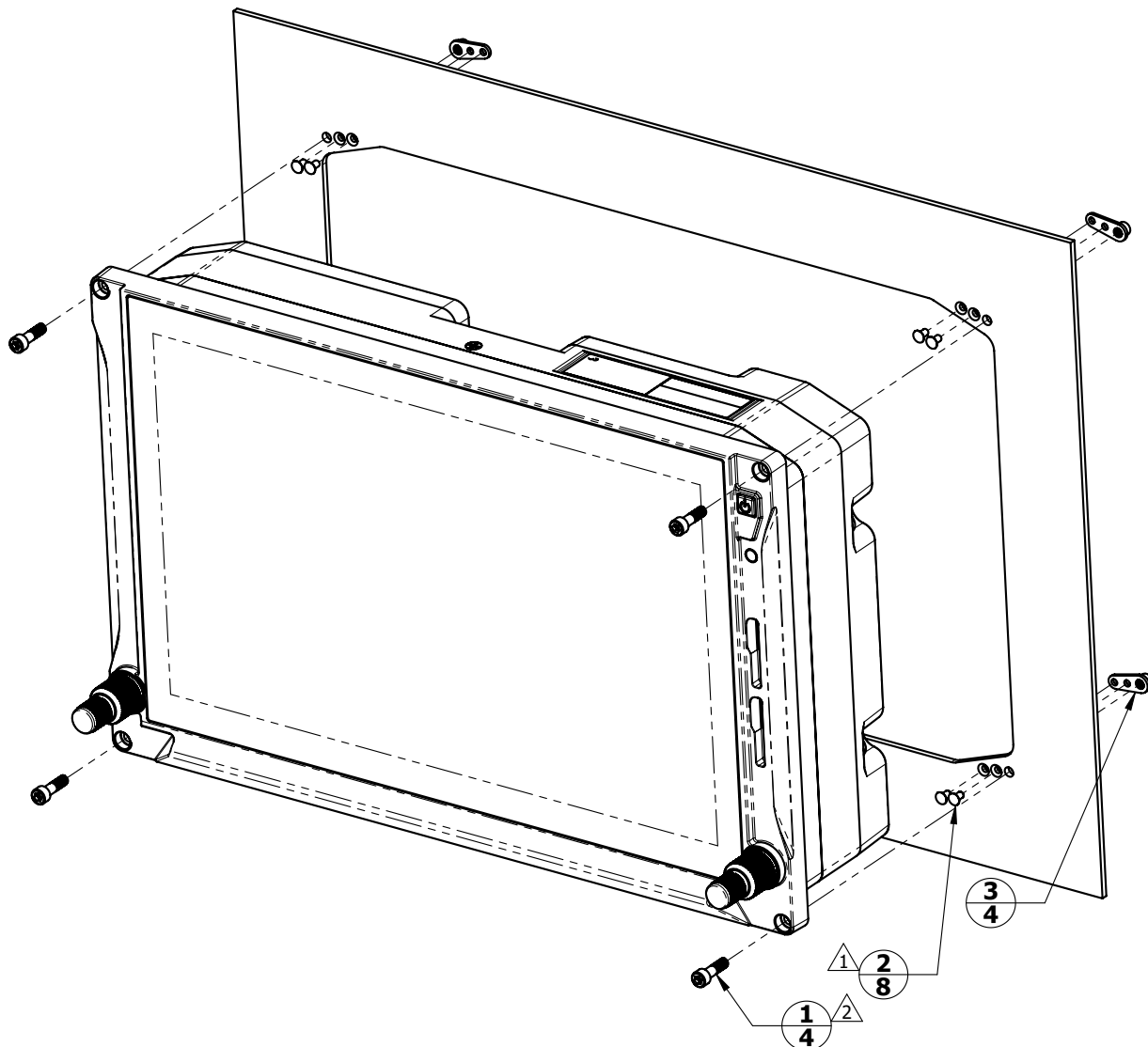


4	3	NAS1352-06-8	SCREW, CAP, SOCKET HEAD, 0.1380-32 UNC, 8/16-IN LONG
4	2	MS21071L06	NUT, SELF-LOCKING, PLATE, ONE LUG, REDUCED RIVET SPACING, .138-32 UNJC-3B
8	1	MS20426AD3-4	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 3/32 IN OD, 4/16 IN LONG
QTY	ITEM	PART NUMBER	DESCRIPTION

△ 1 RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, PREPARATION FOR AND INSTALLATION, OR PER MIL-STD-403 PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET MISSILE, AND AIRFRAME STRUCTURES. ADJUST RIVET GRIP LENGTH TO MATCH PANEL THICKNESS AS REQUIRED. HOLLOW NUTPLATE RIVETS CAN BE USED IN PLACE OF SOLID RIVETS.

△ 2 ADJUST SCREW LENGTH TO MATCH PANEL THICKNESS AS REQUIRED. MS16995-21B SCREW IS ACCEPTABLE SUBSTITUTE. TORQUE 0.138-32 UNJC SCREWS 8.0 ± 1.0 IN-LB.

Figure 5-1 GDU 1210 Installation

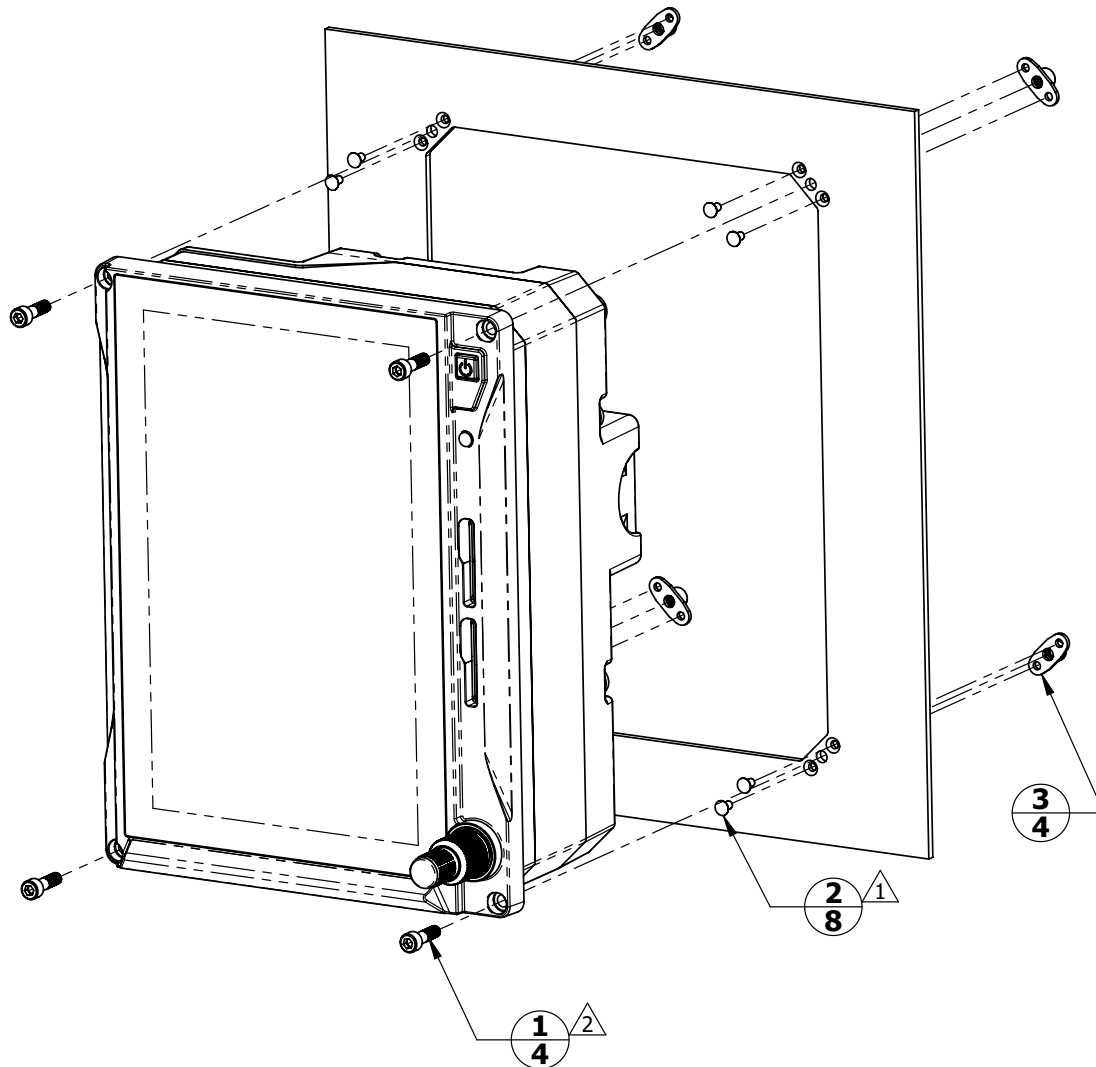


4	3	MS21071-06	NUT, SELF-LOCKING, PLATE, ONE LUG, REDUCED RIVET SPACING, LOW HEIGHT, STEEL .138-32 UNJC-3B
8	2	MS20426AD3-3	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 3/32 IN OD, 3/16 IN LONG
4	1	MS16995-18B	SCREW, CAP, SOCKET HEAD- HEXAGON, CORROSION RESISTANT STEEL, .1380-32 UNC-3A, 0.500 IN LONG
QTY	ITEM	PART NUMBER	DESCRIPTION

NOTES

- 1 RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, *PREPARATION FOR AND INSTALLATION*, OR PER MIL-STD-403 *PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET, MISSILE, AND AIRFRAME STRUCTURES*.
- 2 TORQUE .1380-32 UNC-3A SCREWS 8.0 ± 1.0 LBF-IN.

Figure 5-2 GDU 1060 Installation



4	3	MS21069L06	NUT, SELF-LOCKING, PLATE, TWO-LUG, REDUCED RIVET SPACING, LOW HEIGHT, STEEL .138-32 UNJC-3B
8	2	MS20426AD3-3	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 3/32 IN OD, 3/16 IN LONG
4	1	MS16995-18B	SCREW, CAP, SOCKET HEAD- HEXAGON, CORROSION RESISTANT STEEL, .1380-32 UNC-3A, 0.500 IN LONG
QTY	ITEM	PART NUMBER	DESCRIPTION

NOTES

- 1 RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, *PREPARATION FOR AND INSTALLATION, OR PER MIL-STD-403 PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET, MISSILE, AND AIRFRAME STRUCTURES.*
- 2 TORQUE .1380-32 UNC-3A SCREWS 8.0 ± 1.0 LBF-IN.

Figure 5-3 GDU 700P Installation



NOTE

The GDU 700L uses the same fastener and torque specifications as the GDU 700P in Figure 5-3.

5.1.1 GDU Removal

Remove the GDU using the following procedure:

1. Ensure the current configuration is saved to an SD card in accordance with the instructions contained in Section 2.1.6.
2. Turn off the GDU and remove power to the GDU. If the aircraft is equipped with a GDL 60, pull the CNXT BATT circuit breaker. Reset after all other maintenance is complete.
3. Remove the four screws retaining the GDU in the instrument panel, shown as item 1 in Figure 5-2 or Figure 5-3 above.
4. Gently pull the GDU out from the instrument panel far enough to access the cable connectors and ADC module (if installed).
5. Remove the cable connectors from the back of the GDU.
6. If an integrated ADAHRS is installed in the GDU, loosen the four thumbscrews securing the ADC module to the rear of the GDU, as shown in Figure 5-4, and gently separate the module from the GDU. If the ADC module is being replaced, proceed to Section 5.1.3.

5.1.2 GDU Cooling Fan Replacement



NOTE

The GDU cooling fan replacement kit (P/N K00-01080-00) must be obtained from an authorized Garmin dealer. In order for the GDU warranty to remain valid, this procedure must be accomplished by an authorized Garmin dealer.



NOTE

Resetting the fan operation hours requires the use of an Installer Unlock Card, which is only available for use by a Garmin Dealer.

The GDU cooling fan has a recommended replacement interval of 3,000 hours. After 3,000 hours of operation, the cooling fan should be replaced using the following procedure:

1. Remove the GDU from the instrument panel in accordance with Section 5.1.1.
2. Remove the four screws securing the fan module to the rear of the GDU and discard the O-rings.
3. Grasp the fan module and gently pull the module out of the GDU.
4. Visually inspect the inside of the fan module receptacle on the back of the GDU for the following:
 - Verify that the four rubber gaskets around the fan screw mounting holes and are not torn, damaged, or missing. If any of these conditions are found, replace all four gaskets (not included in fan replacement kit)
 - Inspect the 4-pin electrical connector for the fan module for damage or corrosion. If any damage is found, return the GDU to Garmin for service
5. Place the new O-rings included in the fan replacement kit on the four fan mounting screws.
6. Place the new cooling fan module in the fan well of the GDU with the electrical connector oriented on the upper-side near the J7 connector.

**CAUTION**

It may be necessary to slightly move the fan module within the fan well to align the connector pins and connector body. If the module does not press into the back of the GDU with slight pressure, the connector may not be aligned. If the connector cannot be aligned, remove the module again and inspect the pins on the fan module and the connector on the GDU for straightness or damage. Applying too much pressure to the fan module with the connector out of alignment could cause damage to the fan module, GDU connector, or both.

7. Slide the fan module evenly into the fan well on the GDU and gently press the module into the back of the GDU.
8. Insert the four fan mounting screws with O-rings into the mounting holes on the fan module and tighten evenly to 8 ± 1 in-lbf.
9. Install the GDU in accordance with Section 5.1.6.
10. Once the GDU installation and checkout has been accomplished, reset the GDU cooling fan hour counter using the following procedure:
 - a. Power on the GDU in Configuration mode per the instructions in Section 2.1.4.
 - b. Navigate to **Diagnostics** → **Temp & Power Stats**.
 - c. Press **Reset Fan Hours**.

5.1.3 Integrated ADC Module Replacement

To replace the integrated ADC module, perform the following procedure:

1. Remove the GDU 700/1060 in accordance with Section 5.1.1.
2. Mark pitot and static lines with “P” and “S” (if not already marked) near ADC connections.

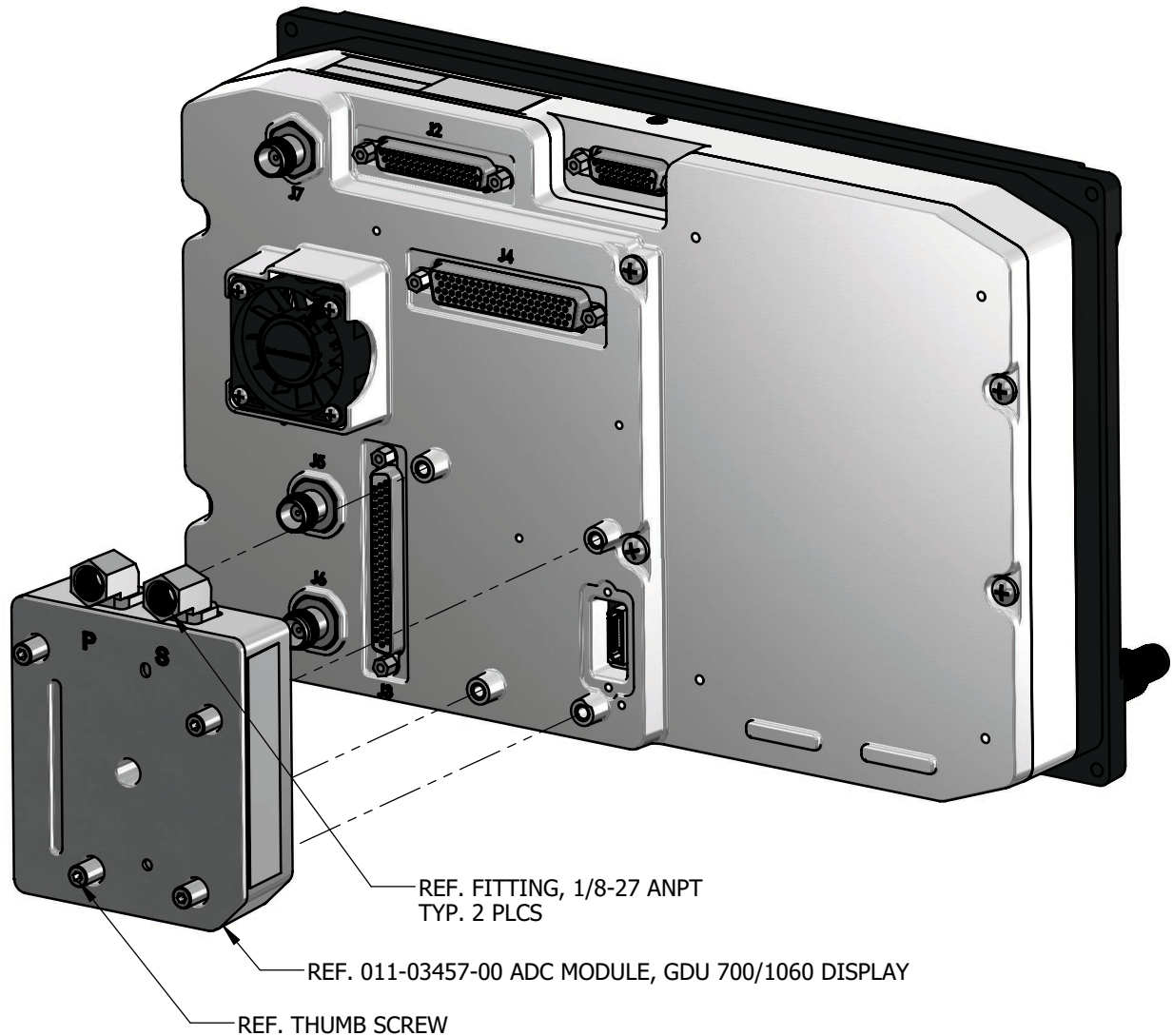


Figure 5-4 Integrated ADC Module Installation

3. Remove pitot and static line from 1/8-27 fittings, shown in Figure 5-4 above.
4. Install pitot and static lines in the new ADC module 1/8-27 fittings.
5. Install the GDU 700/1060 in accordance with Section 5.1.6.

5.1.4 GDU Configuration Module Replacement

To replace a GDU configuration module, perform the following procedure:



NOTE

Ensure the current configuration is saved to an SD card in accordance with the instructions contained in Section 2.1.6.



NOTE

All item numbers in this procedure reference Figure 5-5.

1. Remove the GDU in accordance with Section 5.1.1.
2. Remove the backshell cover (7) from connector P2 by removing two screws (8).
3. Remove the screw (10) securing the configuration module (1) to the backshell (6).
4. Lift the configuration module (1) out of the backshell (6) and disconnect the wiring harness (3) from the module.
5. Inspect the wiring harness (3) and connector pins (4) for damage, loose wiring, or corrosion. Replace all deficient components if any of these conditions are found.
6. Connect the harness to the new configuration module.
7. Install the new configuration module in the connector backshell (6) and re-install the cover (7).
8. Re-install the GDU in accordance with Section 5.1.6.

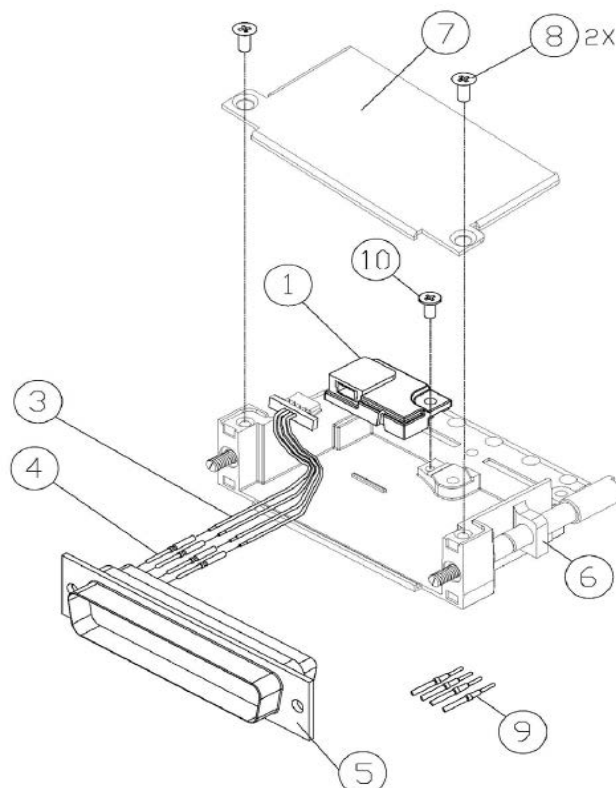


Figure 5-5 Configuration Module Installation



NOTE

The GDU will automatically copy the system configuration to the new configuration module upon the first power-up.

5.1.5 Master Configuration Module Replacement



NOTE

*Replacement of the G500/G600 TXi system **master** configuration module requires the use of an Installer Unlock Card and must be performed by an authorized Garmin dealer.*

Physical replacement of the master configuration module is identical to the configuration module replacement procedure provided in Section 5.1.4. Following the master configuration module replacement, the system ID will have changed. Any feature unlocks and databases will need to be re-issued for the new system ID by a Garmin dealer. To return the system to service from this condition, perform the following steps:



NOTE

Ensure the current configuration is saved to an SD card in accordance with the instructions contained in Section 2.1.6.

1. If multiple GDUs are installed in the system, choose one GDU to act as the new master GDU.
2. Power on all LRUs in the G500/G600 TXi system with all GDUs in Configuration mode.
3. From the **Home** screen on each GDU, navigate to **System Setup** → **GDU Type**.
4. Configure all GDU IDs, locations, and unit configurations to match the recorded configuration settings in the configuration log printout.
5. Ensure that **Master** is selected on the GDU that has been chosen to act as the master configuration module.
6. At this point, the G500/G600 TXi system will have a new system ID. System features will need to be unlocked and the system databases will need to be re-installed. The system ID must be updated at flyGarmin.com and then new databases can be downloaded.
7. Insert the feature unlock card in the bottom or right slot of any GDU in the system.
8. Navigate to **Home** → **System Setup** → **Feature Enablement** and enable system features.
9. Insert the SD card with the saved aircraft configuration file in the top or left slot of any GDU in the system.
10. Navigate to **Home** → **SD Load**.
11. Select the aircraft configuration file you wish to load.
12. Select the GDU to configure and the desired configuration settings to load.
13. Select **SD Load**.
14. Follow on-screen commands.
15. Perform the Configuration Ground check in Section 5.17.1.

5.1.6 GDU Re-installation



CAUTION

When installing a GDU loaded with software prior to v3.80 into a system with software v3.80 or later, or if replacement unit software version is unknown, refer to Section 5.1.7 instead. When installing a GDU loaded with software v3.80 into a system with software prior to v3.80 or later, refer to Section 5.1.8 instead. Failure to follow the correct procedure may result in loss of configuration and calibration data.

To replace the GDU, perform the following procedure:

1. If equipped with an integrated ADAHRS, align the ADC module with the back of the GDU as shown in Figure 5-4 and gently press the module into place.
2. Tighten the four thumb screws that secure the ADC module to the back of the GDU to 10 ± 1 in-lbf.
3. Connect the four wiring connectors and any installed antenna wires to the back of the GDU and tighten the retaining screws.
4. Place the GDU in the instrument panel cutout.
5. Install the four screws (1), as shown in Figure 5-2 and Figure 5-3, and tighten to 8 ± 1 in-lbf.
6. Perform the Configuration mode Ground Check in Section 5.17.1.

5.1.7 Installing a GDU With SW Prior to v3.80 Into a System With SW v3.80 or Later

When installing a GDU loaded with software prior to v3.80 into a system with software v3.80 or later, or if the unit software version is unknown, use the following procedure to ensure no configuration or calibration data is lost:

1. Install the replacement GDU per Section 5.1.6, steps 1 – 5, except only connect the P1 connector.
2. Create a Software Loader card with software v3.80 or later that matches the current system software using instructions available on the [Dealer Resource Center](#).



NOTE

All software updates must be contained in a region file named “file.rgn” on the root directory of the Software Update SD card.

3. Insert the Software Loader card into the top/left slot of the GDU.
4. Power on the GDU in Configuration mode.
5. Navigate to **Updates / System Info** → **Software Upload**.
6. Select the GDU software to update.
7. Select the **Update** button.
8. Follow the on-screen display instructions.
9. When complete, power off the GDU.
10. Attach the remaining connectors.
11. Power on all GDUs in Configuration mode.
12. Verify all GDUs display the correct software version by navigating to **Updates/System Info** → **System Info**.
13. Perform the Configuration mode Ground Check in Section 5.17.1.

5.1.8 Installing a GDU With SW v3.80 or Later Into a System With SW Prior to v3.80

When installing a GDU loaded with software v3.80 or later into a system with software prior to v3.80 and not wanting to update the system software, use the following procedure to ensure no configuration or calibration data is lost:



NOTE

If wanting to update the system software to v3.80 or later, use the procedure in Section 5.16.2 instead.

1. Install the replacement GDU per Section 5.1.6, steps 1 – 5, except only connect the P1 connector.
2. Create a Software Loader card with software prior to v3.80 that matches the current system software using instructions available on the [Dealer Resource Center](#).



NOTE

All software updates must be contained in a region file named “file.rgn” on the root directory of the Software Update SD card.

3. Insert the Software Loader card into the top/left slot of the GDU.
4. Power on the GDU in Configuration mode.
5. Navigate to **Updates / System Info** → **Software Upload**.
6. Select the GDU software to update.
7. Select the **Update** button.
8. Follow the on-screen display instructions.
9. When complete, power off the GDU.
10. Attach the remaining connectors.
11. Power on all GDUs in Configuration mode.
12. Verify all GDUs display the correct software version by navigating to **Updates/System Info** → **System Info**.
13. Perform the Configuration mode Ground Check in Section 5.17.1.

5.2 GCU 485

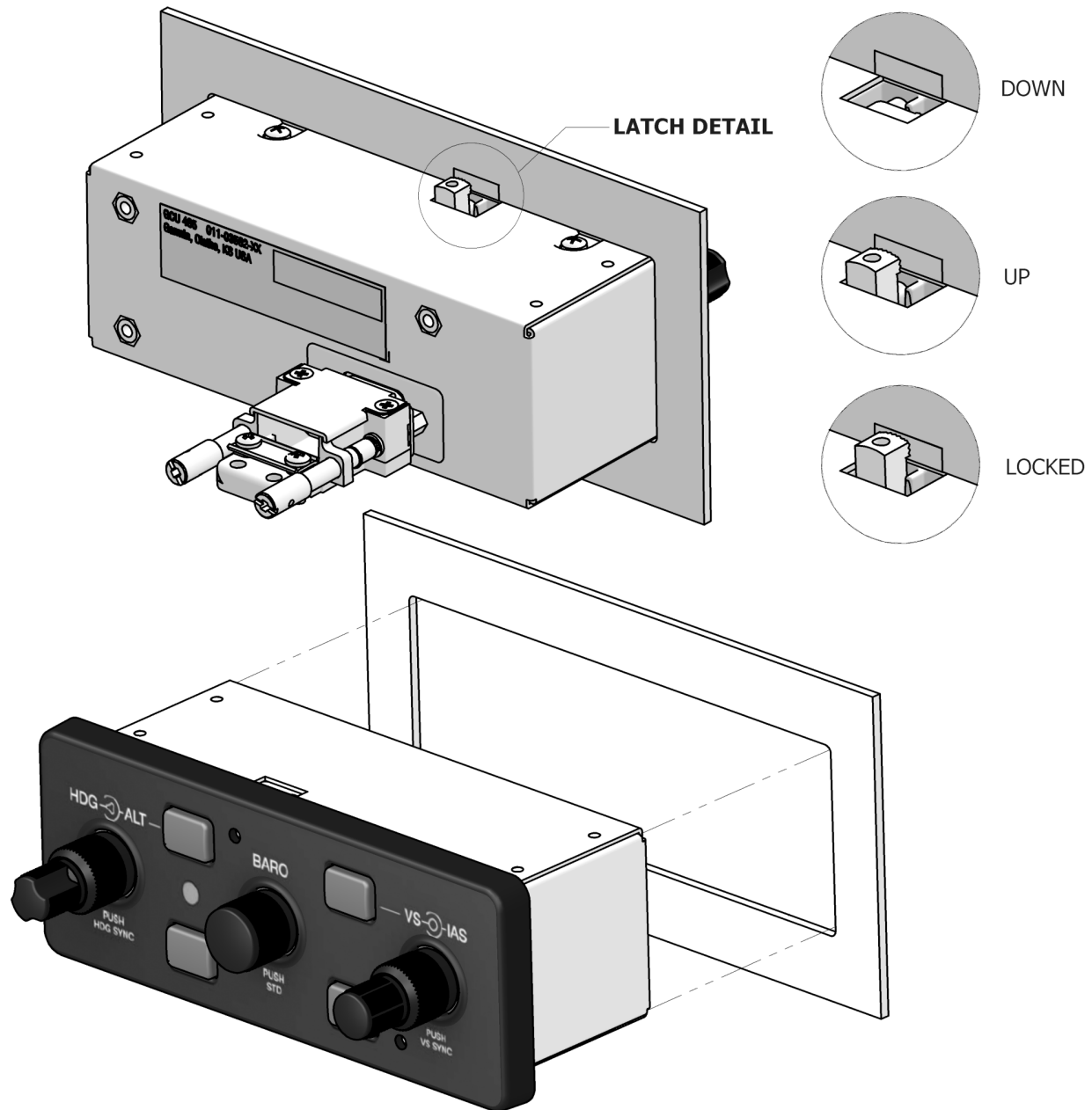


Figure 5-6 GCU 485 Installation

5.2.1 GCU 485 Removal

Remove the GCU 485 using the following procedure:

1. Remove power to the GCU 485.
2. Insert a 3/32" hex drive tool into the holes in the top and bottom of the front panel.
3. Turn counterclockwise until the pawl latches are able to rotate to a horizontal position.
4. Remove the unit from the panel.
5. Disconnect the electrical connector from the back of the unit.

