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TBM AIRCRAFT

SERVICE BULLETIN

SB 70—247	34
REVISION 1	ATA No.

RECOMMENDED

The technical content of this document is approved under the authority of DOA No. EASA.21J.013

CAUTION

COMPATIBILITY WITH INSTALLED SUPPLEMENTAL TYPE CERTIFICATE HAS TO BE CHECKED.
FOR EXAMPLE, SB70—247—34 IS NOT APPLICABLE ON AIRCRAFT EQUIPPED WITH A GTX 3X5 TRANSPONDER INSTALLED WITH GARMIN STC IF NOT PUT IN CONFORMITY WITH TYPE CERTIFICATE INSTALLATION THROUGH SB70—250—34.

SUBJECT : GARMIN G1000 NXi INTEGRATED FLIGHT DECK AND SOFTWARE V20.80 (P/N 006—B3086—00)

REFERENCE : MOD70—0539—00 Version D and Version E, MOD70—0547—46 Version B, MOD70—0459—46 Version E and MOD70—0258—00 Version F.

EFFECTIVITY : TBM S/N 434 to 607 which have GDU software version SW15.11 (P/N 006-B0719-17) loaded through the application of SB70—233—34 Revision 2 and above.
TBM S/N 608 to 1105 which have GDU software version SW15.11 (P/N 006-B0719-17) loaded through the application of SB70—233—34 Revision 1 and above.
TBM S/N 1106 to 1110 which have GDU software version SW15.11 (P/N 006-B0719-16) loaded through the application of SB70—232—34 Revision 0 and above.
TBM S/N 1142, 1157 and 1159.

PURPOSE : To support in service G1000 “Integrated Flight Deck” avionics upgrade to the NXi standard and install Flight Stream 510.

PURPOSE OF THE REVISION 1 :
To extend effectivity to TBM 900 Aircraft.

SUMMARY :

APPLICATION : At user’s convenience

WARRANTY : NOT APPLICABLE.

PROCURABLE MATERIAL :

– **Contact Technical Publications Department at the following e–mail address : techpubs@daher.com, to order Supplement 66 (“GARMIN” G1000 NXi retrofit) and update your subscription contract to Pilot’s Operating Handbook and associated supplements.**
Please mention aircraft serial number.

– Parts to be ordered from your TBM parts distributor.

Item	Part number	Description	Qty/aircraft
/	7130010500	Plug (1)	1

NOTE :
This part list is given for your information and will not be updated.

(1) If Flight Stream 210 installed.

– Parts to be ordered from your GARMIN parts distributor.

Part number	Description	Qty/aircraft
K10–00029–01	Kit, TBM 700/850/900, G1000 NXi Retrofit (2)	1

(2) Content of the kit, TBM 700/850/900, G1000 NXi Retrofit :

Part number	Description	Qty/aircraft
011–04475–00	GCU unit (A4 Keyboard)	1
011–03470–10	PFD1/PFD2 Unit	2
011–03472–00	MFD Unit	1
011–03595–00	Flight Stream 510, Standard	1
010–02054–00	SD Card, G1000 NXi, TBM 850/900 – V 20.80	1
190–02348–00	Pilot’s Guide, G1000 NXi, TBM 850/900	1
K00–01070–00	Kit, Printed materials, G1000 NXi, TBM 850/900	1

NOTE :
The content of this kit is given for your information and will not be updated.

CONSUMABLE MATERIAL or OTHER PRODUCTS (Local purchase) :

– Insulated spare wire caps

TOOLS :

- Standard aeronautical maintenance station tools
- Computer with Windows operating system
- Blank SD Card

NOTE :
The SD card will be used for database update. It is possible to use the SD card from the bottom slot of PFD2 for this purpose as long as it is