5.2.2 GCU 485 Re-installation



NOTE

Electrical bond between the airframe and the GCU 485 is accomplished through direct metal-to-metal contact between pawl latches and the back side of the panel. Areas indicated in Figure 5-7 must be free of any surface coatings.

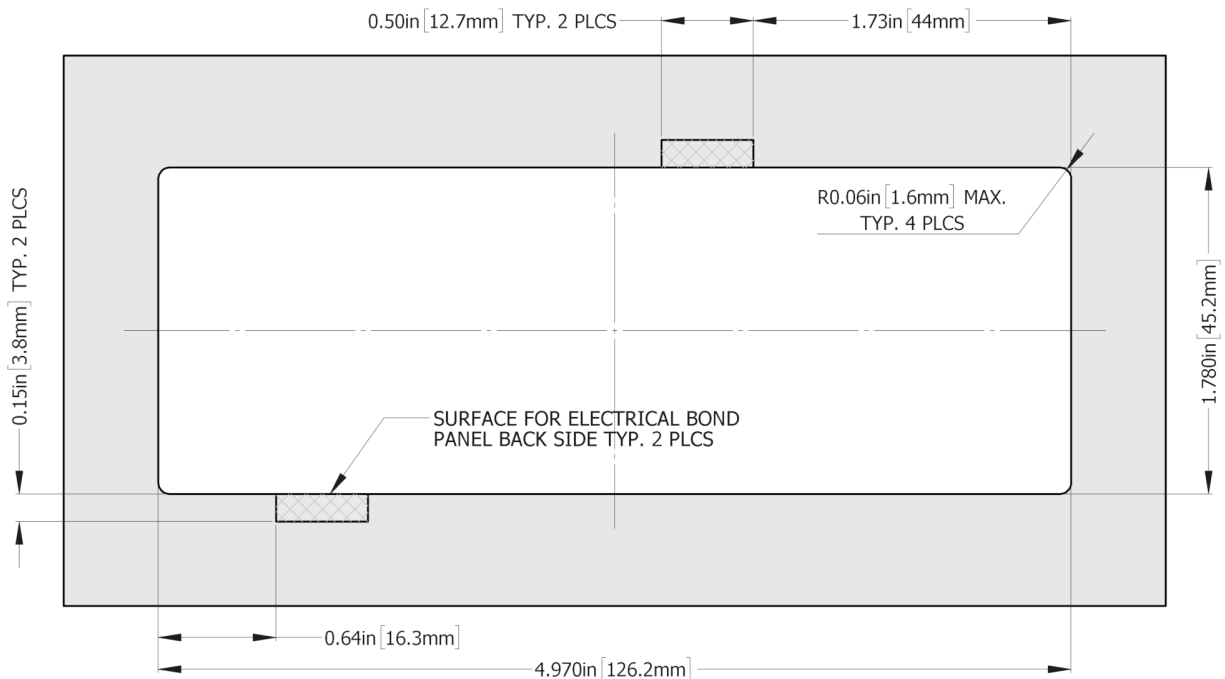


Figure 5-7 Panel Cutout for GCU 485

To re-install the GCU 485, perform the following procedure:

1. Connect the electrical connector to the back of the GCU 485.
2. Place the unit in the panel cutout, ensuring that the pawl latches are fully retracted and in the horizontal position.
3. Tighten the pawl latches with a 3/32" hex drive tool inserted through holes in GCU 485 face plate.
4. Torque the latches to 20 ± 2 in-lbf.
5. Restore power to the unit.

5.3 EIS Annunciator

5.3.1 EIS Annunciator Removal

The EIS caution and warning annunciator can be removed using the following procedure:

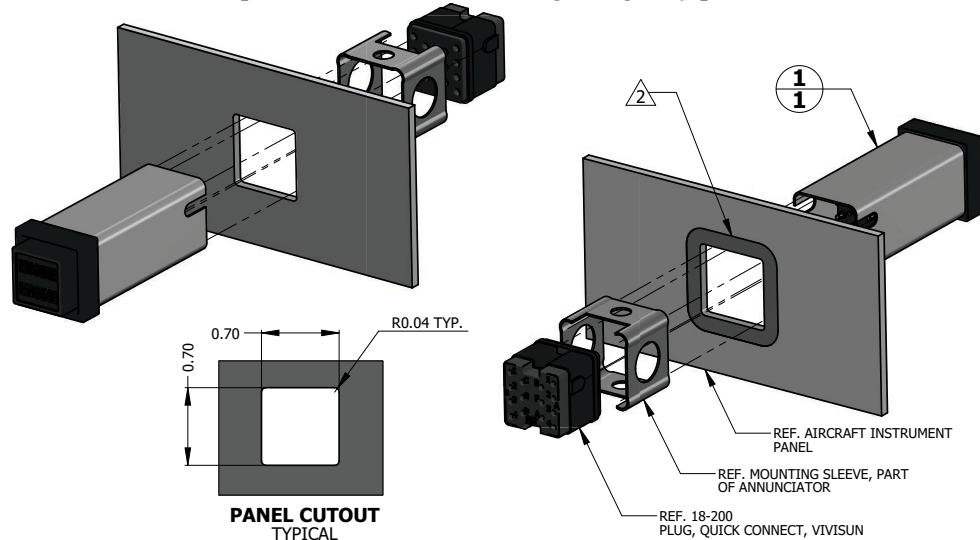
1. Using an Aerospace Optics cap extraction tool (P/N 17-150), locate the two extraction slots positioned on either side of the pushbutton cap.
2. Insert the tool into the extraction slots and pull the cap out from the module.



NOTE

The cap will rotate 90° on two hinged slide retainer pins to allow access to the module mounting screws.

3. Loosen the two small flat head module mounting screws located behind the pushbutton cap until the module can be removed from the housing.
4. Insert an Aerospace Optics connector extraction tool (P/N 18-234) into the slots at the top and bottom of the electrical connector.
5. Push to release the snap tabs in the switch housing and gently pull the connector out of the module.



QTY	ITEM	PART NUMBER	DESCRIPTION
1	1	95-40-17-B4-E1WPM	ANNUNCIATOR, 14 VDC INCANDESCENT, CAUTION AND WARNING, ENGINE INDICATION, AEROSPACE OPTICS
		LED-40-17-BM-E1WPM	ANNUNCIATOR, 28 VDC LED, CAUTION AND WARNING, ENGINE INDICATION, AEROSPACE OPTICS

NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.



2. AREA IN DIRECT CONTACT WITH ANNUNCIATOR MOUNTING SLEEVE AT THE BACK SIDE OF INSTRUMENT PANEL MUST BE PREPARED FOR ELECTRICAL BOND TO ACHIEVE DIRECT CURRENT RESISTANCE LESS THAN OR EQUAL TO 10 MILLIOHMS AS MEASURED BETWEEN ANNUNCIATOR BODY AND AIRCRAFT INSTRUMENT PANEL WITH CONNECTOR DISCONNECTED.

Figure 5-8 EIS Caution and Warning Annunciator Installation

5.3.2 EIS Annunciator Re-installation

Re-installation of the annunciator is accomplished using the following procedure:

1. Orient the keyed electrical connector to the module and press together until locked.
2. Orient the annunciator for proper viewing and gently slide the module into the housing until seated.
3. Tighten the mounting screws until the module is fully seated in the housing.
4. Rotate the cap back into position on the module and gently press until secured.

5.3.3 Separate EIS Annunciator Removal

The Mil-Spec EIS annunciators can be removed using the following procedure:

1. Remove the lens holder from the indicator.
2. Remove the lamp from the lens holder.
3. Remove the MS25041 assembly.



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	MS25041-4-327	ANNUNCIATOR, YELLOW, PRESS TO TEST FOR 28V AIRCRAFT
2	1	MS25041-2-327	ANNUNCIATOR, RED, PRESS TO TEST FOR 28V AIRCRAFT
3	1	MS25041-4-330	ANNUNCIATOR, YELLOW, PRESS TO TEST FOR 14V AIRCRAFT
4	1	MS25041-2-330	ANNUNCIATOR, RED, PRESS TO TEST FOR 14V AIRCRAFT

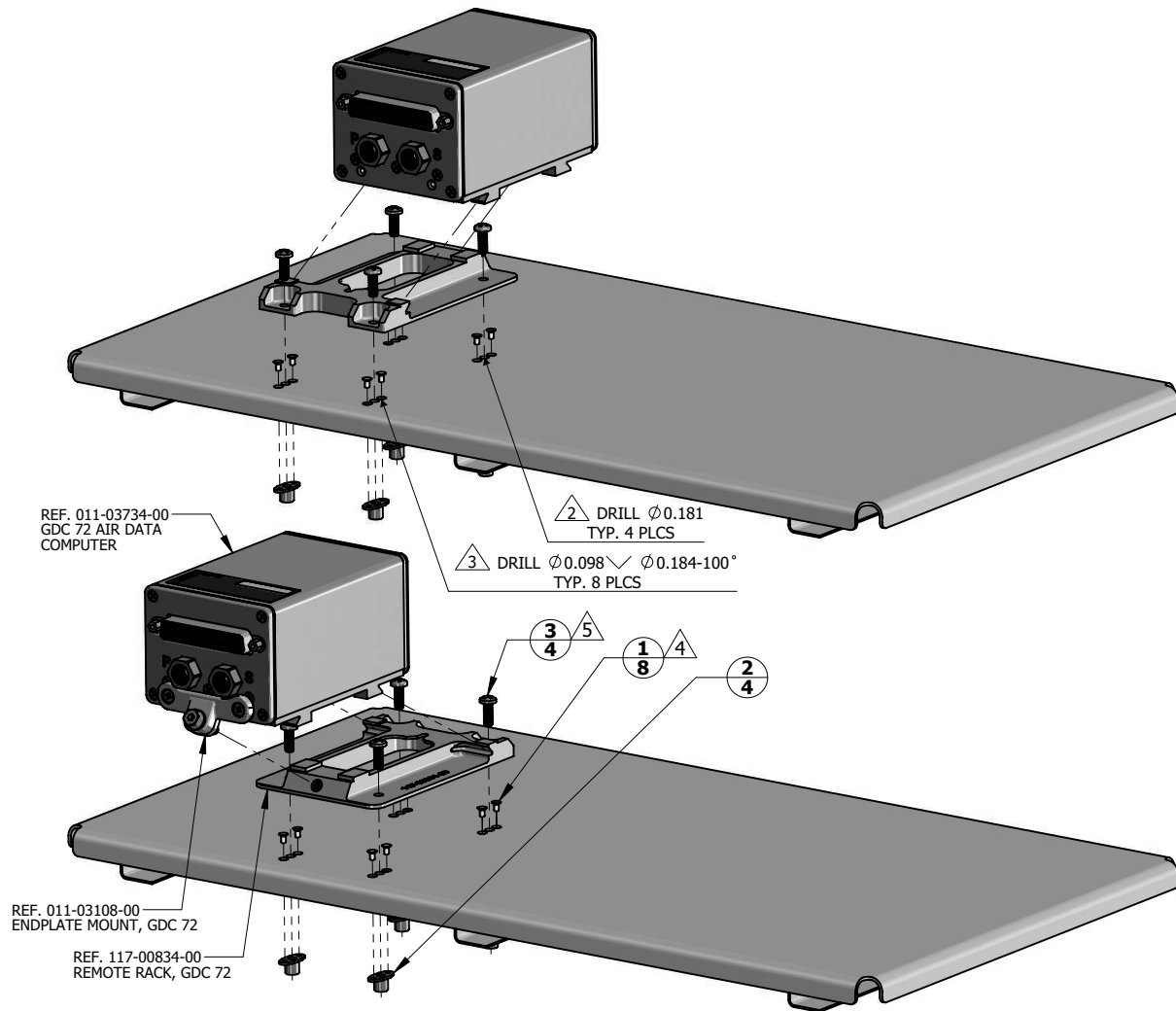
Figure 5-9 Separate EIS Annunciator Installation

5.3.4 Separate EIS Annunciator Re-installation

Re-installation of the annunciators is accomplished using the following procedure:

1. Insert the MS25041 assembly without lens holder from the forward side of the panel and secure.
2. Install lamp on the lens holder.
3. Install and secure lens holder on the indicator.

5.4 GDC 72



4	3	MS27039-0807	SCREW, MACHINE, PAN HEAD, STRUCTURAL, CROSS RECESSED .1640-32 UNC-3A, 0.469 IN
4	2	MS21069L08	NUT, SELF-LOCKING, PLATE, TWO-LUG, REDUCED RIVET SPACING, LOW HEIGHT, STEEL .164-32 UNJC-3B
8	1	MS20426AD3-3	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 3/32 IN OD, 3/16 IN LONG
QTY	ITEM	PART NUMBER	DESCRIPTION

NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. FASTENER HOLES ARE LOCATED TO MATCH GDC 72 REMOTE RACK.
3. FASTENER HOLES ARE LOCATED TO MATCH NUTPLATE ITEM 2.
4. RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, *PREPARATION FOR AND INSTALLATION*, OR PER MIL-STD-403 *PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET MISSILE, AND AIRFRAME STRUCTURES*.
5. TORQUE .1640-32 UNC-3A SCREWS 13.5 ± 1.5 LBF-IN.

Figure 5-10 GDC 72 Installation (Sheet Metal Shelf Example)

5.4.1 GDC 72 Removal

Removal of the GDC 72 Air Data Computer can be accomplished using the following procedure:

1. Remove power to the GDC 72. If the aircraft is equipped with a GDL 60, pull the CNXT BATT circuit breaker. Reset after all other maintenance is complete.
2. Disconnect the electrical connector.
3. Disconnect the pitot-static lines.
4. Loosen the single mounting screw in the endplate mount bracket.
5. Lift the side of the GDC 72 where the endplate mount bracket is attached and slide the unit towards the bracket to disengage mounting pawls and remove the unit.

5.4.2 GDC 72 Re-installation

1. Place the unit flat on the mounting bracket and slide it back to engage the mounting pawls.
2. Engage the mounting screw and torque the screw to 15-20 in-lbf.
3. Connect the pitot-static lines.
4. Connect the electrical connector.

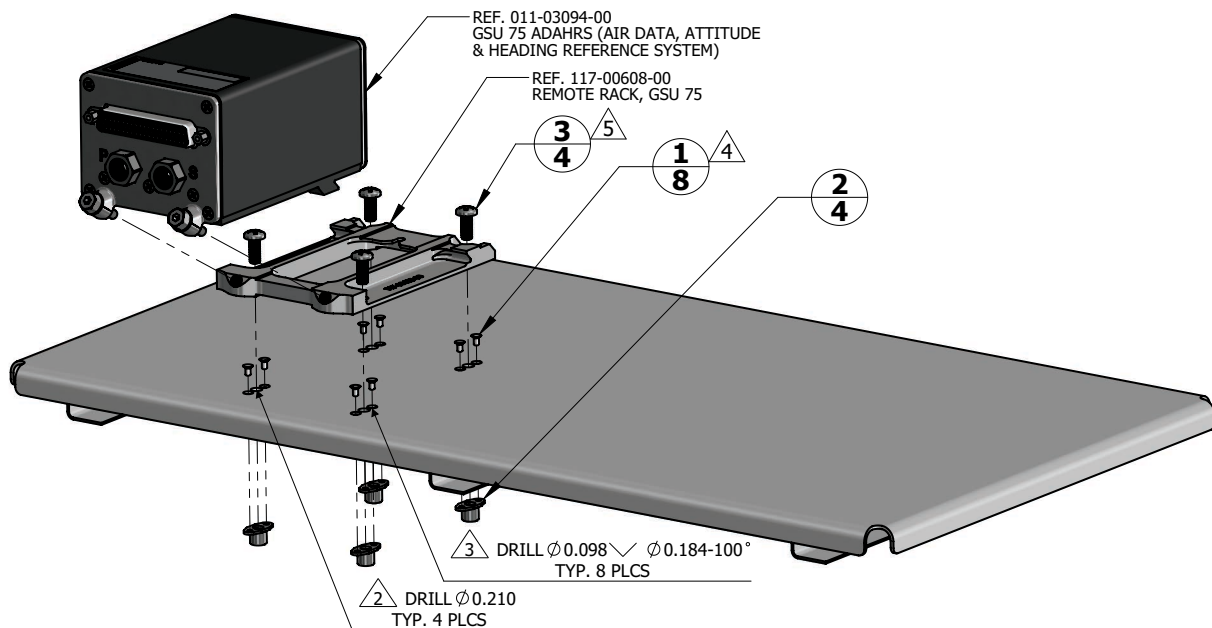
5.4.3 GDC 72 Checkout

Perform a static and pitot system leak test in accordance with the aircraft manufacturer's specification and/or applicable regulations.

In accordance with 14 CFR Part 43 Appendix E, paragraph (b)(2), Garmin specifies a test procedure equivalent to Part 43 Appendix E, paragraph (b)(1) with two exceptions. The tests of sub-paragraphs (iv) (Friction) and (vi) (Barometric Scale Error) are not applicable because the digital outputs of the GDC 72 are not susceptible to these types of errors.

Perform checkout procedures in Section 5.17.2.

5.5 GSU 75(), GRS 79



4	3	MS27039-1-07	SCREW, MACHINE, PAN HEAD, STRUCTURAL, CROSS RECESSED .1900-32 UNF-3A, 0.469 IN
4	2	MS21069L3	NUT, SELF-LOCKING, PLATE, TWO-LUG, REDUCED RIVET SPACING, LOW HEIGHT, STEEL .190-32 UNJF-3B
8	1	MS20426AD3-3	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 3/32 IN OD, 3/16 IN LONG
QTY.	ITEM	PART NUMBER	DESCRIPTION

NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. FASTENER HOLES ARE LOCATED TO MATCH GSU 75 REMOTE RACK.
3. FASTENER HOLES ARE LOCATED TO MATCH NUTPLATE ITEM 2.
4. RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, *PREPARATION FOR AND INSTALLATION*, OR PER MIL-STD-403 *PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET MISSILE, AND AIRFRAME STRUCTURES*.
5. TORQUE .1900-32 UNF-3A SCREWS 22.5 ± 2.5 LBF-IN.

Figure 5-11 GSU 75() Installation (Sheet Metal Shelf Example)



NOTE

The GRS 79 has the same case and mounting hardware as the GSU 75() with the exception of the pitot-static ports, which are not present on the GRS 79. Removal and installation procedures are similar for both units.



NOTE

Loosening of the unit mounting plate and/or the shelf to which the mounting plate is attached requires re-calibration of the AHRS, which requires an Installer Unlock Card, which is only available for use by a Garmin Dealer.

5.5.1 GSU 75()/GRS 79 Removal

Removal of the GSU 75() or GRS 79 can be accomplished using the following procedure:

1. Remove power to the unit. If the aircraft is equipped with a GDL 60, pull the CNXT BATT circuit breaker. Reset after all other maintenance is complete.
2. Disconnect the electrical connector.
3. Disconnect the pitot-static lines (GSU75() only).
4. Loosen the two mounting screws on the connector end of the unit.
5. Lift the connector side of the unit and slide the unit towards the connector to remove.

5.5.2 GSU 75()/GRS 79 Re-installation

1. Place the unit on the remote rack.
2. Slide the unit back until the feet are fully engaged with the remote rack.
3. Push down and simultaneously turn each retention screw clockwise.
4. Torque each retention screw to 15-20 in-lbf.
5. Connect the pitot-static lines (GSU 75() only).
6. Connect the electrical connector.
7. Restore unit power.

5.5.3 GSU 75()/GRS 79 Checkout

If the mounting bracket bolts have been loosened or bracket mounting (e.g., instrument panel, avionics shelf) has been moved in any way, the following AHRS calibration procedures must be performed as described in Section 6 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3):

1. Pitch/Roll Offset Compensation.
2. Magnetometer Calibration.
3. Compass Swing.
4. Heading Offset Compensation (if required by the previous step).
5. Engine Run-up Vibration Check.

For the GSU 75() only:

Perform a static and pitot system leak test in accordance with the aircraft manufacturer's specification, applicable regulations, and/or model-specific data in Appendix B.

In accordance with 14 CFR Part 43 Appendix E, paragraph (b)(2), Garmin specifies a test procedure equivalent to Part 43 Appendix E, paragraph (b)(1) with two exceptions. The tests of sub-paragraphs (iv) (Friction) and (vi) (Barometric Scale Error) are not applicable because the digital outputs of the GSU 75() are not susceptible to these types of errors.

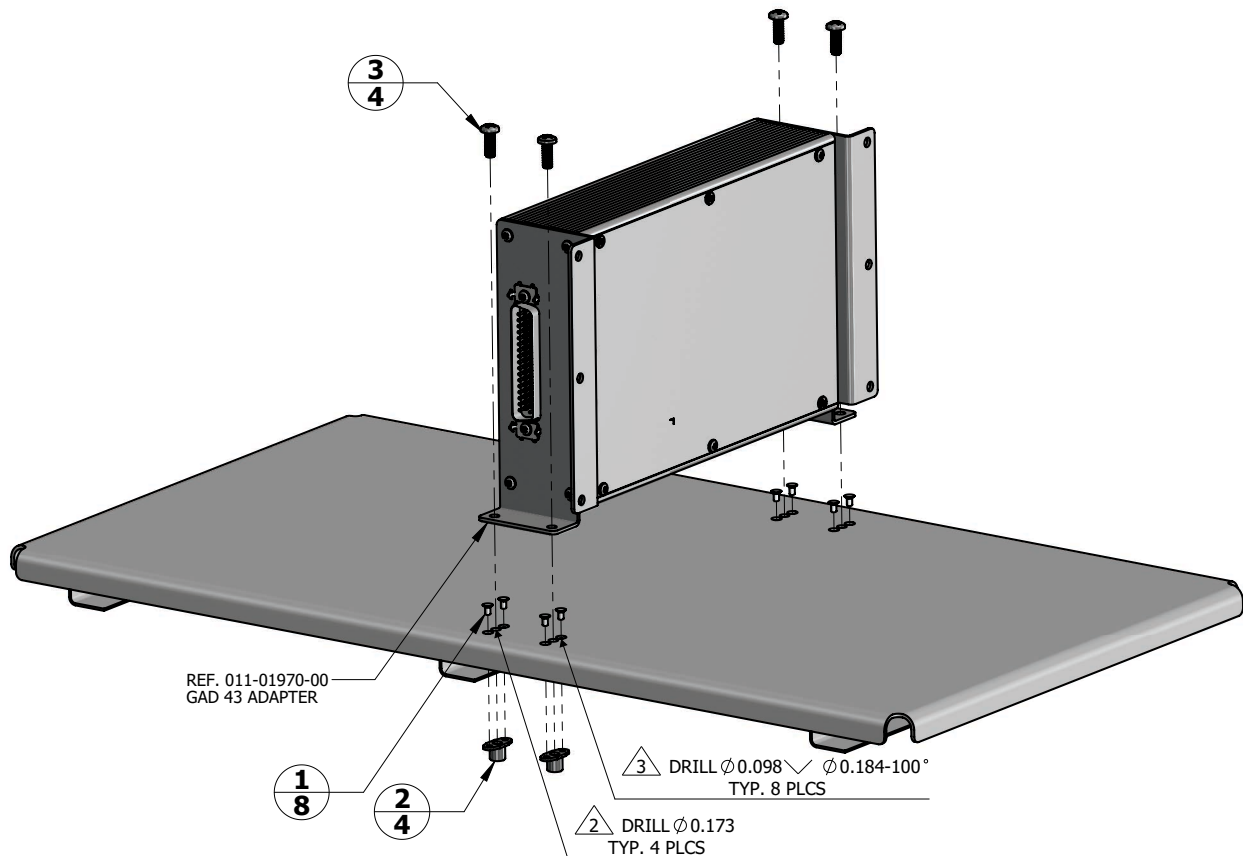
Perform checkout procedures in Section 5.17.2.

5.6 GAD 43(e)



NOTE

The GAD 43(e) may be removed and re-installed without a GDU Installer Unlock Card. If the unit is replaced with a new GAD 43(e), or if the software is updated, a GDU Installer Unlock Card is necessary to configure the new unit. Installer Unlock Cards are only available for use by Garmin Dealers.



4	3	MS27039-0807	SCREW, MACHINE, PAN HEAD, STRUCTURAL, CROSS RECESSED .1640-32 UNC-3A, 0.469 IN
4	2	MS21069L08	NUT, SELF-LOCKING, PLATE, TWO-LUG, REDUCED RIVET SPACING, LOW HEIGHT, STEEL .164-32 UNJC-3B
8	1	MS20426AD3-3	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 3/32 IN OD, 3/16 IN LONG
QTY	ITEM	PART NUMBER	DESCRIPTION

NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. FASTENER HOLES ARE LOCATED TO MATCH GAD 43 ADAPTER.
3. FASTENER HOLES ARE LOCATED TO MATCH NUTPLATE ITEM 2.
4. RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, PREPARATION FOR AND INSTALLATION, OR PER MIL-STD-403 PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET MISSILE, AND AIRFRAME STRUCTURES.
5. TORQUE .1640-32 UNC-3A SCREWS 13.5 ± 1.5 LBF-IN.

Figure 5-12 GAD 43 Installation (Sheet Metal Shelf Example)

5.6.1 GAD 43(e) Removal

The GAD 43(e) can be removed using the following procedure:

1. Remove power from the GAD 43(e).
2. Disconnect the electrical connector(s) from the GAD 43(e).
3. Unscrew the four mounting screws.

5.6.2 GAD 43(e) Re-installation

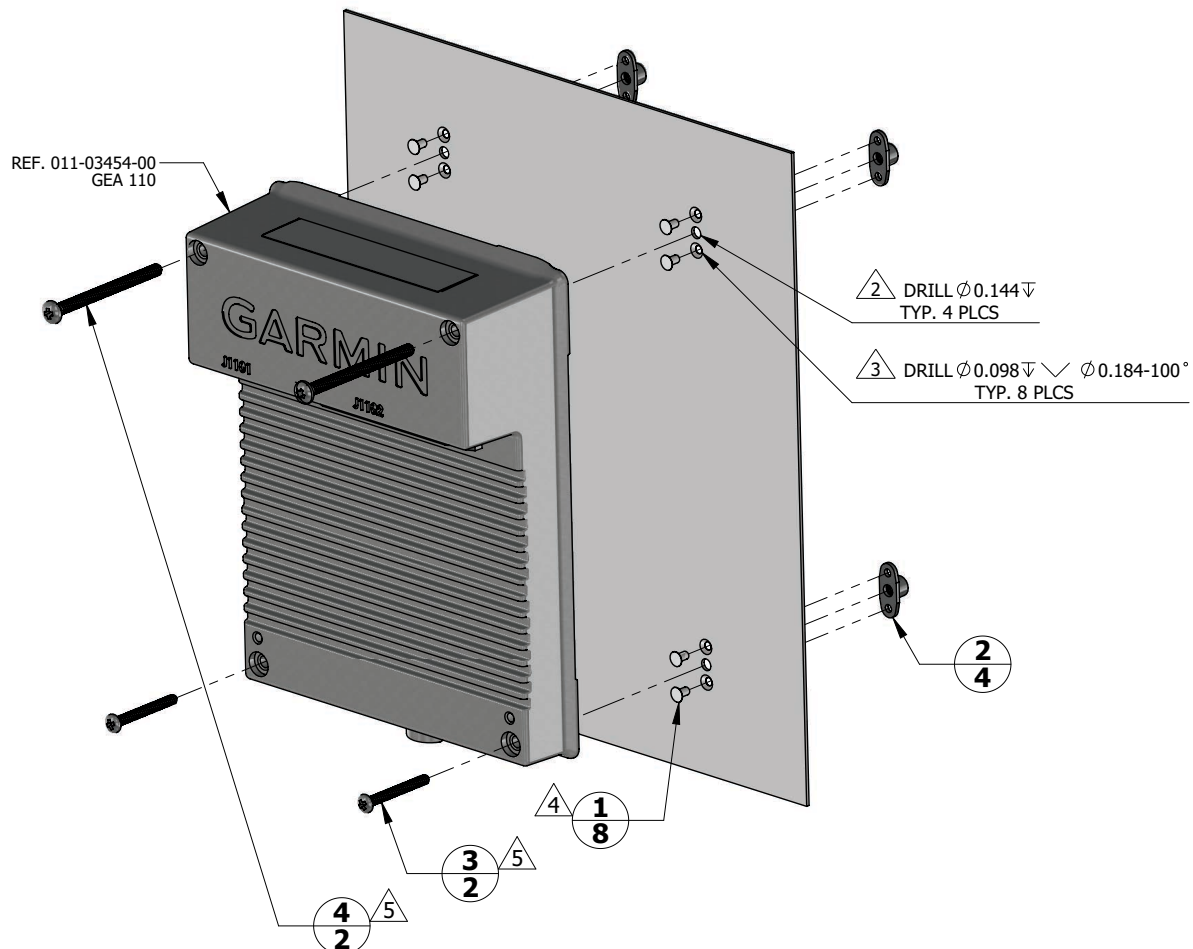
Re-installation of the GAD 43(e) is accomplished by performing the removal process in reverse. Torque the mounting screws to the specifications provided in Figure 5-12.

5.6.3 GAD 43(e) Checkout

If the GAD 43(e) has been replaced, perform the following procedure:

1. Insert the Installer Unlock Card into the GDU connected to the GAD.
2. Power the G500/G600 TXi system up on Configuration mode.
3. Navigate to **Interfaces** → **Adapter** → **Settings**.
4. Configure interface settings per the printed configuration log.
5. Perform checkout procedures in Section 6.2 and Section 6.7 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.7 GEA 110

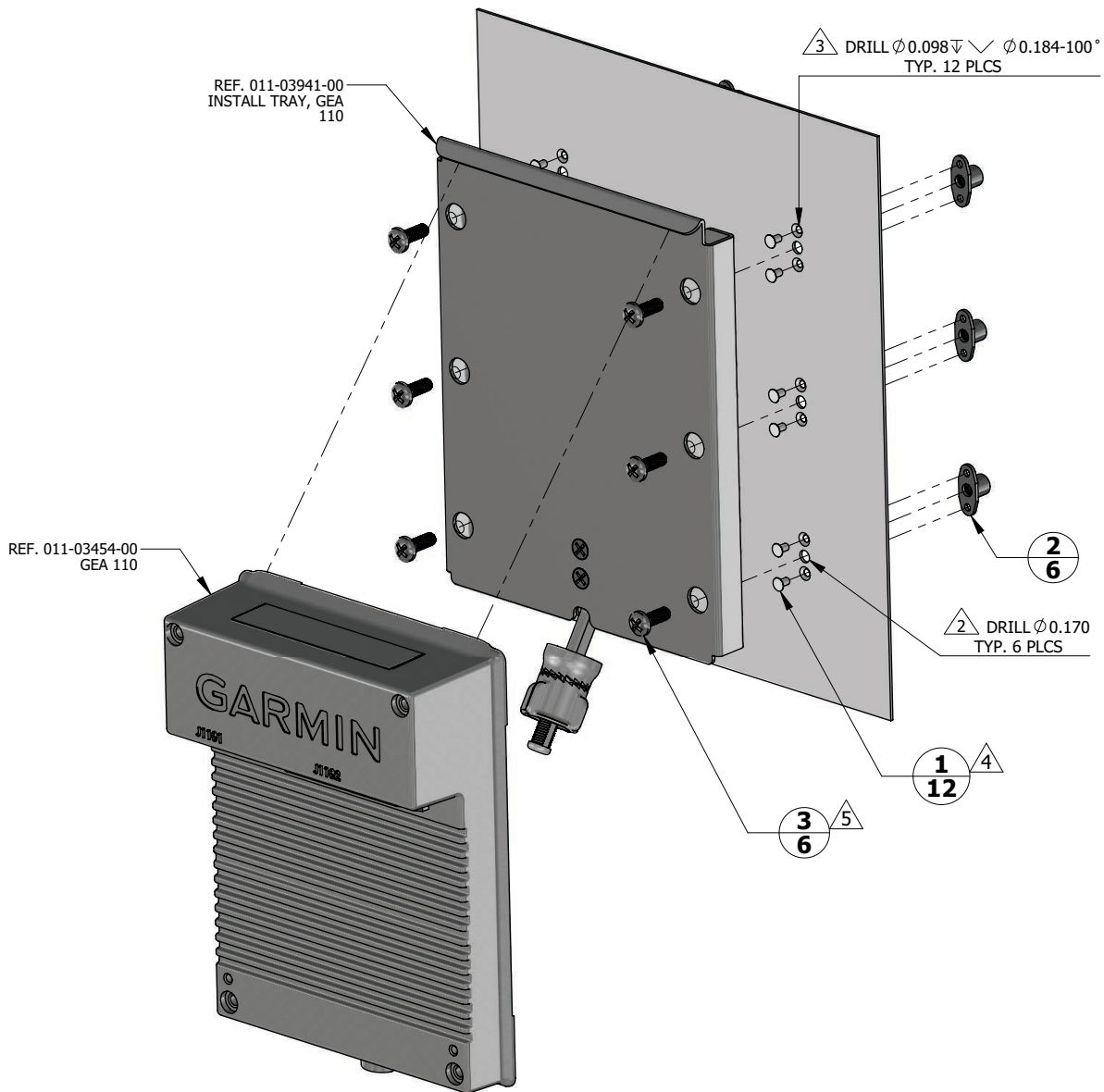


2	4	MS35206-237	SCREW, MACHINE, PAN HEAD, CROSS RECESSED, CAD PLATED .1380- 32 UNC-2A, 1.750 IN LONG
2	3	MS35206-234	SCREW, MACHINE, PAN HEAD, CROSS RECESSED, CAD PLATED .1380- 32 UNC-2A, 1.000 IN LONG
4	2	MS21069L06	NUT, SELF-LOCKING, PLATE, TWO-LUG, REDUCED RIVET SPACING, LOW HEIGHT, STEEL .138-32 UNJC-3B
8	1	MS20426AD3-3	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 3/32 IN OD, 3/16 IN LONG
QTY.	ITEM	PART NUMBER	DESCRIPTION

NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
- 2 FASTENER HOLES ARE LOCATED TO MATCH GEA 110.
- 3 FASTENER HOLES ARE LOCATED TO MATCH NUTPLATE ITEM 2.
- 4 RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, *PREPARATION FOR AND INSTALLATION*, OR PER MIL-STD-403 *PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET MISSILE, AND AIRFRAME STRUCTURES*.
- 5 TORQUE .1380-32 UNC-2A SCREWS 8.0 ± 1.0 LBF-IN.

Figure 5-13 GEA 110 Installation (Mounted Directly to Airframe Example)



6	3	MS27039-0807	SCREW, MACHINE, PAN HEAD, STRUCTURAL, CROSS RECESSED .1640-32 UNC-3A, 0.469 IN
6	2	MS21069L08	NUT, SELF-LOCKING, PLATE, TWO-LUG, REDUCED RIVET SPACING, LOW HEIGHT, STEEL .164-32 UNJC-3B
12	1	MS20426AD3-3	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 3/32 IN OD, 3/16 IN LONG
QTY.	ITEM	PART NUMBER	DESCRIPTION

NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. FASTENER HOLES ARE LOCATED TO MATCH GEA 110 INSTALL TRAY.
3. FASTENER HOLES ARE LOCATED TO MATCH NUTPLATE ITEM 2.
4. RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, *PREPARATION FOR AND INSTALLATION*, OR PER MIL-STD-403 *PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET MISSILE, AND AIRFRAME STRUCTURES*.
5. TORQUE .1640-32 UNC-2A SCREWS 13.5 ± 1.5 LBF-IN.

Figure 5-14 GEA 110 Installation (Mounted on a Tray Example)

5.7.1 GEA 110 Removal

To remove the GEA 110, perform the following procedure:

1. Remove power to the GEA 110. If the aircraft is equipped with a GDL 60, pull the CNXT BATT circuit breaker. Reset after all other maintenance is complete.
2. Disconnect the two electrical connectors.
3. If the unit is mounted on a tray, as shown in Figure 5-14, pull out on the mounting knob and turn counterclockwise to loosen it enough to rotate the arm down and away from the unit.
4. If the unit is mounted to the airframe or back of the GDU using screws, as shown in Figure 5-13, loosen the four screws securing the unit to the airframe or GDU.

5.7.2 GEA 110 Re-installation

To re-install the GEA 110, perform the removal procedures in reverse. If the unit is mounted to the airframe or back of the GDU, torque the screws to the specification in Figure 5-13. For units that are mounted in a mounting tray, tighten the mounting screw by hand until the unit is secure.

If the GEA 110 was replaced, the sensor configurations must be loaded to the new unit using the following procedure:

1. Insert saved configuration SD card in the top or left SD card slot of any GDU directly connected to the GEA 110.
2. Power on the GDU that is physically wired to the GEA 110 in Configuration mode.
3. Press **SD Load**.
4. Select the appropriate Aircraft Configuration File.
5. Select the current GDU as the *From SD* and *To GDU*.
6. Select the **EIS Sensor Configuration** check box.
7. Select **SD Load**.

5.7.3 GEA 110 Checkout

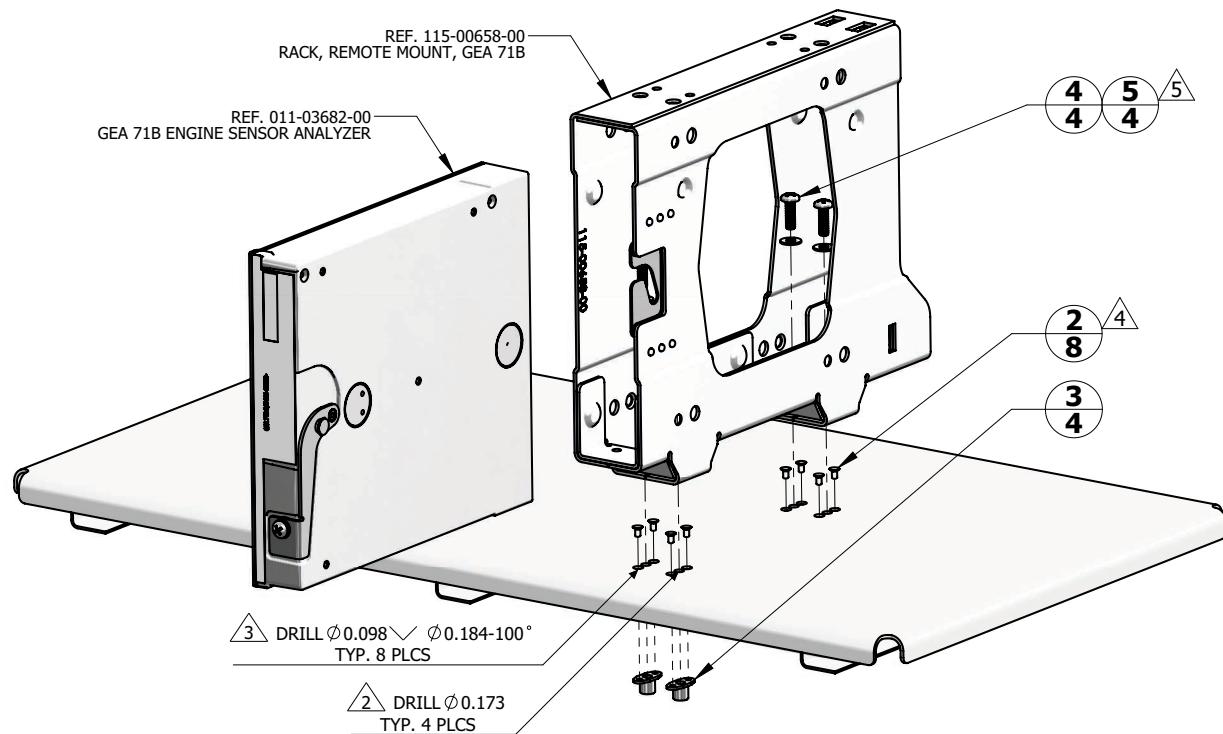
Perform the following checkout procedures:

1. Configuration Mode Ground Checks as described in Section 5.17.1. If the GEA 110 does not pass the checks in this step, load the sensor configurations using the procedure in Section 5.7.2 and perform the checkout procedure again.

Perform the following checkout procedure only if the GEA was replaced or did not initially pass the checkout procedure above:

1. EIS Ground Checks as described in Section 6.5 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.8 GEA 71B Enhanced

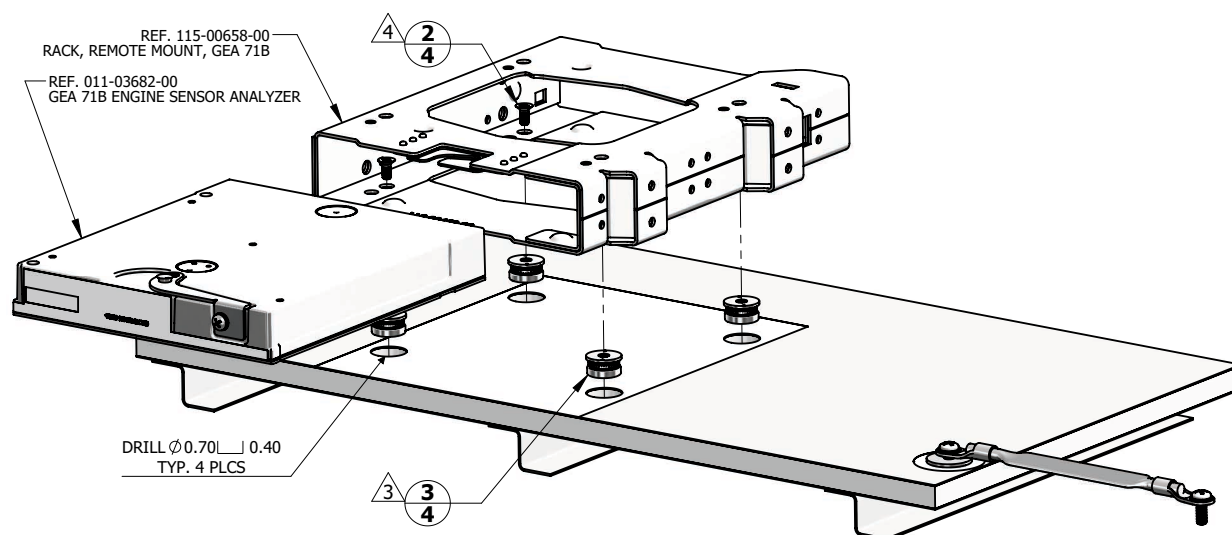


4	5	NAS1149FN832P	WASHER, FLAT, STEEL, CAD PLATED, Ø0.174 ID, Ø0.375 OD, 0.032 INCH THICK
4	4	MS27039-0808	SCREW, MACHINE - PAN HEAD, STRUCTURAL, CROSS RECESSED .1640-32 UNC-3A, 0.531 IN
4	3	MS21069L08	NUT, SELF-LOCKING, PLATE, TWO-LUG, REDUCED RIVET SPACING, LOW HEIGHT, STEEL .164-32 UNJC-3B
8	2	MS20426AD3-3	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 3/32 IN OD, 3/16 IN LONG
1	1	115-00658-00	RACK, REMOTE MOUNT, GEA 71B
QTY	ITEM	PART NUMBER	DESCRIPTION

NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. FASTENER HOLES ARE LOCATED TO MATCH GEA 71B REMOTE RACK.
3. FASTENER HOLES ARE LOCATED TO MATCH NUTPLATE ITEM 3.
4. RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, *PREPARATION FOR AND INSTALLATION*, OR PER MIL-STD-403 *PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET MISSILE, AND AIRFRAME STRUCTURES*.
5. TORQUE .1640-32 UNC-3B SCREWS 13.5 ±1.5 LBF-IN.

Figure 5-15 GEA 71B Enhanced (Metallic Example)



4	3	NAS1835A-08	INSERT, SCREW THREAD, MOLDED IN, BLIND THREADED, SELF-LOCKING, FLOATING, SANDWICH PANEL, .1640-32UNJC-3B
4	2	MS24693-C48	SCREW, MACHINE, FLAT, COUNTERSUNK HEAD 100°, CROSS-RECESSED .1640-32 UNC-2A, 0.375 IN LONG
1	1	115-00658-00	RACK, REMOTE MOUNT, GEA 71B
QTY	ITEM	PART NUMBER	DESCRIPTION

NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. FASTENER HOLES ARE LOCATED TO MATCH GEA 71B REMOTE RACK. SHELF AREA IN DIRECT CONTACT WITH UNIT RACK MUST BE PREPARED FOR ELECTRICAL BOND.
3. IF NOT SPECIFIED IN AIRCRAFT MAINTENANCE MANUAL OR STANDARD PRACTICES MANUAL, PREFERRED ADHESIVE TO POT INSERTS IS TWO-COMPONENT SYNTACTIC MEDIUM DENSITY EPOXY ADHESIVE EPOCAST 1618-D/B, EPOCAST 1633-A/B, OR EPOCAST 1652-A/B MANUFACTURED BY HUNTSMAN ADVANCED MATERIALS.
4. TORQUE .1640-32 UNJC-3B SCREWS 13.5 ± 1.5 LBF-IN.

Figure 5-16 GEA 71B Enhanced (Sandwich Panel Example)

5.8.1 GEA 71B Enhanced Removal

The GEA 71B Enhanced can be removed using the following procedure:

1. Remove power from the GEA 71B Enhanced. If the aircraft is equipped with a GDL 60, pull the CNXT BATT circuit breaker. Reset after all other maintenance is complete.
2. Disconnect the electrical connectors from the GEA 71B Enhanced.
3. On the GEA 71B unit, unlatch the handle. Rotate the handle to unlock the GEA 71B Enhanced unit from the mounting bracket.
4. Slide the GEA 71B Enhanced unit from the mounting bracket.

5.8.2 GEA 71B Enhanced Re-installation

Re-installation of the GEA 71B Enhanced is accomplished by performing the removal process in reverse.

If the GEA 71B Enhanced was replaced, the sensor configurations must be loaded to the new unit using the following procedure:

1. Insert saved configuration SD card in the top or left SD card slot of any GDU directly connected to the GEA 71B Enhanced.
2. Power on the GDU that is physically wired to the GEA 71B Enhanced in Configuration mode.
3. Press **SD Load**.
4. Select the appropriate Aircraft Configuration File.
5. Select the current GDU as the *From SD* and *To GDU*.
6. Select the **EIS Sensor Configuration** check box.
7. Select **SD Load**.

5.8.3 GEA 71B Enhanced Checkout

Perform the following checkout procedures:

1. Configuration Mode Ground Checks as described in Section 5.17.1. If the GEA 71B Enhanced does not pass the checks in this step, load the sensor configurations using the procedure in Section 5.8.2 and perform the checkout procedure again.

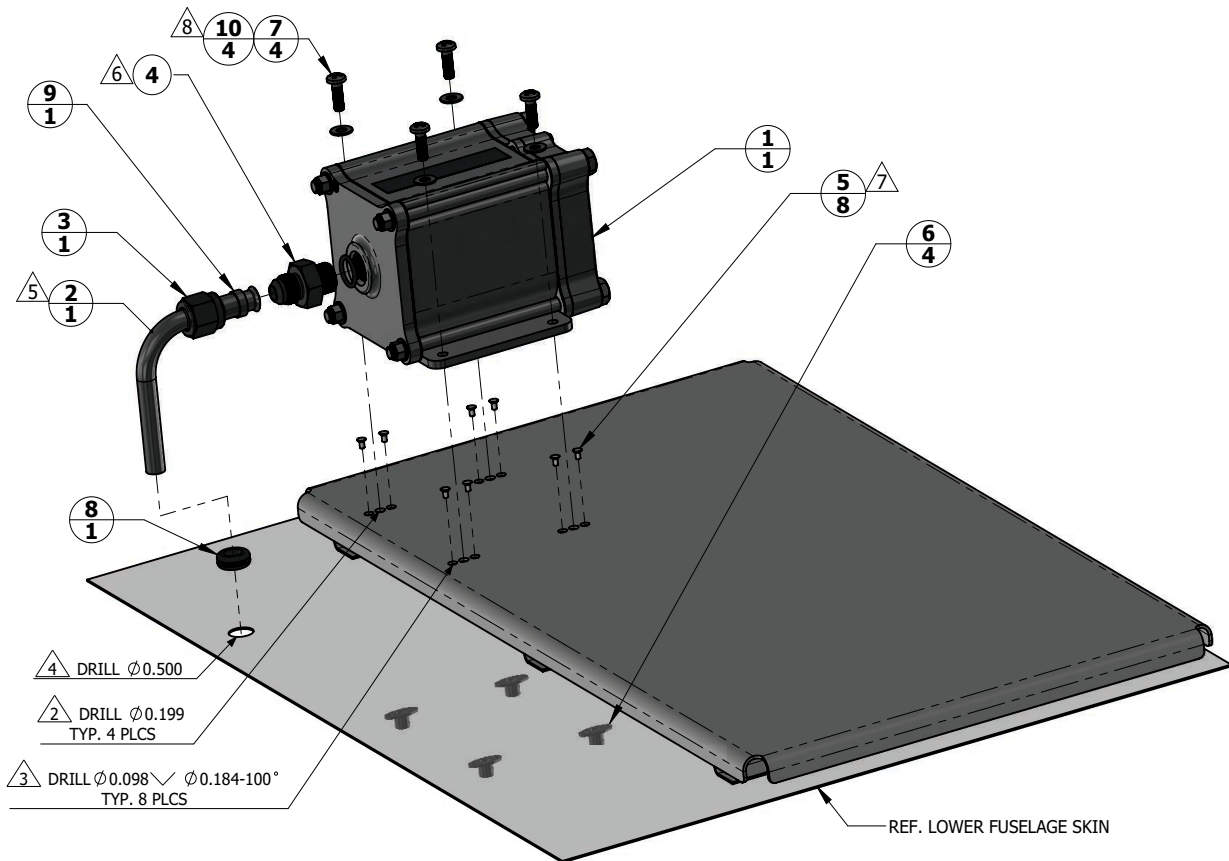
Perform the following checkout procedure only if the GEA was replaced or did not initially pass the checkout procedure above:

- EIS Ground Checks as described in Section 6.5 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3) and in Section 6 of the installation manual addendum of applicable aircraft listed in Appendix D of *G500/G600 TXi Part 23 AML STC Installation Manual*.

For aircraft configured for capacitive fuel quantity interfaces on P701-17, 18, 30 or 31:

If replacing a GEA 71B Enhanced (011-03682-05) Mod 0 unit with a GEA 71B Enhanced (011-03682-05) Mod 1 unit, perform the fuel quantity calibration procedure as described in Section 5.8.7 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3) and/or in Section 5 of the installation manual addendum of applicable aircraft listed in Appendix D of *G500/G600 TXi Part 23 AML STC Installation Manual*.

5.9 GBB 54



4	10	NAS1149F0332P	WASHER, FLAT, STEEL, CAD PLATED, 0.032 INCH THICK, ID 0.203, OD 0.438
1	9	MS51533B6	SLEEVE, COMPRESSION, TUBE FITTING, 37° FLARED, $\phi 3/8$ TUBE OD
1	8	MS35489-141	GROMMET, SYNTHETIC RUBBER, $\phi 0.375$ IN HOLE, $\phi 0.500$ IN GROOVE
4	7	MS27039-1-09	SCREW, MACHINE, PAN HEAD, STRUCTURAL, CROSS RECESSED .1900-32 UNF-3A, 0.594 IN
4	6	MS21069L3	NUT, SELF-LOCKING, PLATE, TWO-LUG, REDUCED RIVET SPACING, LOW HEIGHT, STEEL .190-32 UNJF-3B
8	5	MS20426AD3-3	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 3/32 IN OD, 3/16 IN LONG
(1)	4	AN920-06-06	ADAPTER, STRAIGHT, 6AN MALE TO 9/16-18UNJF-3A O R-RING BOSS, $\phi 3/8$ TUBE OD
1	3	AN818-6	NUT, TUBE COUPLING, SHORT, $\phi 0.375$ TUBE OD .5625-18UNJF-3B
1	2	6061-T6 TUBE	$\phi 3/8$ IN OD, 0.020 IN WALL PER AMS-WW-T-700/6 OR AMS-T-7081
1	1	011-03456-00	GBB 54 BATTERY
QTY	ITEM	PART NUMBER	DESCRIPTION

NOTES

- DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
- FASTENER HOLES ARE LOCATED TO MATCH GBB 54 BATTERY.
- FASTENER HOLES ARE LOCATED TO MATCH NUTPLATE ITEM 6.
- HOLE DIAMETER TO MATCH GROOVE DIAMETER OF THE GROMMET ITEM 8.
- FLARE TUBE END TO 37 DEGREE PER SAEJ533.
- ADAPTER (ITEM 4) IS INCLUDED WITH THE BATTERY.
- RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, PREPARATION FOR AND INSTALLATION, OR PER MIL-STD-403 PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET MISSILE, AND AIRFRAME STRUCTURES.
- TORQUE .1900-32 UNF-3A SCREWS 22.5 ± 2.5 LBF-IN.

Figure 5-17 GBB 54 Installation (Sheet Metal Shelf Example)

5.9.1 GBB 54 Removal



NOTE

All item numbers in this section refer to Figure 5-17.

To remove the GBB 54, utilize the following procedure:

1. Ensure the GDU 700P connected to the GBB 54 is powered off. If the aircraft is equipped with a GDL 60, pull the CNXT BATT circuit breaker. Reset after all other maintenance is complete.
2. Disconnect the electrical connector.
3. Loosen the tube nut (3) and disconnect the vent tube (2) from the battery (1).
4. Remove the four screws (7) holding the GBB 54.

5.9.2 Battery Cell Replacement



NOTE

The GBB 54 Battery Cell Replacement Kit (P/N 010-01331-02) must be obtained from an authorized Garmin dealer.

If access is available to remove four bolts (1) on connector side, unit removal is not required. Refer to Figure 5-18.

Removal Steps

1. Remove the four bolts (1) and four nuts (7).
2. Pull battery cover (2) from the housing (5).
3. Discard the gasket (3).
4. Remove the four bolts (8) that secure the battery to the battery cover.
5. Pull the battery pack (4) from the cover receptacle (2).

Replacement Steps

1. Apply Dow Corning 4 dielectric grease, or equivalent, to the pins in the battery pack connector (6).
2. Push the battery pack connector (6) into the cover receptacle (2).
3. Apply Loctite 242 (blue) thread-locking compound, or equivalent, to the bolts (8).
4. Secure the battery (4) to the cover (2) with bolts (8).
5. In a cross-tightening sequence, torque bolts (8) to 20-25 in-lbf.
6. Place the gasket (3) over the battery pack (4) until flush with the battery cover (2).
7. Insert the battery cover (2) with the gasket (3) and the battery pack (4) into the housing (5).
8. Insert the four bolts (1) and nuts (7).
9. In cross-tightening sequence, torque bolts (1) to 40 to 60 in-lbf.

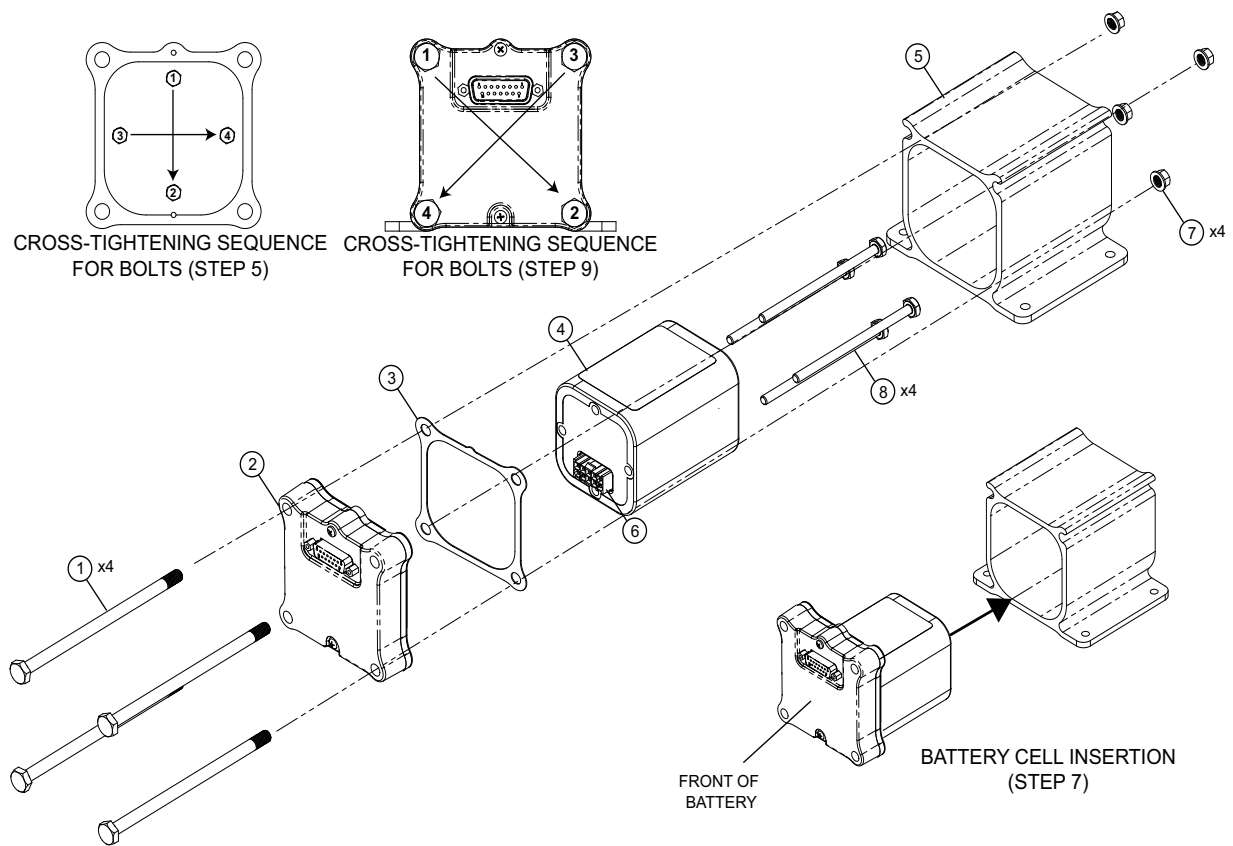


Figure 5-18 GBB 54 Battery Cell Replacement

5.9.3 GBB 54 Re-installation

To re-install the GBB 54, perform the following procedure:

1. Install four screws (7) securing the GBB 54 and torque to the specification in Figure 5-17.
2. Connect the vent tube to the GBB 54 and tighten the tube nut.
3. Connect the electrical connector.
4. Perform the checkout in Section 5.9.4.

5.9.4 GBB 54 Checkout

1. Perform a Configuration Mode Ground Check as described in Section 5.17.1.
2. Perform the Backup Battery Check as described in Section 5.15.5.

5.10 GMU 44(B)



NOTE

Removal, re-installation, or replacement of the GMU 44(B) will require a recalibration of the AHRS, which requires the use of a GDU Installer Unlock Card, which is only available for use by a Garmin Dealer. Additionally, any removal or addition of electrical components or ferrous materials within 10 feet of the GMU 44(B) will require recalibration of the AHRS.

5.10.1 GMU 44(B) Removal

To remove the GMU 44(B), perform the following procedure:

1. Remove power to the AHRS unit. If the aircraft is equipped with a GDL 60, pull the CNXT BATT circuit breaker. Reset after all other maintenance is complete.
2. Disconnect the GMU 44(B) connector.
3. Remove the three screws (9/7) shown in Figure 5-19 (GMU 44) or Figure 5-20 (GMU 44B).
4. Remove the GMU 44(B) from the mounting bracket.

5.10.2 GMU 44(B) Re-installation



NOTE

If reusing the original mounting screws, the anti-rotation properties of the mounting screws must be restored. This may be done by replacing the screws with new Garmin P/N 211-60037-08. If original screws are reused, coat screw threads with Loctite 242 (blue) thread-locking compound (Garmin PN 291-00023-02) or equivalent.

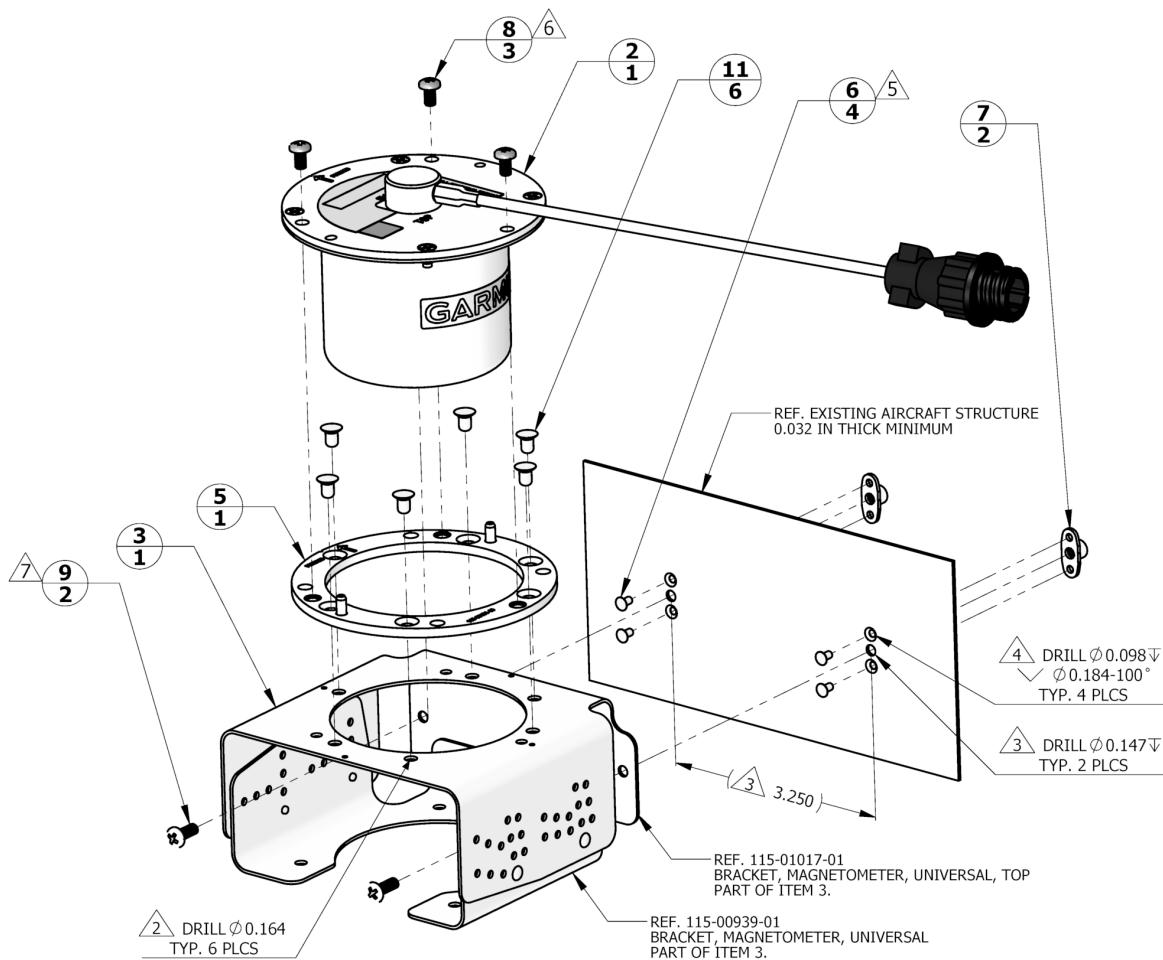
To re-install the GMU 44(B), perform the following procedure:

1. Place the GMU 44(B) in the mounting bracket.
2. Install the three screws (9/7) and torque to the specifications shown in Figure 5-19 (GMU 44) or Figure 5-20 (GMU 44B).
3. Connect the GMU 44(B) electrical connector.
4. Restore power to the AHRS unit.
5. Perform the checkout procedure in Section 5.10.3.

5.10.3 GMU 44(B) Checkout

Perform the following calibration procedures and checks found in Section 6 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3) to return the aircraft to service:

1. Magnetometer Calibration.
2. Compass Swing.
3. Heading Offset Compensation (if required by the previous step).
4. Engine Run-up Vibration Check.
5. Configuration Mode Ground Checks.

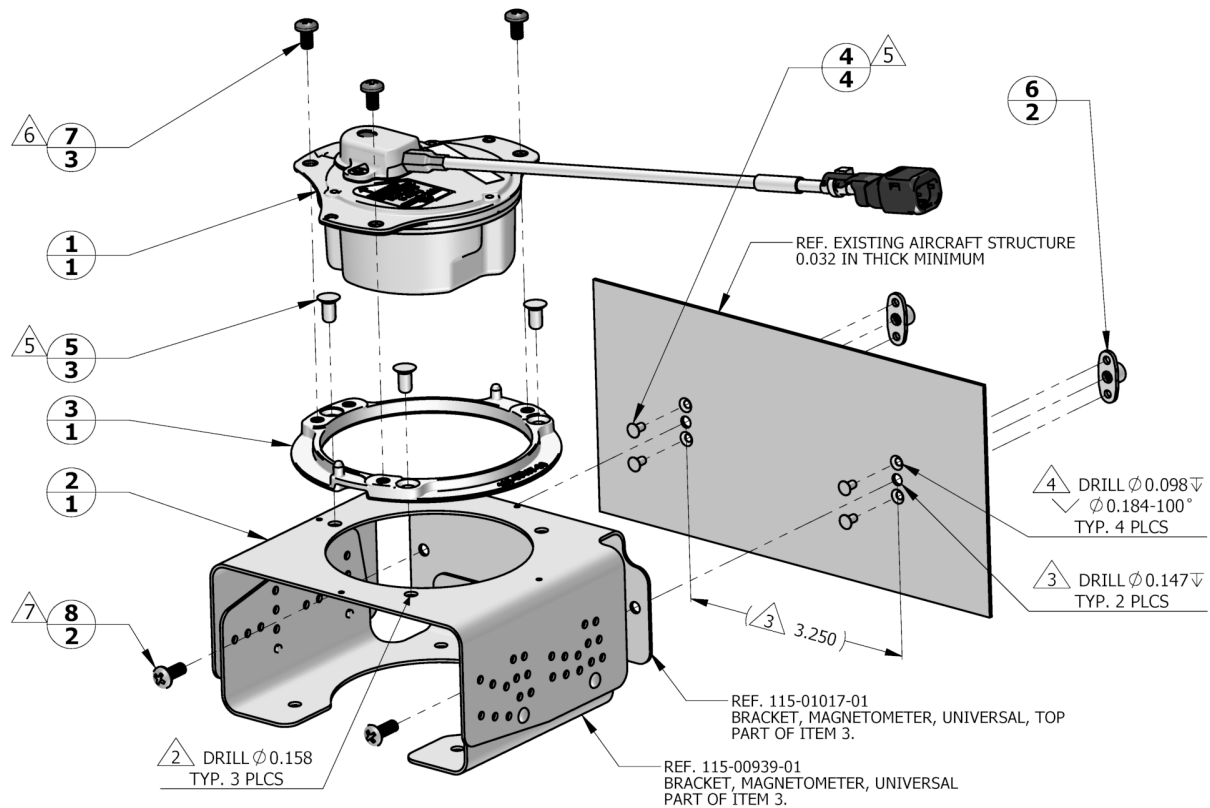


6	11	MS20426AD5-4	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 5/32 IN OD, 4/16 IN LONG
2	9	MS51957-28	SCREW, MACHINE, PAN HEAD, CROSS-RECESSED, CORROSION RESISTANT STEEL, .1380-32 UNC-2A, 0.375 LONG
3	8	MS35214-23	SCREW, MACHINE, PAN HEAD, CROSS-RECESSED, BRASS, 0.1380-32 UNC-2A, 0.25 IN LONG
2	7	MS21069L06	NUT, SELF-LOCKING, PLATE, TWO-LUG, REDUCED RIVET SPACING, LOW HEIGHT, STEEL .138-32 UNJC-3B
4	6	MS20426AD3-3	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 3/32 IN OD, 3/16 IN LONG
1	5	115-00481-10	RACK, INSTALL, MODIFIED, GMU 44
		115-00481-00	RACK, INSTALL, GMU 44
1	3	011-01779-01	GMU 44 UNIVERSAL MOUNT ASSEMBLY [KIT]
1	2	011-00870-20	GMU 44 MAGNETOMETER
		011-00870-10	
QTY	ITEM	PART NUMBER	DESCRIPTION

NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. FASTENER HOLES ARE LOCATED TO MATCH GMU 44 INSTALL RACK ITEM 5.
3. FASTENER HOLES ARE LOCATED TO MATCH GMU 44 UNIVERSAL MOUNT ASSEMBLY ITEM 3.
4. FASTENER HOLES ARE LOCATED TO MATCH NUTPLATE ITEM 8.
5. RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, *PREPARATION FOR AND INSTALLATION*, OR PER MIL-STD-403 *PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET MISSILE, AND AIRFRAME STRUCTURES*.
6. SCREW IS A PART OF 011-00871-00 GMU 44 CONNECTOR KIT. INSTALL WITH MEDIUM STRENGTH THREADLOCKER. TORQUE .1380-32 UNC-2A BRASS SCREWS 7.0 ± 0.5 LBF-IN.
7. TORQUE .1380-32 UNC-2A STEEL SCREWS 11.0 ± 1.0 LBF-IN.

Figure 5-19 GMU 44 Installation (Universal Mount Example)



2	8	MS51957-28	SCREW, MACHINE, PAN HEAD, CROSS-RECESSED, CORROSION RESISTANT STEEL, .1380-32 UNC-2A, 0.375 LONG
3	7	MS35214-23	SCREW, MACHINE, PAN HEAD, CROSS-RECESSED, BRASS, 0.1380-32 UNC-2A, 0.25 IN LONG
2	6	MS21069L06	NUT, SELF-LOCKING, PLATE, TWO-LUG, REDUCED RIVET SPACING, LOW HEIGHT, STEEL .138-32 UNJC-3B
3	5	MS20426AD5-5	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 5/32 IN OD, 5/16 IN LONG
4	4	MS20426AD3-3	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 3/32 IN OD, 3/16 IN LONG
1	3	125-00437-00	INSTALL RACK, GMU 44B
1	2	011-01779-01	GMU 44 UNIVERSAL MOUNT ASSEMBLY [KIT]
1	1	011-04201-00	GMU 44B MAGNETOMETER
QTY	ITEM	PART NUMBER	DESCRIPTION

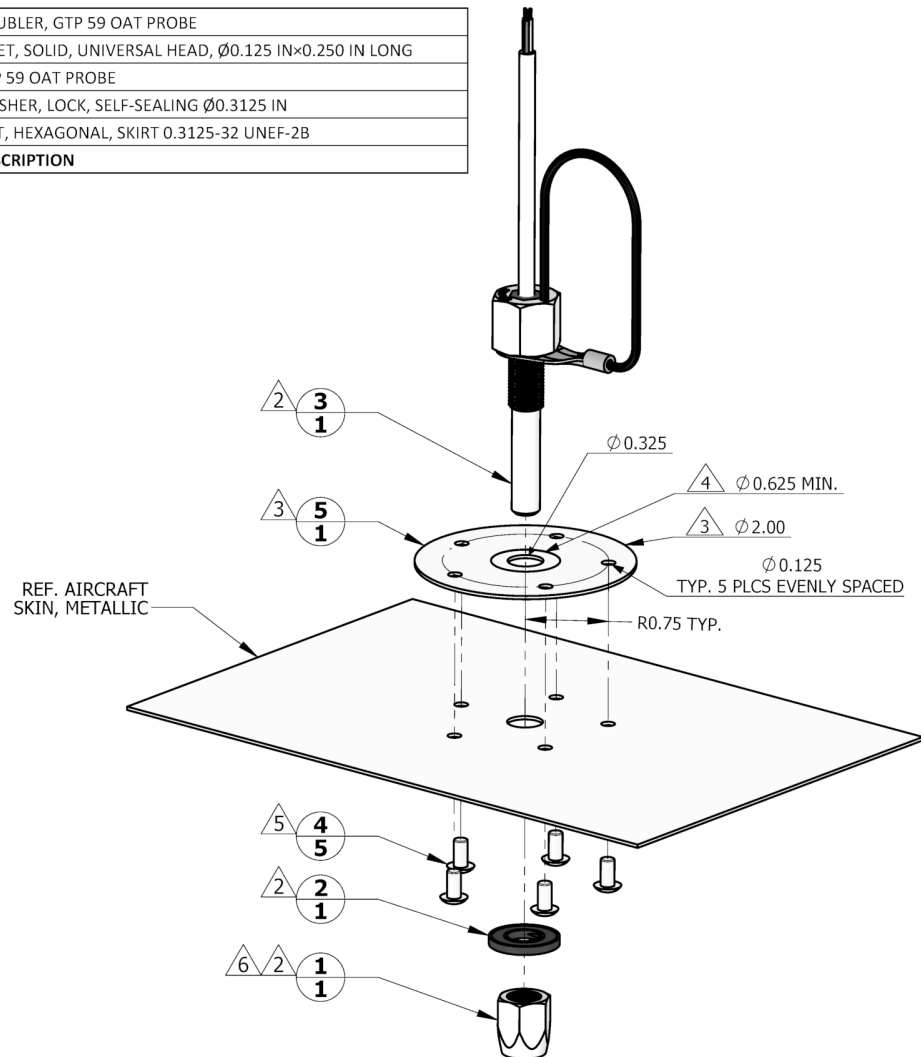
NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. FASTENER HOLES ARE LOCATED TO MATCH GMU 44 INSTALL RACK ITEM 3.
3. FASTENER HOLES ARE LOCATED TO MATCH GMU 44 UNIVERSAL MOUNT ASSEMBLY ITEM 2.
4. FASTENER HOLES ARE LOCATED TO MATCH NUTPLATE ITEM 6.
5. RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, *PREPARATION FOR AND INSTALLATION*, OR PER MIL-STD-403 *PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET MISSILE, AND AIRFRAME STRUCTURES*.
6. BRASS .1380-32 UNC-2A SCREWS (WITH NYLON LOCKING PATCH) ARE PART OF 011-04205-00 GMU 44B CONNECTOR KIT. TORQUE .1380-32 UNC-2A BRASS SCREWS 7.0 ± 0.5 LBF-IN. INSTALL WITH ASTM D5363 MEDIUM STRENGTH THREADLOCKER IF USING SCREWS WITHOUT NYLON LOCKING PATCH.
7. TORQUE .1380-32 UNC-2A STEEL SCREWS 11.0 ± 1.0 LBF-IN.

Figure 5-20 GMU 44B Installation (Universal Mount Example)

5.11 GTP 59

1	5		DOUBLER, GTP 59 OAT PROBE
5	4	MS20470AD4-4	RIVET, SOLID, UNIVERSAL HEAD, Ø0.125 IN×0.250 IN LONG
1	3	494-00022-00	GTP 59 OAT PROBE
1	2	212-00026-00	WASHER, LOCK, SELF-SEALING Ø0.3125 IN
1	1	210-00055-00	NUT, HEXAGONAL, SKIRT 0.3125-32 UNEF-2B
QTY	ITEM	PART NUMBER	DESCRIPTION



NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. NUT ITEM 1, WASHER ITEM 2, AND PROBE ITEM 3 ARE PART OF GTP 59 OAT PROBE ASSEMBLY (KIT), GARMIN P/N 011-00978-00.
3. MINIMUM DOUBLER SIZE SHOWN. CIRCULAR SHAPE OPTIONAL. DOUBLER THICKNESS IS ONE GAUGE THICKER THAN AIRCRAFT SKIN.
4. SPOT FACE TO REMOVE COATING AS REQUIRED TO MAINTAIN ELECTRICAL BOND.
5. RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, *PREPARATION FOR AND INSTALLATION*, OR PER MIL-STD-403 *PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET MISSILE, AND AIRFRAME STRUCTURES*.
6. TORQUE .3125-32 UNEF-2B NUT 100.0 ± 20.0 LBF-IN.

Figure 5-21 GTP 59 Installation (Aircraft with Metallic Skin Example)

5.11.1 GTP 59 Removal

To remove the GTP 59, perform the following procedure:

1. Remove power to the ADC/GEA. If the aircraft is equipped with a GDL 60, pull the CNXT BATT circuit breaker. Reset after all other maintenance is complete.
2. Remove the mounting nut (1) shown in Figure 5-21.
3. Remove the GTP 59 from the hole.

5.11.2 GTP 59 Re-installation

1. Place the GTP 59 in the previous installation hole.
2. Install washer (2) and nut (1) and torque to specifications in Figure 5-21.

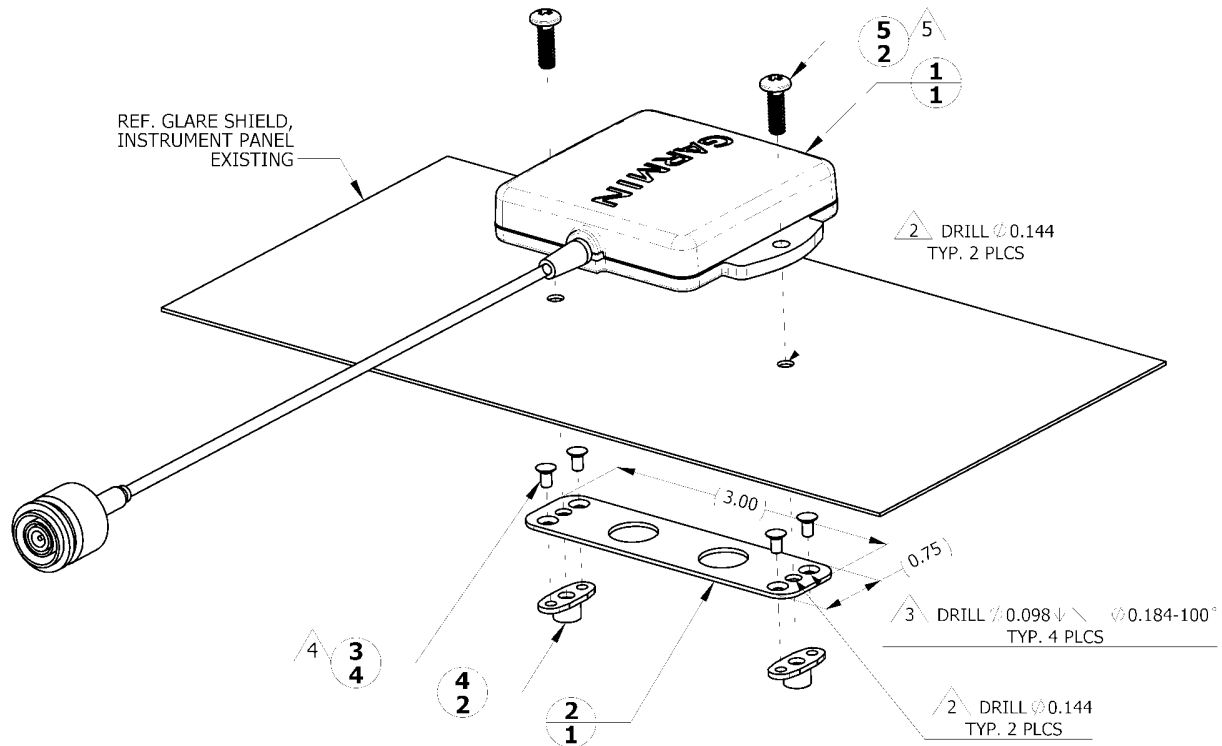
5.11.3 GTP 59 Checkout

Perform the checkout procedure in Section 6.3.2 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.12 Backup GPS Antenna

The backup GPS antenna is designed for installation on top of an existing instrument panel glare shield. The selected location must offer good visibility of the sky through the windshield.

The optimal antenna position is horizontal or as close to horizontal as practical given the shape of the glare shield.

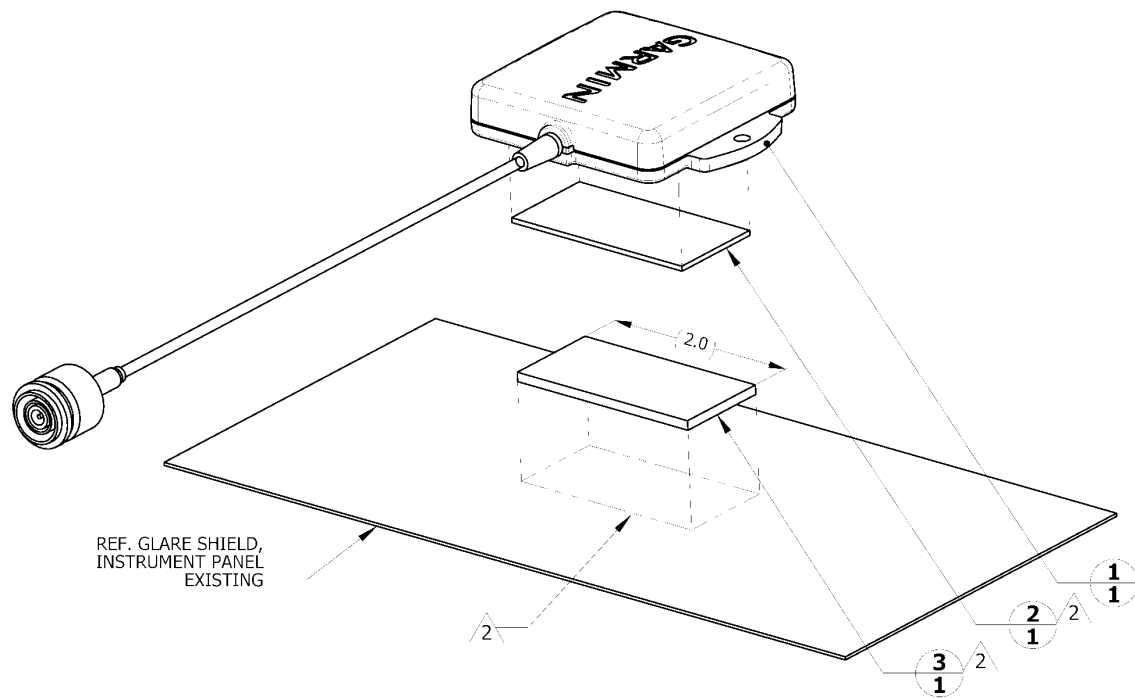


2	6	MS35214-26	SCREW, MACHINE, PAN-HEAD, CROSS RECESSED, BLACK OXIDE FINISH .1380- 32 UNC-2A, 0.438 IN LONG
		MS35206-229	SCREW, MACHINE, PAN HEAD, CROSS RECESSED, CAD PLATED .1380- 32 UNC-2A, 0.438 IN LONG
2	4	MS21069L06	NUT, SELF-LOCKING, PLATE, TWO-LUG, REDUCED RIVET SPACING, LOW HEIGHT, STEEL .138-32 UNJC-3B
4	3	MS20426AD3-3	RIVET, SOLID, COUNTERSUNK 100 DEG, PRECISION HEAD, 3/32 IN OD, 3/16 IN LONG
1	2	PLATE DETAIL	SHEET, 6061-T6 AL, 0.040 INCH THICK PER AMS 4025, AMS 4027, AMS-QQ-A-250/11
1	1	011-04036-00	BACKUP GPS ANTENNA, GDU 7XX
QTY	ITEM	PART NUMBER	DESCRIPTION

NOTES

- DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
- FASTENER HOLES ARE LOCATED TO MATCH BACKUP GPS ANTENNA ITEM 1.
- FASTENER HOLES ARE LOCATED TO MATCH NUTPLATE ITEM 4.
- RIVETS ARE INSTALLED PER MIL-R-47196 (NASM47196) RIVET, BUCK TYPE, *PREPARATION FOR AND INSTALLATION*, OR PER MIL-STD-403 *PREPARATION FOR AND INSTALLATION OF RIVETS AND SCREWS, ROCKET MISSILE, AND AIRFRAME STRUCTURES*.
- USE FASTENER WITH BLACK OXIDE FINISH IF ANTENNA LOCATION IS SUCH THAT FASTENERS ARE VISIBLE TO THE PILOT OR COPILOT AND MIGHT BECOME A SOURCE OF ACCIDENTAL GLARE. TORQUE .1380-32 UNC-2A SCREWS HAND TIGHT.

Figure 5-22 Backup GPS Antenna Installation (Non-removable Installation Example)



1	3	A-A-55126	FASTENER TAPE, SYNTHETIC, ADHESIVE BACKED, A-A-55126 CLASS 1/2, TYPE 1, LOOP 1.0 INCH WIDE
	2		FASTENER TAPE, SYNTHETIC, ADHESIVE BACKED, A-A-55126 CLASS 1/2, TYPE 1, HOOK 1.0 INCH WIDE
1	1	011-04036-00	BACKUP GPS ANTENNA, GDU 7XX
QTY	ITEM	PART NUMBER	DESCRIPTION

NOTES

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. PEEL OFF ADHESIVE PROTECTING FILM AND PRESS THE FASTENER TAPE IN TO BOND. SURFACES MUST BE CLEAN AND FREE FROM OIL OR OTHER CONTAMINANTS. LOOP FASTENER IS BONDED TO GLARE SHIELD AND HOOK FASTENER IS BONDED TO ANTENNA. TAPE FASTENER MUST BE 2.0 INCHES OR LONGER.
3. GPS ANTENNA KIT, GARMIN PART NO. 010-12444-00 INCLUDES DUAL LOCK FASTENER, GARMIN PART NO.252-00433-00 WHICH CAN BE USED INTERCHANGABLY WITH A-A-55126 FASTENER TAPE.

Figure 5-23 Backup GPS Antenna Installation (Removable Installation Example)

5.12.1 Backup GPS Antenna Removal

Use the following procedure to remove the backup GPS antenna:

1. Power off the GDU connected to the backup battery antenna. If the aircraft is equipped with a GDL 60, pull the CNXT BATT circuit breaker. Reset after all other maintenance is complete.
2. Remove the two screws (6) securing the antenna (if installed per Figure 5-22 only).
3. Lift up on the backup GPS antenna to remove it.
4. Disconnect the connector from the GDU (if necessary, remove the GDU per Section 5.1.1).

5.12.2 Backup GPS Antenna Re-installation

Install the backup GPS antenna in the reverse order of the removal procedure.

5.12.3 Backup GPS Antenna Checkout

Perform the backup GPS checkout procedure as described in Section 6.3.6 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.13 EIS Sensors

In addition to the data in this manual, replacement or re-installation of each probe/sensor and wire must be accomplished in accordance with the sensor manufacturer instructions or as recommended by the engine manufacturer. Wire routing and clamping must follow procedures defined in the aircraft maintenance manual, standard practices manual, or practices defined in Chapter 11, *Electrical Systems*, of advisory circular AC 43.13-1B, *Aircraft Inspection and Repair*.

Sensors must be connected using hoses and fittings approved as part of aircraft or engine type certificated design or standard aircraft parts (AN/MS).

After removing or replacing any EIS sensor, perform any applicable calibration(s) in Section 5.15 of this manual and then perform the EIS ground checkout procedure for the specific sensor that was affected in Section 6.5 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).



CAUTION

Check hose routing for sharp bends. Check sensors and fittings for leaks during engine run-up and correct prior to flight.

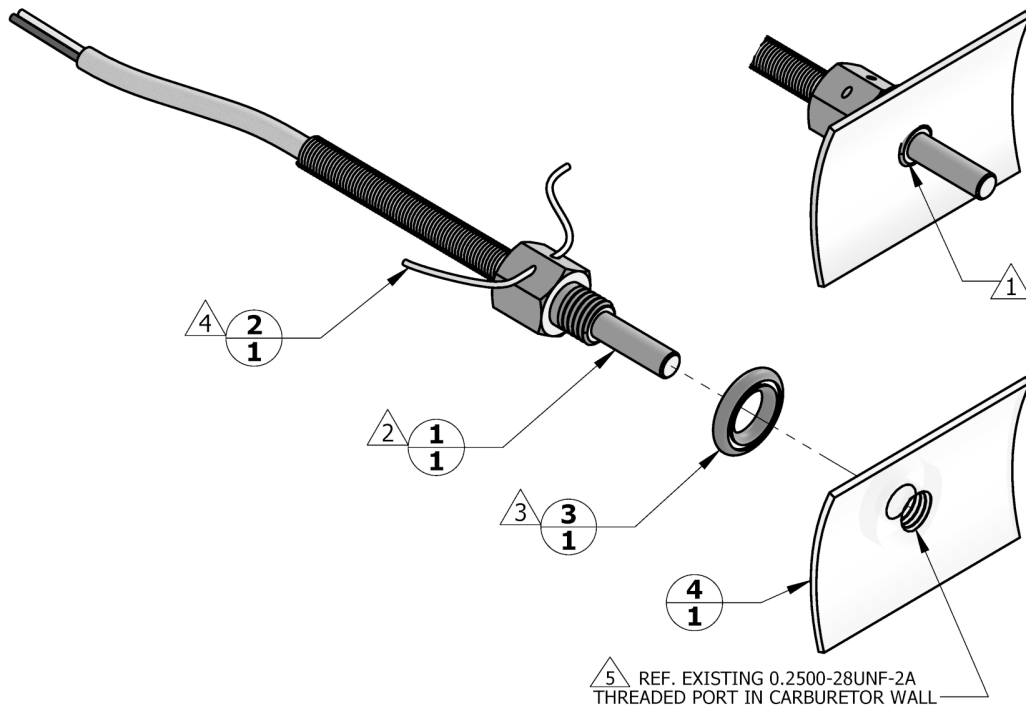


CAUTION

If the aircraft is equipped with a GDL 60, pull the CNXT BATT circuit breaker. Reset after all other maintenance is complete.

5.13.1 Carburetor/Induction Air Temperature

The sensor location will vary for different carburetors. Refer to the engine or carburetor manufacturer data for temperature sensor location, if required.



1	4		CARBURETOR, EXISTING
1	3	MS35769-2	GASKET, METALLIC, ENCASED, ANNULAR, COPPER, Ø1/4 ID×Ø1/2 OD
1	2	MS20995	WIRE, SAFETY OR LOCK
1	1	T3B10-SG	PROBE, CARBURETOR TEMPERATURE
QTY	ITEM	PART NUMBER	DESCRIPTION

NOTES

- 1 WHEN INSTALLED, FACE OF THE SENSOR THREADED BOSS IS FLUSH WITH THE INSIDE OF CARBURETOR BARREL. USE WASHER(S) IF REQUIRED TO SPACE THE SENSOR ACCORDINGLY.
- 2 T3B10-SG TEMPERATURE SENSOR HAS 0.2500-28UNF-2A THREAD. INSTALL WITH MEDIUM STRENGTH THREADLOCKER. EXERCISE CAUTION TO PREVENT FUEL CONTAMINATION.
- 3 SPLIT FACE OF THE GASKET FACES NON-ROTATING SURFACE.
- 4 SAFETY WIRE PROBE IN ACCORDANCE WITH MS33540 *SAFETY WIRING AND COTTER PINNING*.
- 5 SENSOR INSTALLATION IN EXISTING CARBURETOR PORT ONLY. ADDITION OF NEW TAPPED HOLES TO CARBURETOR BARREL NOT ALLOWED.

Figure 5-24 Carburetor Temperature Sensor Installation Example



CAUTION

Fuel and air passages must remain free of contaminants during work near and around the carburetor.

5.13.2 Oil Temperature Sensor

When installing the oil temperature sensor, the unbroken side of the crush washer must face the sensor flange. The sensor is torqued finger tight plus one-half turn and safety wired in accordance with practices defined in Section 7, *Safetying*, of Chapter 7, *Aircraft Hardware, Control Cables and Turnbuckles*, of advisory circular AC 43.13-1B, *Aircraft Inspection and Repair*.



Figure 5-25 Oil Temperature Sensor Installation Example

5.13.3 Pressure and Torque Sensors

Torque, manifold pressure, oil pressure, de-ice boot pressure, and fuel pressure sensor installations are similar. Garmin pressure sensors with a brass housing are limited to aircraft with operational ceilings up to 32,000 feet. Garmin pressure sensors with a stainless steel housing may be used on all aircraft on the AML.

When replacing existing sensors:

- Do not remove engine and fuel fittings with an intentionally reduced orifice. It may limit fluid loss and fire damage in the event of a hose failure
- Replacement of the existing de-ice boot pressure sensors is limited to sensors used for indication only. Sensors controlling system operation are not eligible for replacement and require the retention of the existing indicator
- Inspect the condition of all existing tubes, hoses, and fittings that are being reused; replace if necessary



NOTE

*The GPT series pressure sensors (P/N 011-05783-XX) can replace the brass sensors (P/N 011-04202-XX) of the same range. The Sensor Configuration setting in Config mode must be updated to their respective GPT part number (EIS → Sensors → **Manifold PRESS/Oil PRESS/Fuel PRESS**).*

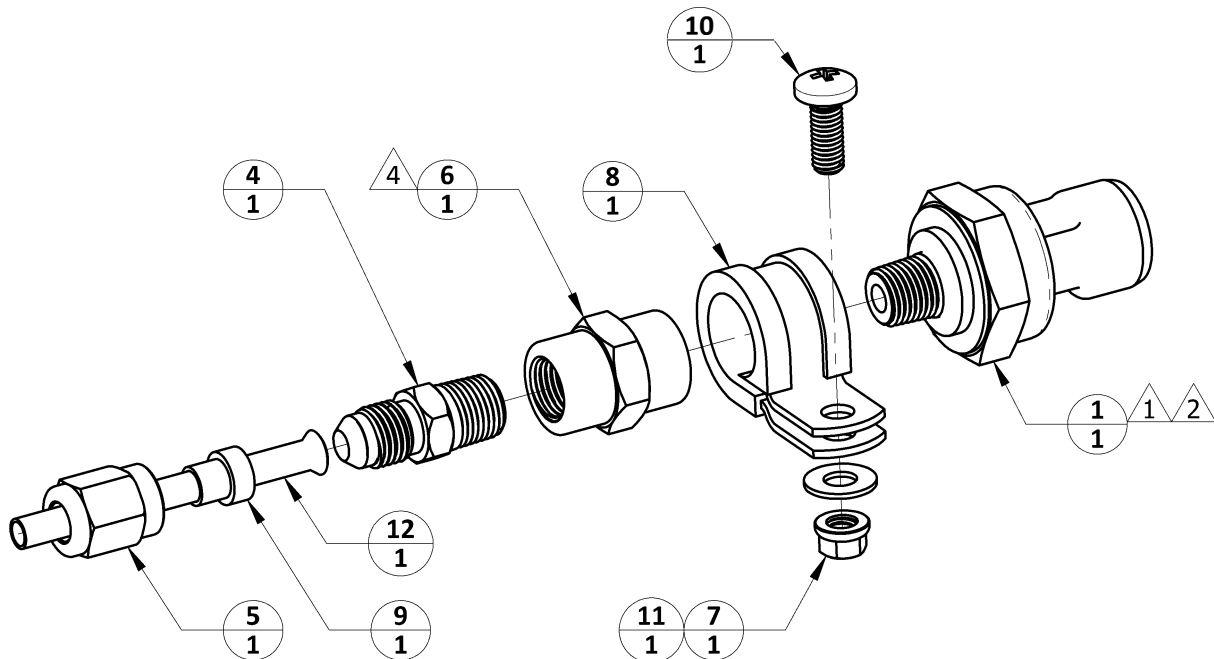
- Replacement of Oil Pressure sensor may require a re-calibration to re-zero the gauge if needed. Refer to Section 5.15.14.

When installing pressure and torque sensors:

1. Fuel and oil hoses in the engine compartment must meet TSO-C53a Type C or D (fire resistant).
2. Do not install sensors directly below fittings or components that may leak flammable fluid.
3. Thread sealant must be used for the NPT threads. To reduce the risk of system contamination, a minimal amount of sealant should be applied leaving at least two threads at the end of the fitting clear of sealant.
4. Sensors must be routed as far away from the aircraft exhaust system as practical and no closer than 6 inches.

Table 5-1 Pressure Sensor Equipment List

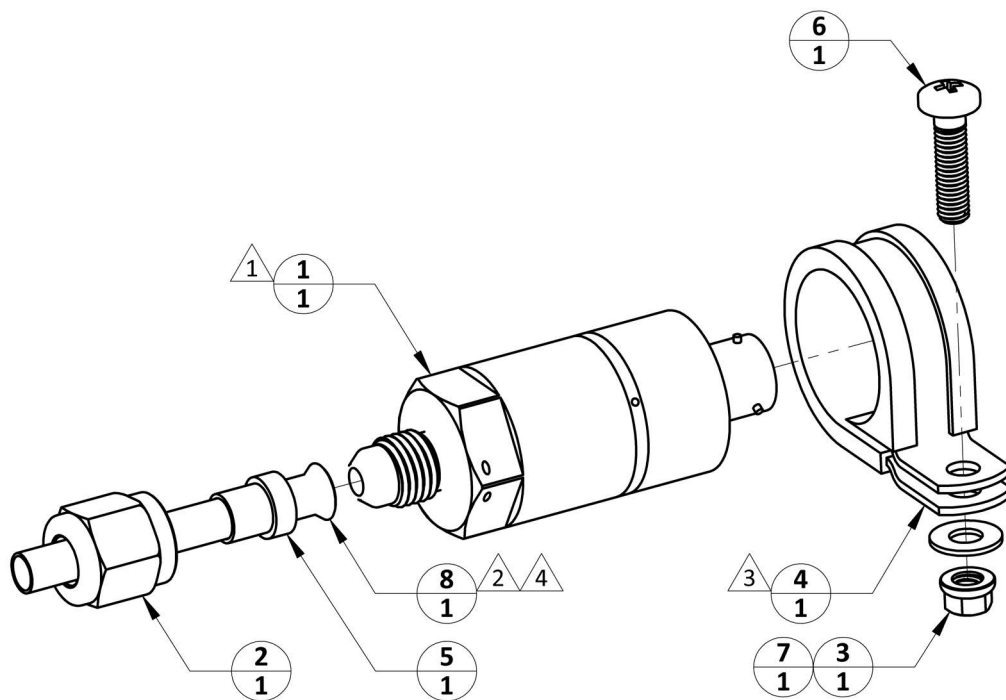
Function	Manufacturer P/N, Description	Garmin P/N	Authorization
Oil Press	Kavlico P4055-5020-4, Press (Brass)	011-04202-30 (494-30027-30)	TXi STC
	Garmin 150 PSIG, Press (GPT)	011-05783-30	
	Kulite APT-20GX-1000-150G, Press (Stainless)	494-30032-00	
Manifold Press	Kavlico P4055-5020-1, Press (Brass)	011-04202-00 (494-30027-00)	TXi STC
	Garmin 30 PSIA, Press (GPT)	011-05783-00	
	Kulite APT-20GX-1000-25PSIA, Press (Stainless)	494-30030-00	
Fuel Press	Kavlico P4055-5020-3, Press (Brass)	011-04202-20 (494-30027-20)	TXi STC
	Kavlico P4055-5020-2, Press (Brass)	011-04202-10 (494-30027-10)	
	Garmin 75 PSIG, Press (GPT)	011-05783-20	
	Garmin 15 PSIG, Press (GPT)	011-05783-10	
	APT-20GX-1000-50PSIG, Press (Stainless)	494-30031-00	
	APT-20GX-1000-15PSIG, Press (Stainless)	494-30029-00	
	Kulite APT-20GX-1000-150G, Press (Stainless)	494-30032-00	
De-ice Press	Garmin 15 PSIG Press, (Brass)	011-04202-10	TXi STC
	Garmin 15 PSIG, Press (GPT)	011-05783-10	
	Garmin 75 PSIG, Press (Brass)	011-04202-20	
	Garmin 75 PSIG, Press (GPT)	011-05783-20	
Torque	Kulite APTE-2B-2250-85D, Press (Stainless)	N/A	TXi STC



1	12		TUBE, Ø0.190 IN OD
1	11	NAS1149F0332P	WASHER, FLAT, STEEL, CAD PLATED, Ø0.203 ID, Ø0.438 OD, 0.032 INCH THICK
1	10	MS51958-63	SCREW, MACHINE, PAN HEAD, CROSS RECESSED .190-32UNF-2A, 1/2 INCH LONG
1	9	MS51533B3	SLEEVE, COMPRESSION, TUBE FITTING, 37° FLARED, Ø3/16 TUBE OD
1	8	MS21919WDG9	CLAMP, LOOP TYPE, CUSHIONED, Ø9/16 TUBE
1	7	MS21042L3	NUT, SELF-LOCKING, REDUCED HEXAGON, REDUCED HEIGHT, RING BASE .1900-32UNJF-3B
1	6	AN910-1D	COUPLING, PIPE, 1/8-27 ANPT
1	5	AN818-3	NUT, TUBE COUPLING, SHORT, Ø0.1875 TUBE OD .3750-24UNJF-3B
1	4	AN816-3	ADAPTER, STRAIGHT, PIPE TO TUBE, 1/8-27 NPT TO .3750-24 UNJF-3A
		AN822-3	ADAPTER, ELBOW 90 DEG, PIPE TO TUBE, 1/8-27 NPT TO 0.3750-24 UNJF-3A
		AN823-3	ADAPTER, ELBOW 45 DEG, PIPE TO TUBE, 1/8-27 NPT TO 0.3750-24 UNJF-3A
1	1	011-04202-XX	PRESSURE SENSOR
QTY	ITEM	PART NUMBER	DESCRIPTION

- 1 TO PREVENT FLUID ENTRAPMENT, ORIENT THE SENSOR SO IT IS NOT POINTING STRAIGHT UP.
- 2 PRESSURE SENSOR HAS 1/8-27 NPT PIPE THREAD. SEE ADDITIONAL INFORMATION IN THIS SECTION RELATED TO SENSOR LOCATION AND INSTALLATION.
- 3 TO CONNECT SENSOR TO PREVIOUSLY INSTALLED HOSE OR TUBING USE ADEQUATE STANDARD ARMY NAVY (AN) OR MILITARY SPECIFICATION (MS) FITTINGS.
- 4 AN910-1D CAN BE SUBSTITUTED BY AN910-1W.

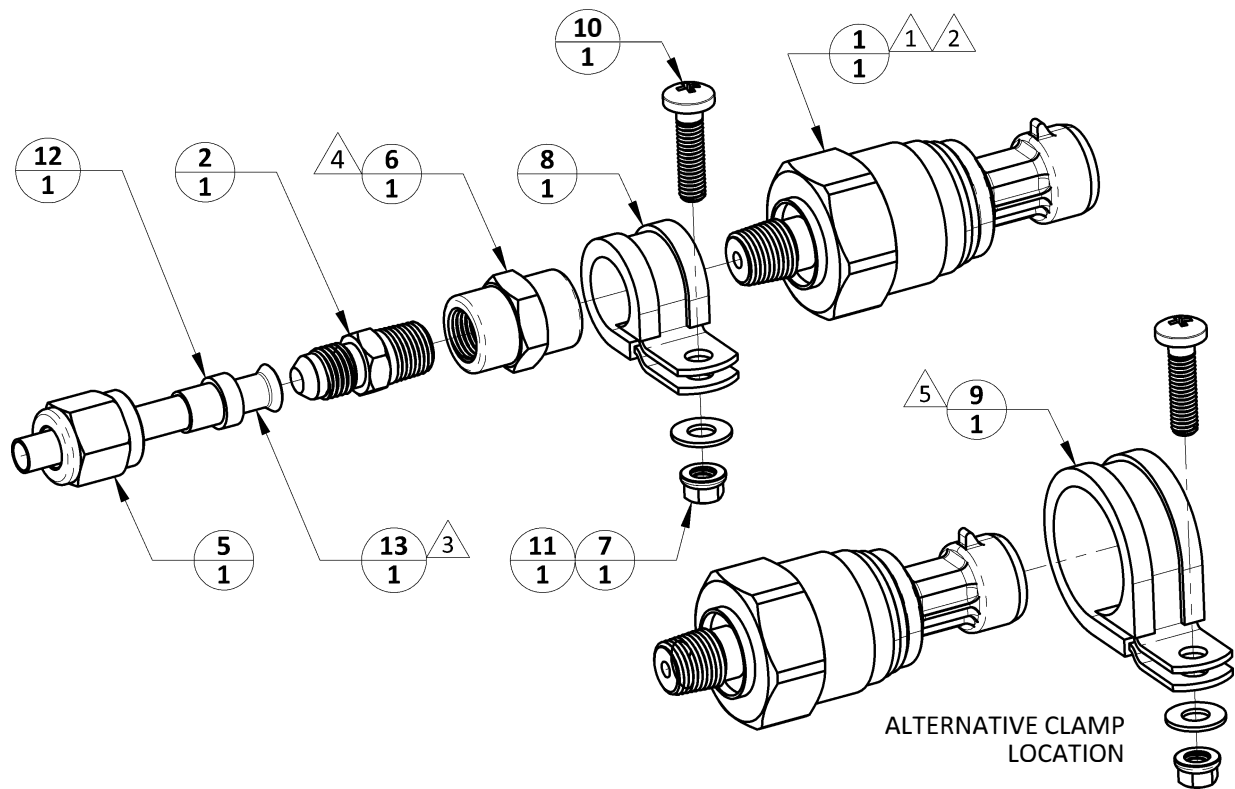
Figure 5-26 Brass Sensor Installation (Coupling Mount Example)



1	8		TUBE, Ø0.250 IN OD
1	7	NAS1149F0332P	WASHER, FLAT, STEEL, CAD PLATED, Ø0.203 ID, Ø0.438 OD, 0.032 INCH THICK
1	6	MS51958-65	SCREW, MACHINE, PAN HEAD, CROSS RECESSED .190-32UNF-2A, 3/4 INCH LONG
1	5	MS51533B4	SLEEVE, COMPRESSION, TUBE FITTING, 37° FLARED, Ø1/4 TUBE OD
1	4	MS21919WDG16	CLAMP, LOOP TYPE, CUSHIONED, Ø1.00 TUBE
1	3	MS21042L3	NUT, SELF-LOCKING, REDUCED HEXAGON, REDUCED HEIGHT, RING BASE .1900-32UNJF-3B
1	2	AN818-4	NUT, TUBE COUPLING, SHORT, Ø0.250 TUBE OD .4375-20UNJF-3B
1	1	494-30030-XX	PRESSURE TRANSDUCER, VENTED GAGE
QTY	ITEM	PART NUMBER	DESCRIPTION

- 1 TO PREVENT FLUID ENTRAPMENT ORIENT THE SENSOR SUCH THAT IS IS NOT STRAIGHT UP .
- 2 PRESSURE SENSOR HAS A STANDARD FITTING (MS33656) WITH 7/16-20UNJF-3A THREAD AND REQUIRES 37 DEGREE FLARED TUBE CONNECTION.
- 3 CLAMP THE SENSOR BODY (ITEM 1) TO MOUNT. CLAMP NOT TO BLOCK VENT HOLES IN SENSOR BODY, IF PRESENT.
- 4 TO CONNECT SENSOR TO PREVIOUSLY INSTALLED HOSE OR TUBING USE STANDARD ARMY NAVY (AN) OR MILITARY SPECIFICATION (MS) FITTINGS ADEQUATE FOR AIRCRAFT INSTALLATION.

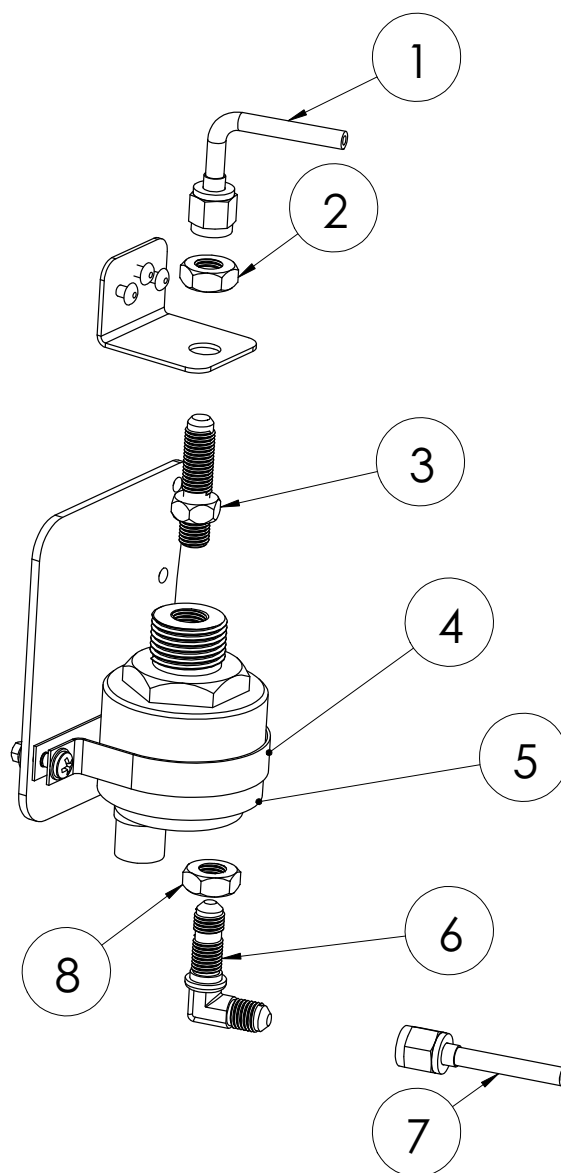
Figure 5-27 Mil-Spec Style Sensor Installation (Housing Mount Example)



1	13		TUBE, Ø0.250 IN OD
1	12	MS51533B4	SLEEVE, COMPRESSION, TUBE FITTING, 37° FLARED, Ø1/4 TUBE OD
1	11	NAS1149F0332P	WASHER, FLAT, STEEL, CAD PLATED, Ø0.203 ID, Ø0.438 OD, 0.032 INCH THICK
1	10	MS51958-65	SCREW, MACHINE, PAN HEAD, CROSS RECESSED .190-32UNF-2A, 3/4 INCH LONG
1	9	MS21919WDG16	CLAMP, LOOP TYPE, CUSHIONED, Ø1.00 TUBE
1	8	MS21919WDG9	CLAMP, LOOP TYPE, CUSHIONED, Ø9/16 TUBE
1	7	MS21042L3	NUT, SELF-LOCKING, REDUCED HEXAGON, REDUCED HEIGHT, RING BASE .1900-32UNJF-3B
1	6	AN910-1D	COUPLING, PIPE, 1/8-27 ANPT (SEE NOTE 4)
1	5	AN818-4	NUT, TUBE COUPLING, SHORT, Ø0.250 TUBE OD .4375-20UNJF-3B
1	2	AN823-3	ADAPTER, ELBOW 45 DEG, PIPE TO TUBE, 1/8-27 NPT TO 0.3750-24 UNJF-3A
		AN822-3	ADAPTER, ELBOW 90 DEG, PIPE TO TUBE, 1/8-27 NPT TO 0.3750-24 UNJF-3A
		AN816-3	ADAPTER, STRAIGHT, PIPE TO TUBE, 1/8-27 NPT TO .3750-24 UNJF-3A
1	1	011-05783-XX	PRESSURE TRANSDUCER, GPT
QTY	ITEM	PART NUMBER	DESCRIPTION

- 1 TO PREVENT FLUID ENTRAPMENT ORIENT THE SENSOR SO IT IS NOT STRAIGHT UP.
- 2 PRESSURE SENSOR HAS 1/8-27 NPT PIPE THREAD. SEE ADDITIONAL INFORMATION IN THIS SECTION RELATED TO SENSOR LOCATION AND INSTALLATION.
- 3 TO CONNECT SENSOR TO PREVIOUSLY INSTALLED HOSE OR TUBING USE ADEQUATE STANDARD ARMY NAVY (AN) OR MILITARY SPECIFICATION (MS) FITTINGS.
- 4 AN910-1D CAN BE SUBSTITUTED BY AN910-1W
- 5 ALTERNATIVE METHOD TO RETAIN THE SENSOR IS CLAMPING THE SENSOR BODY.

Figure 5-28 GPT Sensor Installation



1	8	AN6289-4	NUT, TUBE
1	7	124F003-4CR0184	HOSE (LOWER)
1	6	AN833-4	ELBOW - FLARED TUBE AND BULKHEAD UNIVERSAL, 90°
1	5	APTE-2B-2250-85D	TORQUE SENSOR
1	4	MS21919WDG36	CLAMP LOOP TYPE, CUSHIONED, SUPPORT Ø2-1/4 TUBE
1	3	AN832-4	UNION - FLARED TUBE, 3/8 BULKHEAD AND UNIVERSAL, STEEL
1	2	AN924-4	NUT, TUBE, BULKHEAD AND UNIVERSAL FITTING
1	1	124F002-4CR0124	HOSE (UPPER) WITHOUT AUTOIGNITION
		124F002-4CR0070	HOSE (UPPER) WITH AUTOIGNITION
QTY	ITEM	PART NUMBER	DESCRIPTION

Figure 5-29 APTE-2B-2250-85D Torque Transducer Installation

5.13.4 Fuel Flow

The fuel flow transducer can be mounted using the bracket or clamping hoses connected to the transducer. If mounting with clamps, the placement must be no further than 6 inches from the clamp to the nearest face of the transducer.

- The transducer can be oriented with the wires pointing up, or the cap with five bolts pointing up, or the output port pointing up, or any combination thereof
- The hose connected to the IN port must be straight for a minimum 4 inches
- The hose connected to the OUT port should be level or slope up. It must not slope down more than 4 inches per foot

Hoses and fittings connected to fuel flow transducer must meet the following:

1. New hoses must have the same internal diameter as the hose being replaced and meet TSO-C53a Type C or D (fire resistant) specifications.
2. Fuel compatible thread sealant or tape must be used for the NPT threads. To reduce the risk of fuel system contamination, a minimal amount of sealant should be applied leaving at least two threads at the end of the fitting clear of sealant/tape.
3. Fitting torque must not exceed 12 ft-lbf **or** two full turns past finger tight, whichever occurs first.
4. The transducer and fuel hoses must be routed as far away from the aircraft exhaust system as practical. The transducer must be protected with Aeroquip AE102-() fire-sleeve if within 6 inches of any exhaust component.



WARNING

Ensure the fuel flow transducer installation does not introduce thread sealant or debris into the fuel system.



CAUTION

Do not blow pressurized air through the flow transducer.

If the fuel flow transducer bracket must be replaced, the replacement bracket must be fabricated from 300 series austenitic stainless steel (annealed per AMS 5901 or ½ hard per AMS 5517), sheet thickness 19 gauge minimum (0.044 inches) and installed as provisioned by the aircraft structural repair manual or standard practices manual. Methods, techniques, and practices defined in Chapter 4, *Metal Structure, Welding and Brazing*, of advisory circular AC 43.13-1B, *Aircraft Inspection and Repair*, are acceptable.

Replacement of a Pilatus PC-12, Cessna 441, or Twin Commander fuel flow sensor requires a TXi configuration update. Each sensor has a unique compensation resistor value that must be updated in the TXi system. Refer to Section 5.15.11 (Pilatus PC-12) or Section 5.15.12 (Cessna 441).

5.14 Textron Aviation (Cessna) Model 525(A) Ballast (If Installed)

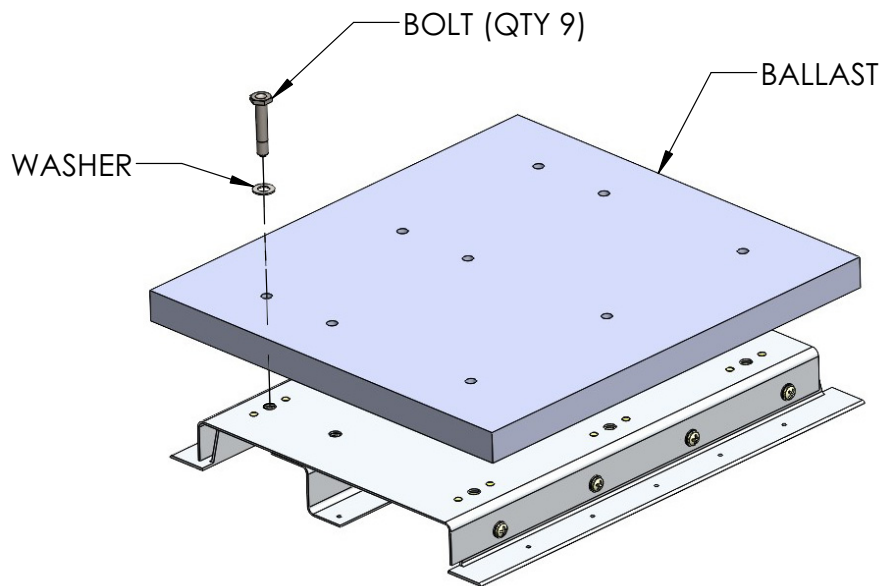


Figure 5-31 Textron Aviation (Cessna) Model 525(A) Ballast



CAUTION

Ballast is included in the empty weight of the aircraft. Removal or changes to the ballast requires an update to the aircraft weight and balance.



NOTE

Ballast weight may be added or removed in accordance with P/N 190-01717-B7 and P/N 190-01717-B9 for Textron Aviation (Cessna) Model 525A. Ballast weight may be added or removed in accordance with P/N 190-01717-BG and P/N 190-01717-BJ for Textron Aviation (Cessna) Model 525.

5.14.1 Textron Aviation (Cessna) Model 525(A) Ballast Removal

To remove ballast, perform the following procedure:

1. Place tail stand under the tailcone.
2. Open left nose baggage access door.
3. Remove bolts (qty 9) securing the ballast. Retain bolts and washers for re-installation of the ballast.
4. Remove and retain cover plate, if installed.
5. Remove and retain ballast.

5.14.2 Textron Aviation (Cessna) Model 525(A) Ballast Re-Installation

1. Re-install ballast.
2. Inspect condition of bolts that secure the ballast before installation. Replace bolts if necessary.
3. Re-install cover plate if previously installed.
4. Secure ballast.
5. Ensure a placard is installed indicating the weight of ballast installed in the aircraft. Refer to P/N 190-01717-B9 (Model 525A) or P/N 190-01717-BJ (Model 525).

5.15 Calibration

This section provides guidance for calibrating the G500/G600 TXi system if the previous calibration has become invalid.



NOTE

Most calibrations require the use of an Installer Unlock Card and must be performed by a Garmin Dealer.

5.15.1 Attitude/Heading

Attitude and heading calibration requires the use of an Installer Unlock Card. If it becomes necessary to re-calibrate any installed AHRS, refer to the calibration procedure contained in Section 5 and Section 6 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.15.2 Autopilot Calibration

Autopilot calibration requires the use of an Installer Unlock Card. If it becomes necessary to re-calibrate the autopilot, refer to the calibration procedure contained in *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.15.3 Analog NAV Calibration

Analog NAV calibration requires the use of an Installer Unlock Card. If it becomes necessary to re-calibrate the Analog NAV, refer to the calibration procedure contained in *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.15.4 Fuel Level Calibration

Fuel level calibration requires the use of an Installer Unlock Card. If it becomes necessary to re-calibrate the fuel level, refer to the calibration procedure contained in *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.15.5 Backup Battery Check

This procedure will analyze the voltage and discharge qualities of the installed backup battery. The procedure is required to be completed on initial installation and every 12 calendar months when a backup battery is installed in the system. A yellow “X” will be displayed over the battery level indicator and a fault indication message will be displayed in Normal mode until this procedure is completed. Except for the purposes of fully charging the battery, this test should be completed without ground power applied.



NOTE

The battery rundown test may take up to 60 minutes to complete. The battery rundown test date is reported in UTC.

To complete the backup battery test, complete the following steps:

1. Power GDU 700P in Configuration mode and touch **Calibration/Test** → **Backup Battery Test**.
2. Verify that the Backup Battery status icon is green.
3. Verify that the battery state is not “Discharging” annunciated under Battery State.
4. Complete the on-screen Before Test instructions. Once all checklist items have a green check mark, the **Start** selection will become active.
5. Select **Start** and follow the on-screen commands.
6. The GDU 700P will power off automatically when the test is complete.
7. Power on the unit in Configuration mode, navigate to the **Backup Battery Status** page (**Diagnostics** → **Backup Battery Status**), and verify that the rundown test duration is reported as 30 minutes or more and that a red “Test Failed” indication is not present.

5.15.6 External Systems (Weather Radar) Calibration

Weather radar calibration requires the use of an Installer Unlock Card. If it becomes necessary to re-calibrate the weather radar, refer to the calibration procedure contained in *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.15.7 Shunt Calibration

Shunt calibration requires the use of an Installer Unlock Card. If it becomes necessary to re-calibrate (re-zero) a shunt, refer to the configuration/calibration procedure contained in *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.15.8 Manifold Pressure Calibration

Manifold pressure calibration requires the use of an Installer Unlock Card. If it becomes necessary to re-calibrate the manifold pressure sensor, refer to the configuration/calibration procedure contained in *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.15.9 Torque Sensor Calibration

Torque sensor calibration requires the use of an Installer Unlock Card. If it becomes necessary to re-calibrate a torque sensor, refer to the configuration/calibration procedure contained in *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

Torque sensors on aircraft with TPE-331 engines are adjusted based on the engine's DSC using the TXi indicator.

Perform the torque sensor calibration in *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3) if any of the following is true:

- The TPE-331 engine is replaced.
- The TPE-331 torque transducer is replaced.
- The Cessna 441, Twin Commander, or Mitsubishi MU-2B-40/-60 torque indicator is replaced with TXi EIS.

Refer to Appendix D of *G500/G600 TXi Part 23 AML STC Installation Manual* for model-specific torque calibration.

5.15.10 Rudder Trim Gauge Calibration

Rudder trim gauge calibration requires the use of an Installer Unlock Card. If it becomes necessary to re-calibrate the rudder trim gauge, refer to the configuration/calibration procedure contained in *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.15.11 Fuel Flow (Pilatus PC-12 Only)

If replacing the fuel flow transducer on Pilatus PC-12 aircraft, perform the Fuel Flow K Factor Calculation Procedure listed in Section 5.4.1.1 of *G500/G600 TXi Part 23 AML STC Installation Manual Addendum Pilatus PC-12* (P/N 190-01717-B5).

5.15.12 Fuel Flow (Cessna 441 Only)

If replacing the fuel flow transducer on Cessna 441 aircraft, perform the Fuel Flow K-Factor Determination configuration instructions listed in Section 5.7.2.3 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.15.13 Fuel Flow (Twin Commander Only)

If replacing the fuel flow transducer on Twin Commander aircraft, perform the Fuel Flow K-Factor Determination configuration instructions listed in Section 5.7.2.3 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.15.14 Oil Pressure Calibration

Oil pressure calibration requires the use of an Installer Unlock card. If 4 psi or less is shown without oil pressure, the configuration/calibration procedure contained in *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3) may be optionally performed to eliminate small errors. If the indication is higher, it may indicate an incorrect sensor selection, sensor malfunction, or the presence of actual oil pressure. Resolve the discrepancy before proceeding with calibration.

5.16 Uploading Software

The **Software Upload** page is used to update the software for the GDU and any LRUs directly interfaced to the GDU. The approved software version and part numbers can be found in the most recent revision of *G500/G600 TXi Part 23 AML STC Equipment List* (P/N 005-00795-D1).

5.16.1 Updating Software for Units with Software v3.80 or Later

Software updates must be accomplished using the following procedure:

1. Create a Software Update SD card using approved software and instructions available on the [Dealer Resource Center](#).



NOTE

All software updates must be contained in a region file named "file.rgn" on the root directory of the Software Update SD card.

2. Insert a Software Update SD card into the top/left slot of the GDU.
3. Power on the display in Configuration mode.
4. Navigate to **Updates / System Info** → **Software Upload**.
5. Select the LRUs to upload software to from the list of available LRUs.



NOTE

Only LRUs that are configured in the system and currently online will be selectable for software updates.

6. Select the **Update** button.
7. Follow the on-screen display instructions.
8. Once complete, save the configuration per Section 2.1.6.

5.16.2 Updating Software to v3.80 or Later for Units with Software Prior to v3.80

When updating a GDU with a current software version prior to 3.80 to software v3.80 or later, the software updates must be accomplished using the following procedure:

1. Create a Software Loader card using approved software and instructions available on the [Dealer Resource Center](#).



NOTE

All software updates must be contained in a region file named "file.rgn" on the root directory of the Software Update SD card.

2. Insert a Software Loader card into the top/left slot of the GDU.
3. Power on the display in Configuration mode.
4. Follow the on-screen prompts to update the configuration module format. Once complete, restart the GDU in Configuration mode.
5. Navigate to **Updates / System Info** → **Software Upload**.
6. Select the LRUs to upload software to from the list of available LRUs.



NOTE

Only LRUs that are configured in the system and currently online will be selectable for software updates.

7. Select the **Update** button.
8. Follow the on-screen display instructions.
9. Once complete, save the configuration per Section 2.1.6.

5.16.3 Downgrading to Software Prior to v3.80 for Units with Software v3.80 or Later

When downgrading a GDU with current software v3.80 or later to a software version prior to v3.80, the software updates must be accomplished using the following procedure:

1. Create a Software Update SD card using approved software and instructions available on the [Dealer Resource Center](#).



NOTE

All software updates must be contained in a region file named "file.rgn" on the root directory of the Software Update SD card.

2. Insert a Software Update SD card with the older software into the top/left slot of the GDU.
3. Power on the display in Configuration mode.
4. Navigate to **Updates / System Info** → **Software Upload**.
5. Select the LRUs to upload software to from the list of available LRUs.



NOTE

Only LRUs that are configured in the system and currently online will be selectable for software updates.

6. Select the **Update** button.
7. Follow the on-screen display instructions.
8. Once complete, save the configuration per Section 2.1.6.

5.17 System Checks

Periodic system checks that do not require a Garmin dealer to perform are contained in this section. For complete system checkout procedures, see Section 6 of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

5.17.1 Configuration Ground Check

The configuration ground check procedures are intended to verify that each LRU and interface in the G500/G600 TXi system has been properly configured. Steps not applicable to a particular installation may be skipped.



NOTE

Throughout the configuration ground check section, references are made to particular functions and screens. If a function or screen is not available, ensure that the system has been configured correctly.

The configuration ground checks must be performed on every GDU. Before starting the configuration mode checkout, the following conditions must be met:

1. All GDUs in the system must be powered on in Configuration mode.
2. All system LRUs must be powered on.
3. All installed LRUs must be configured per the printed configuration log contained in Appendix A.

5.17.1.1 LRU Status check

The **Home** page in the Configuration mode of the GDU shows **Devices Online** that reports the status of installed LRUs. The icon next to each LRU reports one of three colors to indicate the status of each LRU, as described in Table 5-2. Verify that all LRUs connected or configured to each display have a green indicator.

Table 5-2 LRU Status Indicators

Status Color	LRU Condition
Green	The LRU is online. No faults are detected.
Red	The LRU is online. A fault, warning, and/or error is detected.
Black	The LRU is not online.

5.17.1.2 System Summary

The **Home** page in Configuration mode of the GDU contains a **Summary** button that provides information for each configured LRU as part of the G500/G600 TXi system.

1. Open the system summary (**Home** → **Summary**).
2. Verify that all configuration settings listed are consistent with the printed configuration log.
3. Verify that if any LRU sections have a yellow warning triangle present the configuration is valid.

5.17.1.3 Capturing and Saving Screen Shots

Screen shots can be captured and saved to an SD card on any GDU in Normal or Configuration mode.

1. Insert an SD card into either slot on the GDU.
2. Navigate to the desired screen.
3. Do the following:
 - a. **GDU 700/1060:** Hold down the right inner knob and momentarily press the **Power** button.
 - b. **GDU 1060/1210:** Hold down both inner knobs.
4. A small camera icon will appear on the annunciator bar when in Normal mode, or the upper-left corner when in Configuration mode, indicating an image has been captured.
5. Remove the SD card after all desired images have been captured.
6. Images will be saved to a **\print** file on the SD card.

5.17.2 Pitot-Static and Airspeed Tape Settings Checks

The following section verifies the correct operation of the GDU altitude and airspeed tapes, standby altimeter, and standby airspeed indicator using a pitot-static test set. When using a pitot-static test set, only simulate normal aircraft operating conditions as defined in the aircraft Type Data (POH/AFM) or other approved STC to avoid component damage.



NOTE

The ADC may require a warm-up period of 15 minutes to reach full accuracy; however, 30 minutes may be required if the environmental temperature is below 0° C.

The GDU airspeed tape display and settings must be verified using the procedures in Section 5.17.2.1 or Section 5.17.2.2 depending on the airspeed tape configuration (Basic or Advanced, respectively). The airspeeds referenced in the following steps must match those shown in the printed configuration log.

5.17.2.1 Basic Airspeed Tape Setting

If the airspeed Configuration Type is set to *Basic*, verify correct operation of the ADC as follows:

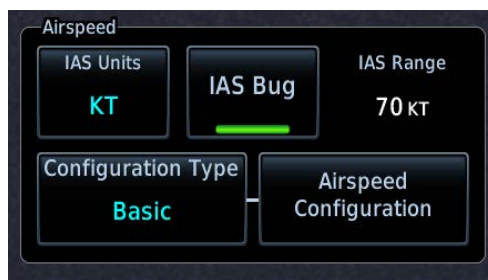


Figure 5-32 Airspeed Configuration Type

1. Verify the TXi system is in Normal mode.
2. Verify all self-tests pass on the main start-up screen.



NOTE

If the ADC and standby airspeed indicator are on separate pitot-static systems, it is recommended to set up the test set so that both systems can be tested at the same time, or separate tests must be completed for each system.

3. Using a pitot-static test set, increase the airspeed until the PFD airspeed tape pointer is at the bottom of the white band (Vs0).
4. Verify that the bottom of the white arc/band on the standby ASI and PFD airspeed tape are at the same airspeed value.
5. **For twin-engine aircraft with a minimum control speed:** Increase the airspeed to the lower red radial (Vmca). Verify that the red radial on the standby ASI and PFD airspeed tape are at the same airspeed value.
6. Change the airspeed until the PFD airspeed tape pointer is at the bottom of the green band (Vs1).
7. Verify that the bottom of the green arc/band on the standby ASI and PFD airspeed tape are at the same airspeed value.
8. **For twin-engine aircraft only:** Increase the airspeed to the blue radial (Vyse). Verify that the blue radial on the standby ASI and PFD airspeed tape are at the same airspeed value.
9. Change the airspeed until the PFD airspeed tape pointer is at the top of the white band (Vfe).
10. Verify that the top of the white arc/band on the standby ASI and PFD airspeed tape are at the same airspeed value.
11. Change the airspeed until the PFD airspeed tape pointer is at the top of the green band/bottom of the yellow band (Vno).
12. Verify that the top of the green arc/band on the standby ASI and PFD airspeed tape are at the same airspeed value.
13. Increase the airspeed to the upper red radial/top of yellow arc (Vne).
14. Verify that the red radial on the standby ASI and PFD airspeed tape are at the same airspeed value.
15. Starting at the current airspeed, decrease the airspeed to zero, stopping at each of the airspeeds listed in Table 5-3 (airspeeds above Vne should not be checked), verifying that the PFD and standby ASI airspeed values are within the tolerances indicated in Table 5-3.

Table 5-3 Airspeed Test Points

Test Set Airspeed (kt)	PFD Allowed Tolerance (kt)	Recommended Standby ASI Tolerance (kt) [1]
50	±5.0	±5
80	±3.5	±4
100	±2.0	±3
120	±2.0	±3
150	±2.0	±3
180	±2.0	±5
210	±2.0	±5
250	±2.0	±5
290	±3.0	±6

Notes:

- [1] If available, the aircraft or instrument manufacturer's data should be referenced for standby tolerances.

5.17.2.2 Advanced Airspeed Tape Setting

If the Configuration Type is set to *Advanced*, verify correct operation of the ADC as follows:

1. Verify the TXi system is in Normal mode.
2. Verify all self-tests pass on the main start-up screen.



NOTE

For Textron Aviation (Cessna) Model 525 aircraft, verify the airspeed tape is configured in accordance with G500/G600 TXi Part 23 AML STC Installation Manual Addendum, Textron Aviation Inc. (Cessna), Model 525, SN 525-0360 Thru -0599 (P/N 190-01717-BG). Then, conduct Step 7 only using a pitot-static test set.



NOTE

For Textron Aviation (Cessna) Model 525A aircraft, verify the airspeed tape is configured in accordance with G500/G600 TXi Part 23 AML STC Installation Manual Addendum, Textron Aviation Inc. (Cessna), Model 525A, S/N 525A-0001 Thru -0299 (P/N 190-01717-B7). Then, conduct Step 7 only using a pitot-static test set.



NOTE

If the ADC and standby airspeed indicator are on separate pitot-static systems, it is recommended to set up the test set so that both systems can be tested at the same time, or separate tests must be completed for each system.

3. Using a pitot-static test set, increase the airspeed until the PFD airspeed tape pointer is at the bottom of the white band (Vs0).
4. Verify that the bottom of the white arc/band on the standby ASI and PFD airspeed tape are at the same airspeed value.
5. Increase the IAS throughout the range of the ASI – stop at the limits of all Arc Ranges, and at all Marking values configured per the instructions in Table 5-4 and Table 5-5 and listed in the printed configuration log.
6. Verify that the ranges and markings on the standby ASI and PFD are located at the same airspeed values. The last value verified should be the beginning of the barber pole (Vne/Vmo/Mmo).
7. The following applies to Variable Vne/Vmo/Mmo aircraft only:
 - a. Decrease the IAS to 25 kt below the barber pole on the PFD. Increase the indicated altitude to the maximum operating altitude or service ceiling. Verify that the barber pole on the PFD and standby ASI are at the same airspeed (± 5 kt). Decrease the airspeed as needed to ensure the IAS does not exceed the barber pole during the simulated climb.
 - b. Decrease the indicated altitude (do not exceed vertical speed limitations) back to ambient static pressure.
8. Starting at the current airspeed, decrease the airspeed to zero, stopping at all of the relevant airspeeds listed in Table 5-3 (airspeeds above Vne should not be checked). Verify that the PFD and standby ASI values are within the tolerances indicated.

Table 5-4 Advanced Airframe Specific Configuration Data – Arc Ranges

Arc Color	Description	POH/AFM Section	Notes
RED (LOW SPEED)	Low speed awareness	2 - Limitations	If the aircraft has a defined WHITE or GREEN arc, set the RED arc to <i>ON</i>. Set the MAX value of the RED arc to the lowest value of the WHITE or GREEN arc (Vs0). A RED low-speed awareness arc will appear below the lowest marked stall speed. If the aircraft does not have defined white or green arc, set the red arc to <i>OFF</i>, and enter the lowest stall speed in the STALL SPEED setting at the bottom of the page.
WHITE	Full flap operational range	2 - Limitations	Set the Min value to the bottom of the POH/AFM defined range. If WHITE and GREEN arcs overlap, set the Max value to the beginning of the WHITE/GREEN arc. If WHITE and GREEN arcs do not overlap, set the Max value to the top of the POH/AFM or aircraft specification defined range. If a WHITE arc is not defined by the AFM/POH or aircraft specifications, set both the Min and Max values to the aircraft stall speed in the landing configuration (Vs0). This setting will not display a white arc, but the system needs it to characterize aircraft performance.
HALF WHITE	Standard operational range	2 - Limitations	If the HALF WHITE arc range is not defined by the AFM/POH or aircraft specification, set to <i>OFF</i>. This may sometimes be called a “narrow WHITE arc.”
WHITE/ GREEN	Overlap between standard operational and flaps operational ranges	2 - Limitations	If a WHITE/GREEN arc is not defined by the AFM/POH or aircraft specification, set to <i>OFF</i>. If WHITE and GREEN arcs overlap, configure to the range they overlap within.
GREEN	Standard operational range	2 - Limitations	If the GREEN arc is not defined by the AFM/POH or aircraft specification, set to <i>OFF</i>. If WHITE and GREEN arcs overlap, set Min value to the Max of WHITE/GREEN. If the YELLOW arc is defined, set to the Min of the YELLOW arc (Vno). If the YELLOW arc is not defined, set Max value to Vno/Vne.

Arc Color	Description	POH/AFM Section	Notes
YELLOW	Caution / smooth air operational range	2 - Limitations	If the YELLOW arc is defined as Fixed by the AFM/POH or aircraft specification, set to <i>Fixed</i> with Min value equal to Maximum structural speed (Vno). Max value should be configured to Vne, or the highest value of Vne if variable. If variable with altitude, set to <i>Variable</i> and set speeds in accordance with AFM/POH or aircraft specifications. If the YELLOW arc is not defined, set to <i>OFF</i> .
Vne/Vmo/ Mmo	Never exceed speed/ max operating speed/ max operating mach number	2 - Limitations	If defined as a fixed value, set to <i>Fixed</i> , and enter POH/AFM defined Vne/Vmo as the Min value. If variable with altitude, set to <i>Variable</i> , and set overspeeds in accordance with Appendix Section E.5 in <i>G500/G600 TXi Part 23 AML STC Installation Manual</i> .

Table 5-5 Advanced Airframe Specific Configuration Data – Markings

Marking	Description	POH/AFM Section	Note
WHITE TRIANGLE	A small white triangle – meaning varies by airframe	2 - Limitations	If defined in POH/AFM, set to given value. Else, set to <i>OFF</i> .
RED BAR	Typically marks the minimum controllable airspeed for twin-engine aircraft with only one engine operational (Vmca)	3 - Emergency Procedures	Lower red radial on ASI of light twins. Set to <i>OFF</i> for single-engine aircraft.
BLUE BAR	Typically marks the single engine best rate-of-climb speed for a twin-engine aircraft	3 - Emergency Procedures	Blue radial on ASI of light twins. Set to <i>OFF</i> for single-engine aircraft.
RED/WHITE BAR	Varies – sometimes used as a fixed point Vne marking	2 - Limitations	If a fixed RED/WHITE bar, (not a barber pole) is shown in the POH/AFM, set to given value. Else, set to <i>OFF</i> .
Vle	Maximum landing gear extended speed	2 - Limitations	Set to <i>OFF</i> for fixed gear aircraft.

5.17.2.3 Altimeter Check

The GDU and standby altitude displays must be verified per Title 14 of the CFR 91.411 and Part 43 Appendix E, with the following exception to 14 CFR Part 43 Appendix E, paragraph (b)(1):

- The tests of sub-paragraphs (iv) (Friction) and (vi) (Barometric Scale Error) are not applicable to the GDU due to the ADC interface and instrument display being digital



NOTE

For Socata TBM 700/850 aircraft approved or seeking approval for operations in RVSM airspace, refer to Section 5.17.3 for altimeter check procedures.



NOTE

For Textron Aviation (Cessna) Model 525 aircraft approved or seeking approval for operations in RVSM airspace, refer to Procedures for Reduced Vertical Separation Minimum Initial and Continued Airworthiness in G600 TXi Equipped Textron Aviation Model 525 Aircraft, S/N 525-0360 Thru -0599 Except -0473 (P/N 190-01717-BN) for altimeter check procedures.

For Textron Aviation (Cessna) Model 525 aircraft not approved or not seeking approval for operations in RVSM airspace, refer to Appendix B for altimeter check procedures.



NOTE

For Textron Aviation (Cessna) Model 525A aircraft approved or seeking approval for operations in RVSM airspace, refer to G600 TXi Part 23 AML STC Maintenance Manual Addendum, RVSM, Textron Aviation Inc. (Cessna), Model 525A, S/N 525A-0001 Thru - 0299 (P/N 190-01717-BE) for altimeter check procedures.

For Textron Aviation (Cessna) Model 525A aircraft not approved or not seeking approval for operations in RVSM airspace, refer to Appendix B for altimeter check procedures.

5.17.3 RVSM System Checkouts (Socata TBM 700/850 only)

Pitot-static system #1, pitot-static system #2, and calibration of the AM-250 must meet the criteria in the following sections. The air data tests and surface checks are required within the previous 24 months.

5.17.3.1 Air Data Test

The air data systems must be tested and maintained in accordance with the *Socata Maintenance Manual*, except as follows.

The following altimeter checks must be used in lieu of *Socata Maintenance Manual* 34-11-00, Table 503, and Section 5.17.2.3, with the following exceptions:

- For paragraph (b)(1)(i) Scale Error, use of Table 5-6 instead of 14 CFR 43, Appendix E, Table I
- Do not perform paragraph (b)(1)(iv), *Friction*
- Do not perform paragraph (b)(1)(vi), *Barometric Scale Error*

The following Air Data and Altitude Alerter Tests are to be performed in conjunction with any other regulated tests. The Air Data test must be performed on both pilot and co-pilot systems with a calibrated pitot-static test set with a combined accuracy/repeatability specification of less than ± 20 feet for the test altitude range.



NOTE

The standby altimeter is connected to the co-pilot side static system and it is not SSEC corrected.

1. Connect the pitot-static tester to the aircraft left and right pitot and static ports in accordance with *Socata Maintenance Manual* Section 34-11-00.
2. Perform a pitot-static system leak check of each system as described in *Socata Maintenance Manual* Section 34-11-00.
3. File the results with the aircraft maintenance records.
4. Verify that the altimeter baro-setting is 29.92 in Hg (1013.25 millibar) on both sides.
5. Verify the Altitude Alerter annunciation and alert tones at test level of 29,000 feet during the Air Data Test.
 - a. To set the altitude alerter to the current altitude, navigate to the ALT menu and press the inner PFD knob.
6. Simulate the altitudes and airspeeds for each condition shown in Table 5-6.
7. Record the altitude displayed on the GDU and AM-250 for each condition on Table 5-6.
8. Verify that the indicated altitudes are within allowable tolerances.
9. File the results with the aircraft maintenance records.

If either the pilot or co-pilot air data system does not meet the tolerances specified, maintenance checks should be performed on the air data system or the pitot-static system.

Table 5-6 Air Data Test Points

Test Point		Nominal Altitude (ft)	Altitude Tolerance Range (ft)				
Altitude (ft)	Airspeed (kts)		Air Data 1		Air Data 2		
			GSU 75B	GDC 74B	GSU 75B	GDC 74B	AM 250
0	0	0	-20 to 20	-20 to 20	-20 to 20	-20 to 20	-20 to 20
	150	44*	24 to 64	24 to 64	24 to 64	24 to 64	24 to 64*
1000	40	1000	980 to 1020	980 to 1020	980 to 1020	980 to 1020	980 to 1020
2000	120	2032	2007 to 2057	2007 to 2057	2007 to 2057	2007 to 2057	2007 to 2057
4000	120	4034	4009 to 4059	4009 to 4059	4009 to 4059	4009 to 4059	4009 to 4059
8000	120	8038	8008 to 8068	8008 to 8068	8008 to 8068	8008 to 8068	8013 to 8063
	300	8219	8129 to 8249	8129 to 8249	8129 to 8249	8129 to 8249	8194 to 8244
10000	150	10059*	10029 to 10089	10029 to 10089	10029 to 10089	10029 to 10089	10034 to 10084*
11000	120	11042	11007 to 11077	11007 to 11077	11007 to 11077	11007 to 11077	11012 to 11072
13000	150	13065	13025 to 13105	13025 to 13105	13025 to 13105	13025 to 13105	13035 to 13095
14000	150	14067	14027 to 14107	14027 to 14107	14027 to 14107	14027 to 14107	14037 to 14097
16000	180	16100	16060 to 16140	16055 to 16145	16060 to 16140	16055 to 16145	16070 to 16130
18000	210	18145	18105 to 18185	18100 to 18190	18105 to 18185	18100 to 18190	18115 to 18175
20000	120	20056	20016 to 20096	20009 to 20103	20016 to 20096	20009 to 20103	20026 to 20086
	150	20082*	20042 to 20122	20035 to 20129	20042 to 20122	20035 to 20129	20052 to 20112*
	300	20324	20284 to 20364	20277 to 20371	20284 to 20364	20277 to 20371	20294 to 20354
29000	120	29077	29035 to 29119	29005 to 29149	29035 to 29119	29005 to 29149	29042 to 29112
	150	29113*	29071 to 29155	29041 to 29185	29071 to 29155	29041 to 29185	29078 to 29148*
	300	29447	29405 to 29489	29375 to 29519	29405 to 29489	29375 to 29519	29412 to 29482
33000	120	33090	33041 to 33139	33018 to 33162	33041 to 33139	33018 to 33162	33049 to 33131
	150	33131*	33082 to 33180	33059 to 33203	33082 to 33180	33059 to 33203	33090 to 33172*
	300	33519	33470 to 33568	33447 to 33591	33470 to 33568	33447 to 33591	33478 to 33560

* Test points and tolerances correspond with *Socata Maintenance Manual* 34-11-00, Table 503.

5.17.3.2 Surface Checks

The TBM700 series aircraft with RVSM privileges require external checks per *Socata Maintenance Manual* 05-10-01, ATA 53 for Standard and Progressive inspection intervals. Refer to *Socata Maintenance Manual* 53-00-00 for fuselage surface check procedures.

5.17.3.3 RVSM In-Flight Altitude Hold Check

In addition to the autopilot performance checks specified in this manual, RVSM operation requires that the autopilot system accurately maintain the acquired altitude during non-turbulent, non-gust cruise conditions. The autopilot must be shown to meet the performance specification of the following in-flight altitude hold test:

1. Verify the following conditions (normal RVSM cruise flight):
 - Altitude FL290 to FL310
 - Altimeter setting 29.92 in Hg (1013 hPa)
 - Autopilot altitude hold engaged
 - Non-turbulent, non-gust conditions
2. Record the data specified in Table 5-7 from the primary cockpit displays every 5 minutes for a minimum flight segment of 30 minutes in length. The maximum altitude deviation shown on the display throughout the test should not exceed ± 65 feet.

If the aircraft fails to hold altitude to this tolerance, repeat the check ensuring that the airspeed remains constant and the air remains stable during the entire test. If the test still fails, perform maintenance checks on the G600 TXi system, then repeat the test. RVSM operations are prohibited until the autopilot is capable of maintaining altitude within ± 65 feet of the selected cruise altitude.

Table 5-7 Altitude Hold Check Log

Aircraft S/N:		Pilot:		
Date:		En route to:		
Time (hr:min)	Pilot		Co-pilot	
	Altitude (ft)	Airspeed (kt)	Altitude (ft)	Airspeed (kt)
0:00				
0:05				
0:10				
0:15				
0:20				
0:25				
0:30				
0:35				
0:40				
0:45				
0:50				
0:55				
1:00				

5.17.4 Oil Temperature Annunciators (Piper Cheyenne PA-31T Series Only)

If it becomes necessary to verify proper operation of the Cheyenne PA-31T Series oil temperature annunciators, refer to the checkout procedure contained in Appendix D of *G500/G600 TXi Part 23 AML STC Installation Manual* (P/N 190-01717-B3).

APPENDIX A: INSTALLATION-SPECIFIC INFORMATION

A.1 General Information

Date: _____ / _____ / _____ By: _____

AIRCRAFT

AIRCRAFT YEAR: _____

AIRCRAFT MAKE: _____

AIRCRAFT MODEL: _____

AIRCRAFT SERIAL #: _____

AIRCRAFT REG. #: _____

GDU1 Main System Software Version: _____

Installed System		
	☐ G500 TXi	☐ G600 TXi
☐ GDU1	☐ 1210 ☐ 1060 ☐ 700P ☐ 700L	☐ MFD ☐ PFD ☐ EIS
☐ GDU2	☐ 1210 ☐ 1060 ☐ 700P ☐ 700L	☐ MFD ☐ PFD ☐ EIS
☐ GDU3	☐ 1210 ☐ 1060 ☐ 700P ☐ 700L	☐ MFD ☐ PFD ☐ EIS
☐ GDU4	☐ 1210 ☐ 1060 ☐ 700P ☐ 700L	☐ MFD ☐ PFD ☐ EIS

A.2 LRU Information

For each unit included in the installation, record the LRU information in the table below.

Unit	Part Number	Serial Number	Mod Level
GDU #1	011- -		
GDU #2	011- -		
GDU #3	011- -		
GDU #4	011- -		
GSU 75() #1	011-03094-		
GSU 75() #2	011-03094-		
GRS 77 #1	011-00868-		
GRS 77 #2	011-00868-		
GRS 79 #1	011-03732-		
GRS 79 #2	011-03732-		
GMU 44() #1	011-0 -		
GMU 44() #2	011-0 -		
GDC 72() #1	011-03734-		
GDC 72() #2	011-03734-		
GDC 74() #1	011-0 -		
GDC 74() #2	011-0 -		
GTP 59 #1	011-00978-		
GTP 59 #2	011-00978-		
GAD 43/43e	011-0 -		
GEA 110 #1	011-03454-		
GEA 110 #2	011-03454-		
GEA 71Be #1	011-03682-		
GEA 71Be #2	011-03682-		
GCU 485	011-03582-		
GBB 54	011-03456-		

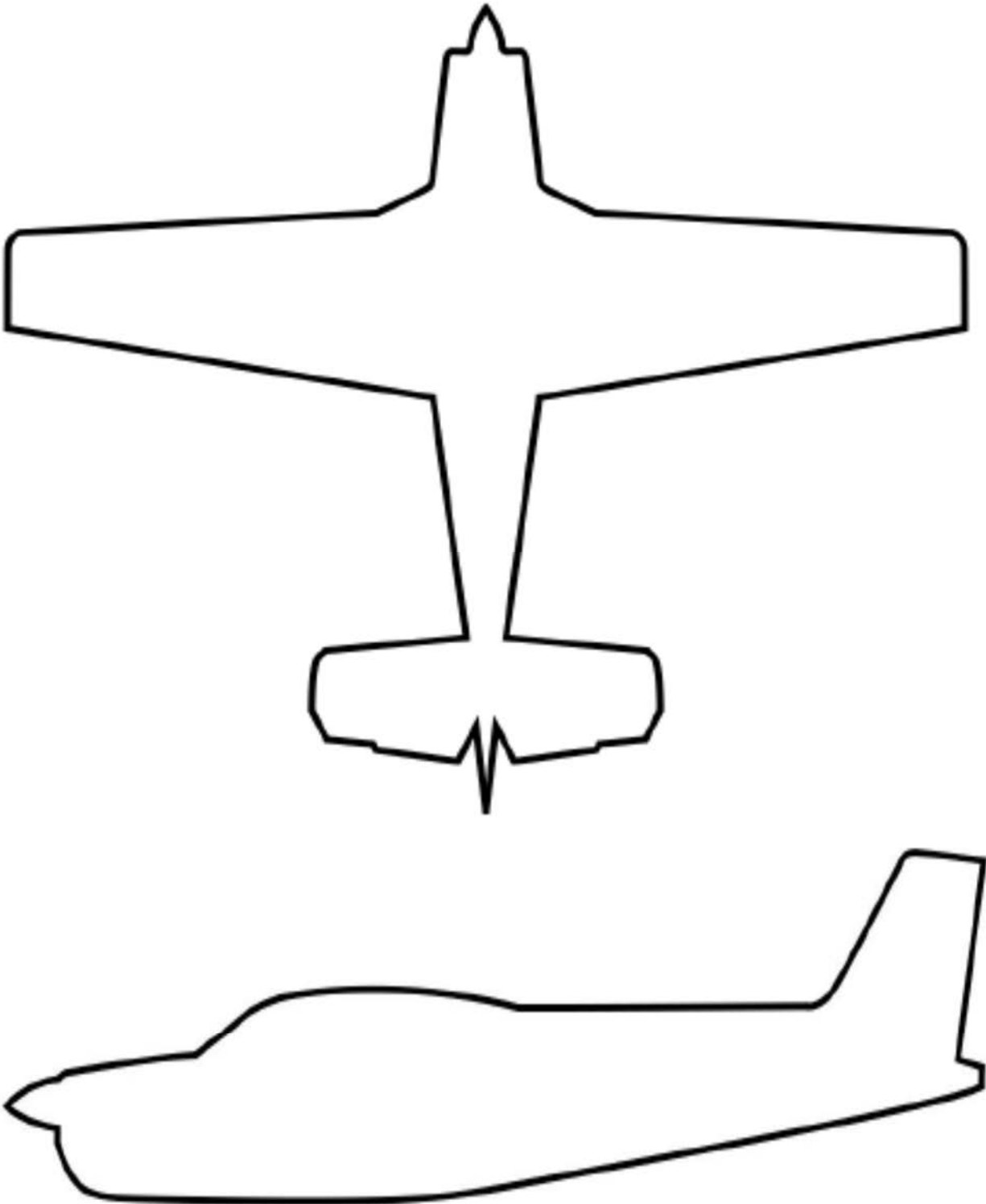
A.3 Equipment Location

For each unit included in the installation, record the fuselage station and provide a brief description of the location.

Unit	Station (CG)	Description of Location
GDU #1	in.	
GDU #2	in.	
GDU #3	in.	
GDU #4	in.	
GSU 75() #1	in.	
GSU 75() #2	in.	
GRS 77 #1	in.	
GRS 77 #2	in.	
GRS 79 #1	in.	
GRS 79 #2	in.	
GMU 44() #1	in.	
GMU 44() #2	in.	
GDC 72() #1	in.	
GDC 72() #2	in.	
GDC 74() #1	in.	
GDC 74() #2	in.	
GTP 59 #1	in.	
GTP 59 #2	in.	
GAD 43/43e	in.	
GEA 110 #1	in.	
GEA 110 #2	in.	
GEA 71Be #1	in.	
GEA 71Be #2	in.	
GCU 485	in.	
GBB 54	in.	

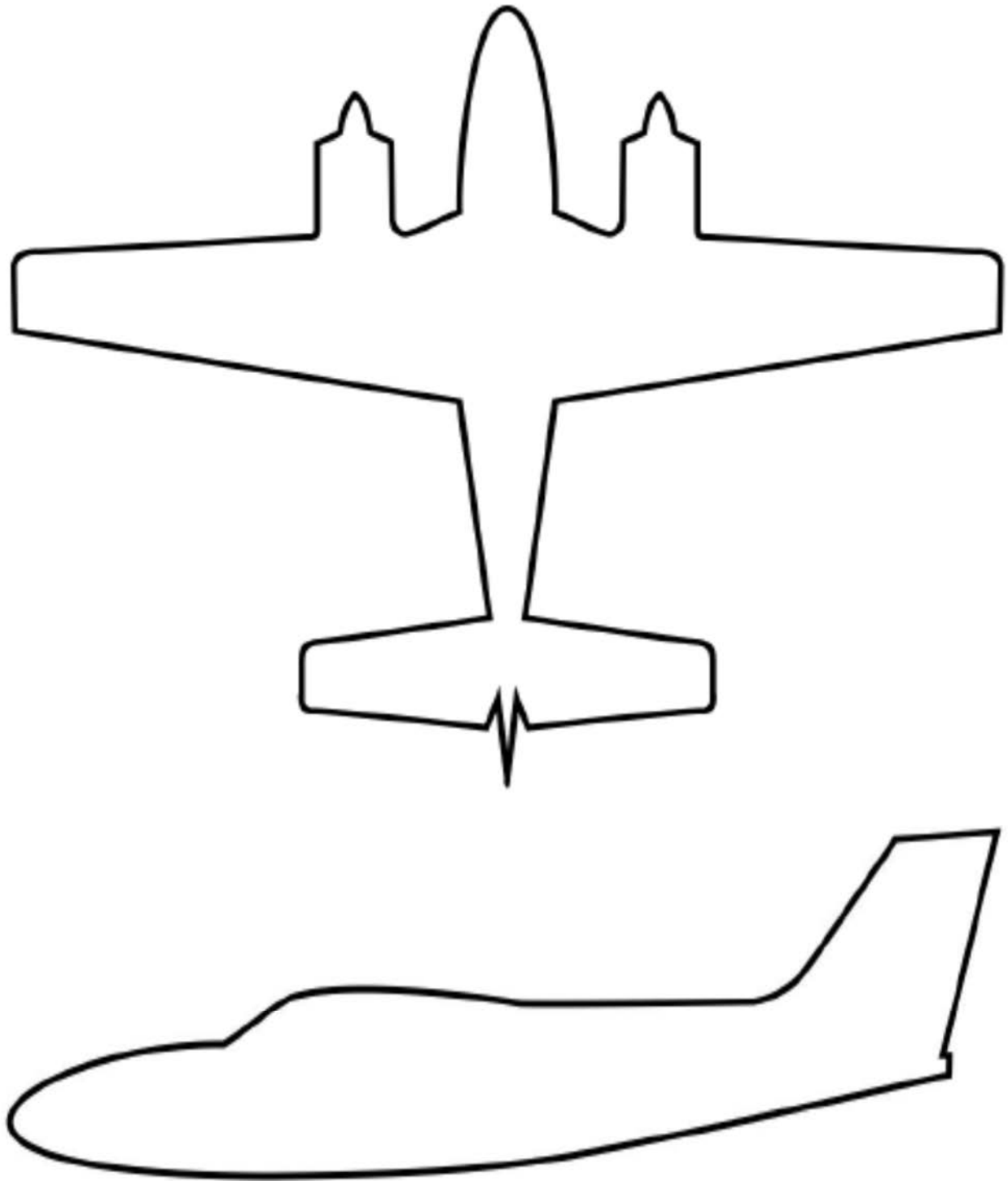
A.4 Wire Routing - Single Engine Reciprocating/Turboprop

The following diagram depicts the wire routing for the G500/G600 TXi LRUs throughout the aircraft structure for a single-engine reciprocating or turboprop aircraft.



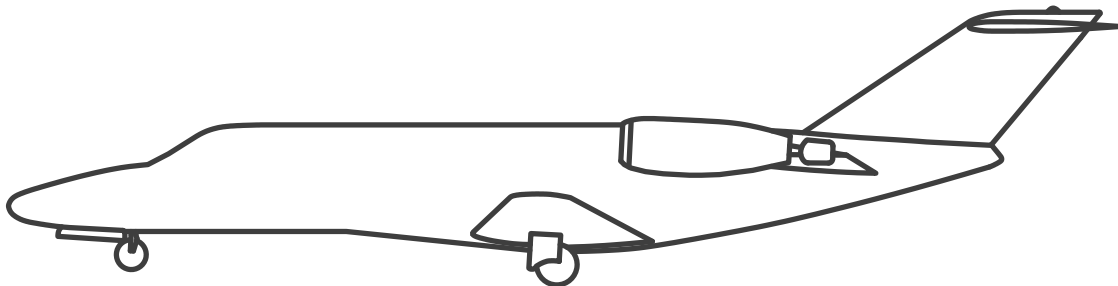
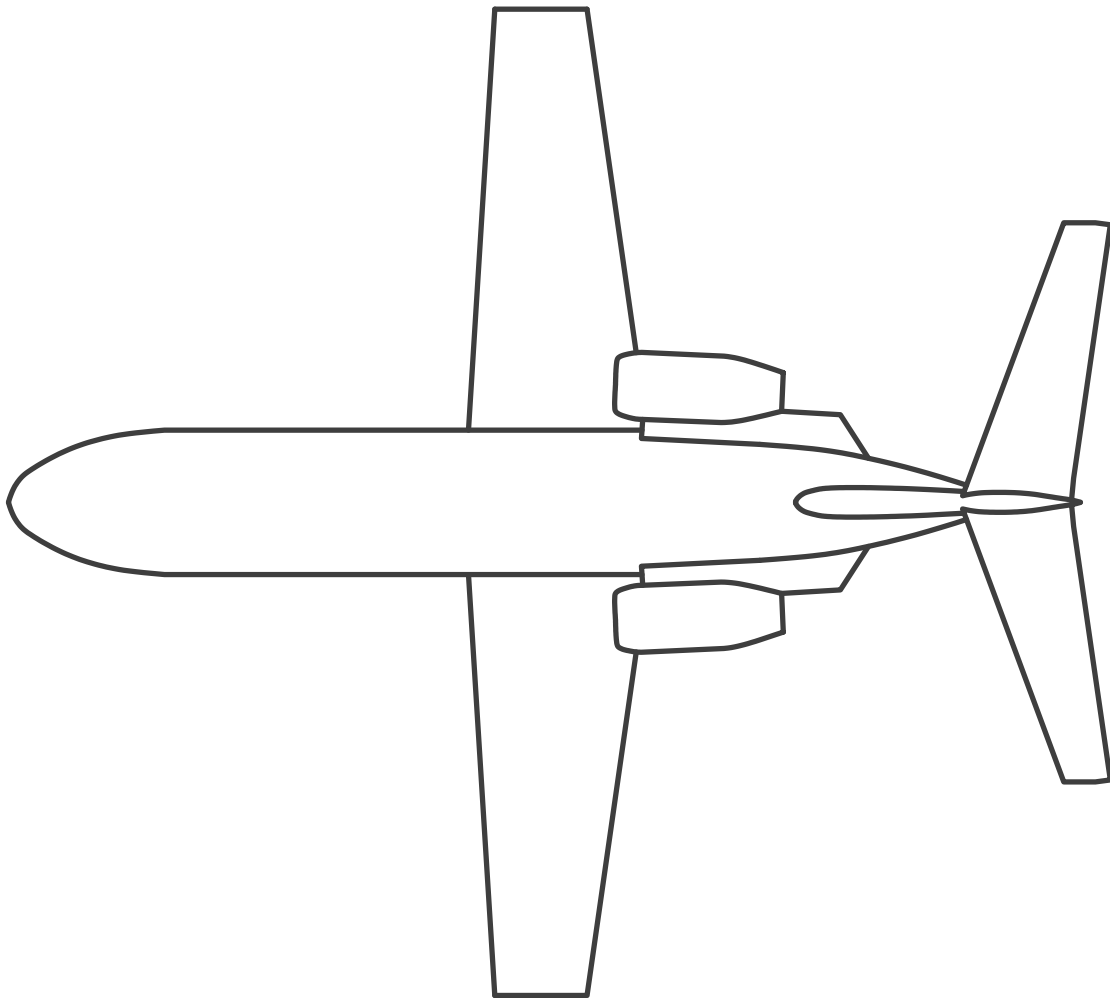
A.5 Wire Routing - Twin Engine Reciprocating/Turboprop

The following diagram depicts the wire routing for the G500/G600 TXi LRUs throughout the aircraft structure for a twin-engine reciprocating or turboprop aircraft.



A.6 Wire Routing - Twin Turbofan

The following diagram depicts the wire routing for the G500/G600 TXi LRUs throughout the aircraft structure for a twin-turboprop aircraft.



A.7 Saved Configuration File

The G500/G600 TXi system configuration must be saved to an SD card and placed with the permanent aircraft maintenance records. For instructions on saving the aircraft configuration file to an SD card, refer to Section 2.1.6.

A.8 Print Configuration Log

The G500/G600 TXi system configuration log must be printed out and included with the permanent aircraft maintenance records. To print the system configuration log, perform the following procedure:

1. Insert the SD card that was created in Appendix Section A.7 into a computer.
2. Open the “Summary” folder.
3. Print the .htm file corresponding to the save generated from Appendix Section A.7.



NOTE

It is recommended that the configuration log be attached to the back of this document for continuity and ease of use. It is required that the MM/ICA, SD card, and configuration log be included in the permanent aircraft maintenance records.

The configuration log printout contains configuration info for configured EIS gages, including configured markings and gauge layout for each GDU displaying EIS gauges. The configuration log will list the location number for each gauge, which can then be referenced to the GDU templates provided in the following sections.

A.9 GDU 1060/1210 EIS Gauge Layout Template



Figure A-1 GDU 1060/1210 Single-Engine Piston Alpha Layout Template



Figure A-2 GDU 1060/1210 Single-Engine Piston Bravo Layout Template



Figure A-3 GDU 1060/1210 Twin-Engine Piston Layout Template



Figure A-4 GDU 1060/1210 Single-Engine Turboprop Alpha Layout Template

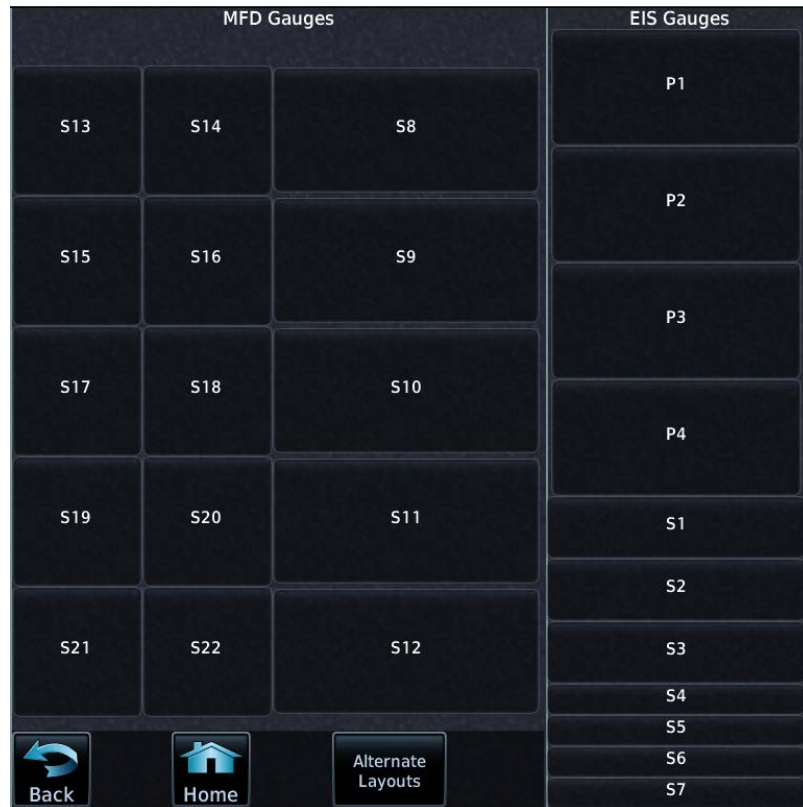


Figure A-5 GDU 1060/1210 Single-Engine Turboprop Bravo Layout Template



Figure A-6 GDU 1060/1210 Twin-Engine Turboprop Alpha Layout Template



Figure A-7 GDU 1060/1210 Twin-Engine Turboprop Bravo Layout Template



Figure A-8 GDU 1060/1210 Twin-Engine Turbofan Layout Template

A.10 GDU 700P EIS Gauge Layout Template



Figure A-9 GDU 700P Single-Engine Piston Layout Template

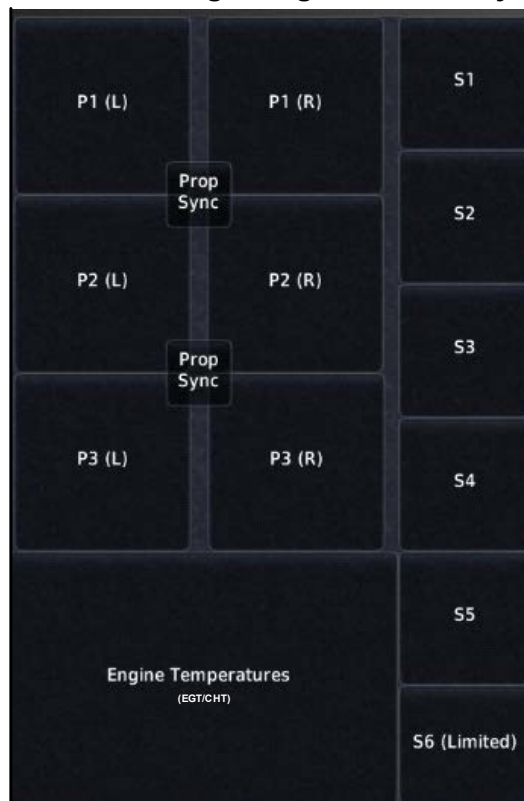


Figure A-10 GDU 700P Twin-Engine Piston Layout Template

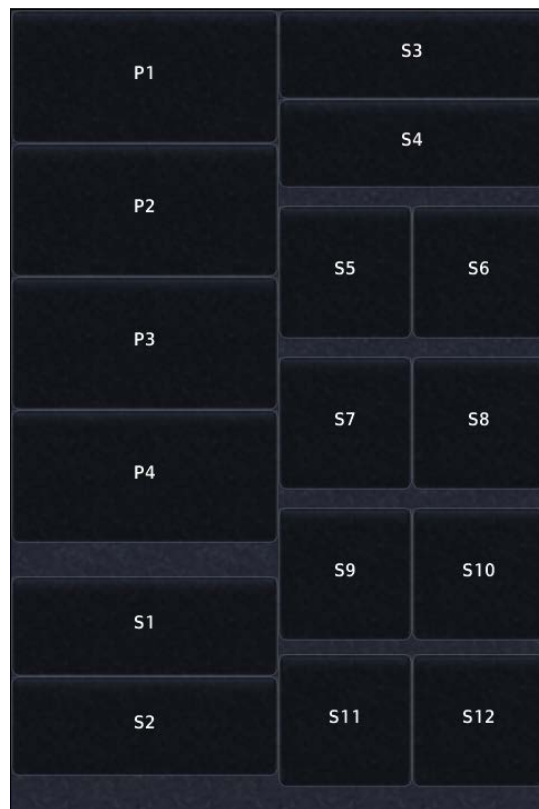


Figure A-11 GDU 700P Single-Engine Turboprop Layout Template



Figure A-12 GDU 700P Twin-Engine Turboprop Layout Template



Figure A-13 GDU 700P MFD/EIS Gauge Layout Template



Figure A-14 GDU 700P Twin-Engine Turbofan Layout Template

A.11 GDU 700L EIS Gauge Layout Template



Figure A-15 GDU 700L EIS Single-Engine Layout Template



Figure A-16 GDU 700L EIS Twin-Engine Layout Template



Figure A-17 GDU 700L MFD/EIS Gauge Layout Template

APPENDIX B MODEL-SPECIFIC DATA

B.1	Textron Aviation (Cessna) Model 525(A).....	B-2
B.1.1	Pitot and Static Systems Purging	B-2
B.1.2	Pitot and Static Systems Leak Check.....	B-4
B.1.3	Altitude, Airspeed, and Mach Display Test	B-7
B.1.4	Fuel Indicating System Functional Check	B-10
B.1.5	N2 Anti-Ice Discrete Output Checks	B-10

This appendix provides periodic maintenance and check procedures for specific aircraft models when modified by this STC. Procedures provided supersede those provided in the aircraft maintenance manual.

B.1 Textron Aviation (Cessna) Model 525(A)

B.1.1 Pitot and Static Systems Purging

Replaces Textron Task 34-11-03 Section 16 for Textron Aviation (Cessna) Model 525

Replaces Textron Task 34-10-00-720 Section 4 for Textron Aviation (Cessna) Model 525A.



WARNING

Make sure no pitot or static line is connected to pressure sensing equipment while performing the following procedure. Applying high pressure air to pressure sensing equipment may damage the equipment.



CAUTION

If the aircraft is equipped with GDL 60, open the CNXT BATT circuit breaker to prevent damage to aircraft systems prior to performing any aircraft maintenance.



NOTE

The aircraft has a dual pitot system and a dual static system. Refer to Figure B-1.

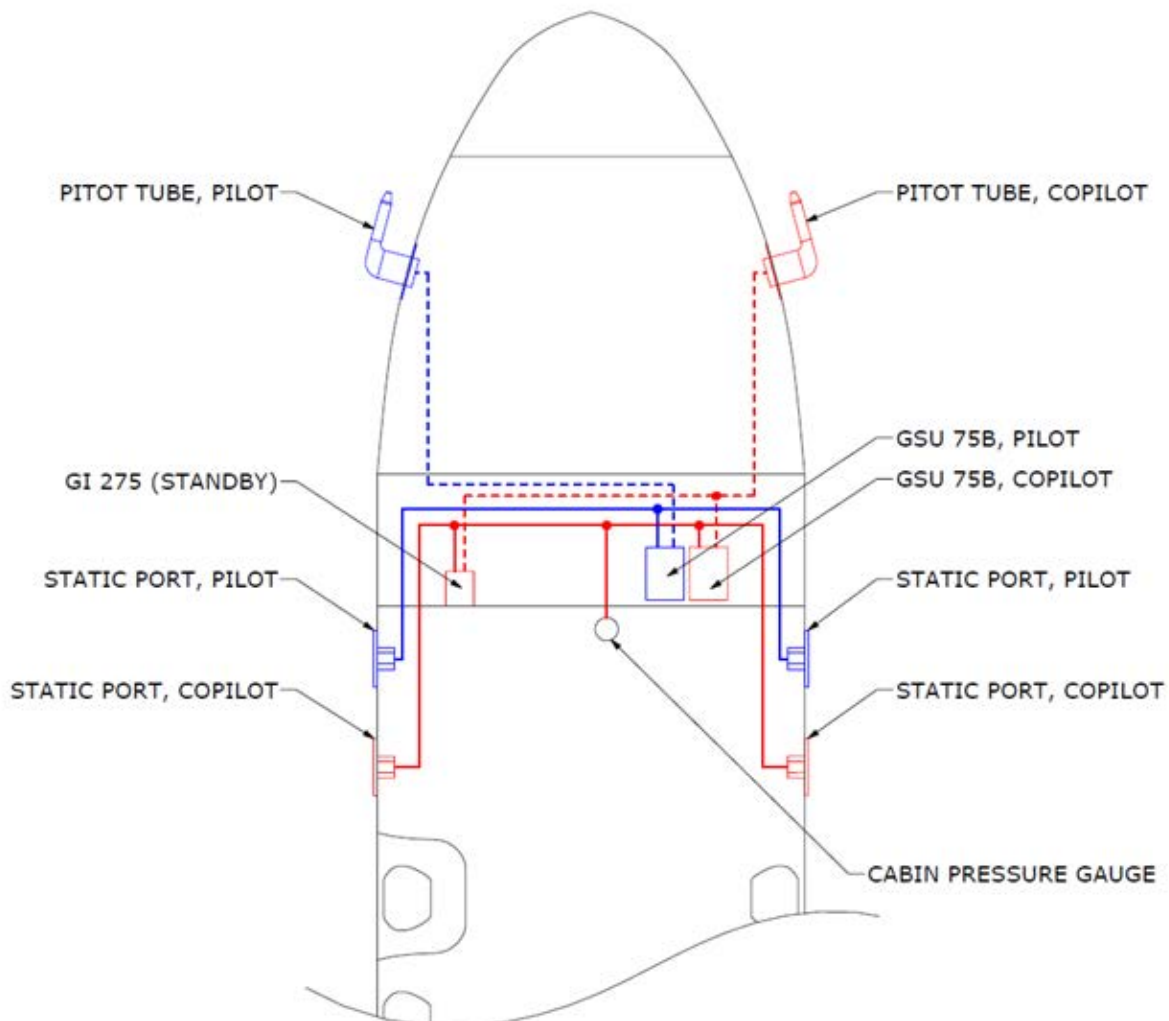


Figure B-1 Pitot-Static System Schematic
(Model 525 S/N 525-0360 thru 0599 and Model 525A S/N 525A-0001 thru 0299)

A. Clean the Pitot and Static Systems.

- (1) Get a clean and dry compressed air source that can be attached to the disconnected pitot and static hose and fittings.
- (2) Set the DC POWER switch to the OFF position.
- (3) Set the AVIONICS POWER switch to the OFF position.
- (4) Remove the caps or covers from the pitot and static ports.
- (5) Get access to the GSU 75B ADAHRS units by removing the copilot PFD.
- (6) Get access to the standby pilot pitot and static hoses by removing the pilot side standby GI 275.
- (7) Disconnect all pitot and static hose connections from equipment, gauges, and any other pressure-sensing devices in the system.



CAUTION

Make sure the hose to the cabin differential pressure gauge has been disconnected. Failure to do so may damage the gauge during the purge procedure.

- (8) Put caps on all disconnected hoses.
- (9) Clean the pilot side static system.
 - (a) Start with the highest hose in the system.
 - (i) Remove the cap from the hose.
 - (ii) Connect the dry air source to the hose.
 - (iii) Clean the hose using the dry air source.
 - (iv) Disconnect the dry air source from the hose.
 - (v) Put the cap back on the hose.
 - (b) Repeat 9(a) for each hose in the pilot side static system. Start with the highest hose and continue to the lowest hose.
 - (c) After all of the hoses have been cleaned, remove the drain cap from the pilot side static drain.
 - (d) Examine the drain cap for any fluid or debris.
 - (i) If there is any fluid or debris, repeat 9(a) through (c) until there is no fluid or debris in the drain cap.
 - (e) Put the drain cap back on the drain.
- (10) Do Step 9 for the copilot side static system.
- (11) Do Step 9 for the pilot side pitot system.
- (12) Do Step 9 for the copilot side pitot system.
- (13) Connect all pitot and static hoses to the equipment; refer to 190-01717-BJ for the Textron Aviation (Cessna) Model 525 or 190-01717-B9 for the Textron Aviation (Cessna) Model 525A.
- (14) Install the pilot standby GI 275; refer to 190-01717-BJ for the Textron Aviation (Cessna) Model 525 or 190-01717-B9 for the Textron Aviation (Cessna) Model 525A.
- (15) Install the copilot PFD; refer to 190-01717-BJ for the Textron Aviation (Cessna) Model 525 or 190-01717-B9 for the Textron Aviation (Cessna) Model 525A.
- (16) Put the caps or covers on the pitot and static ports.
- (17) Do a leak test of the purged pitot-static system (refer to Appendix Section B.1.2).

B.1.2 Pitot and Static Systems Leak Check

Replaces Textron Task 34-11-02 Sections 5 and 6 for the Textron Aviation (Cessna) Model 525.

Replaces Textron Task 34-10-00-720 Sections 6 and 7 for Textron Aviation (Cessna) Model 525A.

A. Preliminary.



WARNING

Use caution during work around the heated pitot tubes. The heating elements can cause severe burns.



CAUTION

Apply maintenance warning tags and signs as appropriate. Turn the pitot-static anti-ice systems off during the leak check. Failure to do so could result in damage to components and/or equipment.



CAUTION

Do not perform a leak check with soap and water, or any other liquid.



CAUTION

Do not use the pitot tube heaters on the ground for a longer duration than necessary. Prolonged use of the pitot tube heaters on the ground can damage the tube heating elements.

- (1) Make sure all the components are correctly connected to the related pitot and static lines.
- (2) Visually check the pitot and static lines for dry rot, cracks, cuts, abrasions, and general condition of the static line material.
- (3) Make sure the DC POWER switch (SI022) and the AVIONICS POWER switch (SI057) on the left switch panel are in the OFF position.
- (4) Make sure the ANTI-ICE-DE-ICE PITOT & STATIC switch (SI011) on the left switch panel is in the OFF position.
- (5) Connect external power to the airplane.
- (6) Set the DC POWER switch to the BATT position.
- (7) Set the AVIONICS POWER switch (SI057) to the ON position.
- (8) Open the ANTI-ICE L PITOT STATIC and ANTI-ICE R PITOT STATIC circuit breakers on the left circuit breaker panel.
- (9) If equipped, open the CNXT BATT circuit breaker on the right circuit breaker panel.
- (10) Make sure that the ADAHRS 1, ADAHRS 2, PFD 1, PFD 2, and STBY ADI 1 circuit breakers are closed.

B. Complete a Pitot and Static Leak Check for Pilot's and Copilot's Systems Simultaneously.

- (1) Connect the portable air data tester to the pilot and copilot pitot tubes. Record the make, model, serial number, and calibration date of the air data tester.

Make:	_____	Serial Number:	_____
Model:	_____	Calibration Date:	_____

- (2) Connect the portable air data tester static fittings to either upper or lower pilot's static port, and the opposite static port on copilot's side.



NOTE

Left system ports are lower left/upper right. Right system ports are upper left/lower right.

- (3) Put a cover on each unused static port using red vinyl tape.



CAUTION

Do not use transparent tape. Paper masking tape or adhesive tape are not equivalent substitutes for red vinyl pressure tape.

- (4) Adjust the barometric pressure setting on the pilot PFD, copilot PFD, and the air data tester to 29.92 in-Hg (1013 mb).
- (5) Adjust the air data tester to obtain an indicated airspeed of 250 knots (463 km/hr) and an indicated altitude of 31,420 feet (9577 m) on the pilot or copilot PFDs.
 - (a) As the altitude on the air data tester increases, monitor the aircraft altimeters for a parallel indication with the air data tester altimeter.
 - (i) If the aircraft altimeters lag the air data tester altimeter, check for obstructions or restrictions in the static port and/or tubing through which the vacuum is being applied. Purging the pitot-static system will be necessary to clear obstructions. Refer to Appendix Section B.1.1.



NOTE

Due to static error correction, a small difference between the air data tester altimeter and the altitude displayed on the PFD is expected.

- (6) Operate air data tester valves to close the pitot pressure and static vacuum source.
 - (a) Make sure the closed system altimeter indication on the pilot and copilot PFDs does not decrease below 31,170 feet (9501 m) within one minute. Record and verify the indicated altitude for each PFD.

Altitude (feet, m):	Pilot PFD _____	Copilot PFD _____
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- (b) Make sure the closed system airspeed indication on the pilot and copilot PFDs does not change more than nine (9) knots (17 km/hr) within one minute. Record and verify the indicated airspeed for each PFD.

Airspeed (knots, km/hr):	Pilot PFD _____	Copilot PFD _____
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NOTE

With the system at 31,420 feet (9577 m) and 250 knots (463 km/hr), a pitot system leak will cause the airspeed to increase, and a static system leak will cause the airspeed to decrease.

- (7) If the leak rate is excessive, examine each system individually.

C. Restore Aircraft.

**NOTE**

It is acceptable to proceed to additional pitot and static tests prior to restoring the aircraft. Restore aircraft after all tests are complete.

- (1) Bleed the pitot and static systems to the ambient pressure.
 - (a) Keep the airspeed between 100 and 300 knots (185 to 556 km/hr).
 - (b) Do not exceed a 6000 ft/min (1829 m/min) rate of climb.
- (2) Disconnect the air data tester.
- (3) Set the DC POWER switch (SI022) and AVIONICS POWER switch (SI057) to the OFF position.
- (4) Disconnect external power from the airplane.
- (5) Remove the tape from the static ports.

**CAUTION**

Make sure that all of the tape has been removed from the static ports prior to returning the aircraft to service.

- (6) Close the ANTI-ICE L PITOT STATIC and ANTI ICE R PITOT STATIC circuit breakers located on the left circuit breaker panel.

B.1.3 Altitude, Airspeed, and Mach Display Test

Replaces Textron Task 34-11-02-720 Section 8 for Textron Aviation (Cessna) Model 525.

Replaces Textron Task 34-10-00-720 Section 9 for Textron Aviation (Cessna) Model 525A.

A. Complete an Altitude, Airspeed and Mach Display Check.



NOTE

This test meets the requirements of Title 14 C.F.R. §91.411.



NOTE

For RVSM certified Textron Aviation (Cessna) Model 525A aircraft, this test is superseded by the Altitude, Airspeed, and Mach Display Test in G600 TXi Part 23 AML STC Maintenance Manual Addendum, RVSM, Textron Aviation Inc. (Cessna), Model 525A, S/N 525A-0001 Thru -0299 (P/N 190-01717-BE).



NOTE

For RVSM certified Textron Aviation (Cessna) Model 525 aircraft, this test is superseded by the Altitude, Airspeed, and Mach Display test in Procedures for Reduced Vertical Separation Minimum Initial and Continued Airworthiness in G600 TXi Equipped Textron Aviation Model 525 Aircraft, S/N 525-0360 Thru -0599 Except -0473 (P/N 190-01717-BN)

(1) Do a Pitot-Static Leak Check, if not previously done. Refer to Appendix Section B.1.2.



NOTE

The airplane must pass a leak test before the Altitude, Airspeed, And Mach Display Check.

- (2) Make sure the DC power switch (SI022) is in the OFF position.
- (3) Connect external electrical power to the airplane.
- (4) Put the DC POWER switch (SI022) in the BATT position.
- (5) Open the FLT-HR and ANG OF ATTACK circuit breakers.
- (6) If not done concurrently, open the ADAHRS and PFD circuit breakers for the side not under test.
- (7) Set the AVIONICS POWER switch (SI057) to the ON position.
- (8) On the PFD display, select STD BARO.
 - (a) Make sure “STD” is displayed below the PFD altimeter.
- (9) Set the air data tester to the specified values in Table B-1 for Textron Aviation (Cessna) Model 525 and Table B-2 for Textron Aviation (Cessna) Model 525A. Record the make, model, serial number, and calibration date of the air data tester.

Make:	_____	Serial Number:	_____
Model:	_____	Calibration Date:	_____

- (10) Record the values in the applicable table.
- (11) Repeat the test for the other side pitot-static system, if not done concurrently.

Table B-1 Altitude, Airspeed, and Mach Display Values (Non-RVSM Certified Model 525)

Date:							
Aircraft S/N:				Operator:			
Aircraft Registration:				Witness:			
Air Data Tester Input		Altimeter Display	Altitude Tolerance	Airspeed Display	Airspeed Tolerance	Mach Display	Mach Tolerance
Altitude (ft)	Airspeed (kts)	Pilot (ft)	Pilot (ft)	Pilot (kts)	Pilot (kts)	Pilot	Pilot
-1000	185		-944 ± 20		185 ± 2		N/A
0	185		-45 ± 20		185 ± 2		N/A
2000	100		1992 ± 30		100 ± 2		N/A
2000	150		1967 ± 30		150 ± 2		N/A
2000	185		1952 ± 30		185 ± 2		N/A
5000	185		4948 ± 35		185 ± 2		N/A
10000	180		9943 ± 80		180 ± 2		N/A
10000	220		9924 ± 80		220 ± 2		N/A
20000	220		19895 ± 130		220 ± 2		0.483 ± 0.005
25000	185		24907 ± 155		185 ± 2		0.452 ± 0.005
30000	220		29840 ± 180		220 ± 2		0.592 ± 0.005
30000	263		29752 ± 180		263 ± 3		0.700 ± 0.005
35000	185		34859 ± 205		185 ± 2		0.560 ± 0.005
40000	200		39779 ± 230		200 ± 2		0.672 ± 0.008
41000	200		40765 ± 230		200 ± 2		0.687 ± 0.007
43000	185		42783 ± 230		185 ± 2		0.668 ± 0.007

Table B-2 Altitude, Airspeed, and Mach Display Values (Non-RVSM Certified Model 525A)

Date:							
Aircraft S/N:				Operator:			
Aircraft Registration:				Witness:			
Air Data Tester Input		Altimeter Display	Altitude Tolerance	Airspeed Display	Airspeed Tolerance	Mach Display	Mach Tolerance
Altitude (ft)	Airspeed (kts)	Pilot (ft)	Pilot (ft)	Pilot (kts)	Pilot (kts)	Pilot	Pilot
-960	185		-990 ± 20		185 ± 2		N/A
0	185		-31 ± 20		185 ± 2		N/A
2000	100		1994 ± 30		100 ± 2		N/A
2000	150		1976 ± 30		150 ± 2		N/A
2000	185		1967 ± 30		185 ± 2		N/A
5000	185		4964 ± 35		185 ± 2		N/A
10000	180		9961 ± 80		180 ± 2		N/A
10000	220		9944 ± 80		220 ± 2		N/A
20000	220		19912 ± 130		220 ± 2		0.483 ± 0.010
25000	185		24926 ± 155		185 ± 2		0.452 ± 0.011
30000	220		29834 ± 180		220 ± 2		0.592 ± 0.008
30000	270		29669 ± 180		270 ± 3		0.718 ± 0.005
35000	185		34863 ± 205		185 ± 2		0.560 ± 0.008
40000	200		39739 ± 230		200 ± 2		0.672 ± 0.006
41000	200		40718 ± 230		200 ± 2		0.687 ± 0.005
45000	180		44729 ± 255		180 ± 2		0.680 ± 0.006
47000	150		46826 ± 255		150 ± 2		0.600 ± 0.007

B.1.4 Fuel Indicating System Functional Check

Replaces Textron Task 28-40-00-720 during the regular 24 month inspection or as required by the applicable Cessna Maintenance Manual.

A. Do a Fuel Indicating System Functional Check.



NOTE

This inspection is usually done before Textron Task 28-10-00-220, Fuel Storage Detailed Inspection, since the fuel quantity is already at zero.

- (1) Make sure the airplane is approximately level before performing this check.
- (2) Open the WARN LTS 1 and WARN LTS 2 circuit breakers.
- (3) Make sure the right and left sides of the fuel quantity gage read between 10 and 50 pounds.
- (4) Record the initial left and right fuel quantity gauge indications.
- (5) Add 1,000 pounds (454 kg) of fuel to each side.
- (6) Record the final left and right fuel quantity gauge indications.
- (7) Make sure that the difference between final and initial gauge indications is equal to 1,000 $\pm$ 40 pounds (454 $\pm$ 18.14 kg) of fuel.



NOTE

If either side fails the 1000 pounds (454 kg) check, make a dry calibration check and possibly an indicator adjustment, as outlined in Fuel Quantity Gauging System - Adjustment/Test for Textron Aviation (Cessna) Model 525A or in Fuel Indication System - Adjustment/Test for Textron Aviation (Cessna) Model 525.

B.1.5 N2 Anti-Ice Discrete Output Checks

The following procedures verify that the GEA 1 (LH) and GEA 2 (RH) discrete output signals activate when the associated engine N2 RPM reaches 70% or above for Model 525 or 75% or above for Model 525A. These discrete signals are used by the aircraft anti-ice circuitry.

B.1.5.1 Textron Aviation (Cessna) Model 525

B.1.5.1.1 N2 Indication and Anti-Ice Discrete Output Check (LH)

1. Open the ANTI-ICE L ENGINE circuit breaker, located in the aft junction box.
2. Open the aft baggage compartment door.
3. Remove the aft baggage panel 321BT to access the left pressure regulating shutoff valve (VT001) (refer to Cessna 525 MM Chapter 6, *Access Plates and Panels Identification - Description and Operation*).
4. Disconnect electrical connector PT007 from the left pressure regulating shutoff valve.
5. Connect a multimeter to PT007 pin A and airframe ground to check continuity.
6. Close the ANTI-ICE L ENGINE circuit breaker.
7. Ensure that the left landing gear electrical test box is set to 'In-Air'.
8. Open the LH FUEL CONTROL, BOOST PUMP, and IGNITION circuit breakers.
9. Disconnect electrical connector PD008 from the LH turbine monopole (UD004).
10. Connect the signal generator to PD008 pins A and C.

- a. Set the signal generator to sine wave output at $2V, \pm 0.5V$, peak to peak, with no DC offset.
 - b. Adjust the signal generator to 4.342 kHz.
11. Verify that the left N2 indication is $65\% \pm 0.2\%$.
12. Set the LH throttle above the CUTOFF position.
13. Set the left anti-ice switch to WING/ENG.
14. Verify that the multimeter displays continuity at PT007 pin A.
15. Adjust the signal generator to a frequency of 5.344 kHz.
16. Verify that the left N2 indication is $80\% \pm 0.2\%$.
17. Verify that the multimeter does not display continuity at PT007 pin A.
18. Set the left anti-ice switch to OFF.
19. Open the ANTI-ICE L ENGINE circuit breaker, located in the aft junction box.
20. Remove the multimeter.
21. Reconnect electrical connector PT007 to the left pressure regulating shutoff valve.
22. Close the ANTI-ICE L ENGINE circuit breaker.
23. Disconnect the signal generator to PD008 pins A and C.
24. Reconnect electrical connector PD008 to the LH turbine monopole (UD004).

B.1.5.1.2 N2 Indication and Anti-Ice Discrete Output Check (RH)

1. Open the ANTI-ICE R ENGINE circuit breaker, located in the aft junction box.
2. Access the right pressure regulating shutoff valve (VT002) (refer to Cessna 525 MM Chapter 6, *Access Plates and Panels Identification - Description and Operation*).
3. Disconnect electrical connector PT006 from the right pressure regulating shutoff valve.
4. Connect a multimeter to PT006 pin A and airframe ground to check continuity.
5. Close the ANTI-ICE R ENGINE circuit breaker.
6. Ensure that the right landing gear electrical test box is set to 'In-Air'.
7. Open the RH FUEL CONTROL, BOOST PUMP, and IGNITION circuit breakers.
8. Disconnect electrical connector PE011 from the RH turbine monopole (UE004).
9. Connect the signal generator to PE011 pins A and C.
 - a. Set the signal generator to sine wave output at $2V, \pm 0.5V$, peak to peak, with no DC offset.
 - b. Adjust the signal generator to 4.343 kHz.
10. Verify that the right N2 indication is $65\% \pm 0.2\%$.
11. Set the RH throttle above the CUTOFF position.
12. Set the right anti-ice switch to WING/ENG.
13. Verify that the multimeter displays continuity at PT006 pin A.
14. Adjust the signal generator to a frequency of 5.344 kHz.
15. Verify that the right N2 indication is $80\% \pm 0.2\%$.
16. Verify that the multimeter does not display continuity at PT006 pin A.
17. Set the right anti-ice switch to OFF.
18. Open the ANTI-ICE R ENGINE circuit breaker, located in the aft junction box.
19. Remove the multimeter.
20. Reconnect electrical connector PT006 to the right pressure regulating shutoff valve.
21. Close the ANTI-ICE R ENGINE circuit breaker.

22. Disconnect the signal generator from PE011 pins A and C.
23. Reconnect electrical connector PE011 to the RH turbine monopole (UE004).
24. Attach the aft baggage panel 321BT.
25. Close the aft baggage compartment door.

B.1.5.2 Textron Aviation (Cessna) Model 525A

B.1.5.2.1 N2 Indication and Anti-Ice Discrete Output Check (LH)

1. Open the ANTI-ICE L ENGINE circuit breaker, located in the aft junction box.
2. Open the aft baggage compartment door.
3. Remove the aft baggage panel 322BT to access the left pressure regulating shutoff valve (VT023) (refer to Cessna 525A MM Chapter 6, *Access Plates and Panels Identification - Description and Operation*).
4. Disconnect electrical connector PT007 from the left pressure regulating shutoff valve.
5. Connect a multimeter to PT007 pin A and airframe ground to check continuity.
6. Close the ANTI-ICE L ENGINE circuit breaker.
7. Ensure that the left landing gear electrical test box is set to 'In-Air'.
8. Open the LH FUEL CONTROL, BOOST PUMP, and IGNITION circuit breakers.
9. Disconnect electrical connector PD008 from the LH turbine monopole (UD004).
10. Connect the signal generator to PD008 pins A and C.
 - a. Set the signal generator to sine wave output at 2V, $\pm 0.5V$, peak to peak, with no DC offset.
 - b. Adjust the signal generator to 4.344 kHz.
11. Verify that the left N2 indication is $65\% \pm 0.2\%$.
12. Set the LH throttle above the CUTOFF position.
13. Set the left anti-ice switch to WING/ENG.
14. Verify that the multimeter displays continuity at PT007 pin A.
15. Adjust the signal generator to a frequency of 5.344 kHz.
16. Verify that the left N2 indication is $80\% \pm 0.2\%$.
17. Verify that the multimeter does not display continuity at PT007 pin A.
18. Set the left anti-ice switch to OFF.
19. Open the ANTI-ICE L ENGINE circuit breaker, located in the aft junction box.
20. Remove the multimeter.
21. Reconnect electrical connector PT007 to the left pressure regulating shutoff valve.
22. Close the ANTI-ICE L ENGINE circuit breaker.
23. Disconnect the signal generator to PD008 pins A and C.
24. Reconnect electrical connector PD008 to the LH turbine monopole (UD004).

B.1.5.2.2 N2 Indication and Anti-Ice Discrete Output Check (RH)

1. Open the ANTI-ICE R ENGINE circuit breaker, located in the aft junction box.
2. Access the right pressure regulating shutoff valve (VT022) (refer to Cessna 525A MM Chapter 6, *Access Plates and Panels Identification - Description and Operation*).
3. Disconnect electrical connector PT006 from the right pressure regulating shutoff valve.
4. Connect a multimeter to PT006 pin A and airframe ground to check continuity.
5. Close the ANTI-ICE R ENGINE circuit breaker.
6. Ensure that the right landing gear electrical test box is set to 'In-Air'.
7. Open the RH FUEL CONTROL, BOOST PUMP, and IGNITION circuit breakers.
8. Disconnect electrical connector PE011 from the RH turbine monopole (UE004).
9. Connect the signal generator to PE011 pins A and C.
 - a. Set the signal generator to sine wave output at 2V, $\pm 0.5V$, peak to peak, with no DC offset.
 - b. Adjust the signal generator to 4.344 kHz.
10. Verify that the right N2 indication is $65\% \pm 0.2\%$.
11. Set the RH throttle above the CUTOFF position.
12. Set the right anti-ice switch to WING/ENG.
13. Verify that the multimeter displays continuity at PT006 pin A.
14. Adjust the signal generator to a frequency of 5.344 kHz.
15. Verify that the right N2 indication is $80\% \pm 0.2\%$.
16. Verify that the multimeter does not display continuity at PT006 pin A.
17. Set the right anti-ice switch to OFF.
18. Open the ANTI-ICE R ENGINE circuit breaker, located in the aft junction box.
19. Remove the multimeter.
20. Reconnect electrical connector PT006 to the right pressure regulating shutoff valve.
21. Close the ANTI-ICE R ENGINE circuit breaker.
22. Disconnect the signal generator from PE011 pins A and C.
23. Reconnect electrical connector PE011 to the RH turbine monopole (UE004).
24. Attach the aft baggage panel 322BT.
25. Close the aft baggage compartment door.

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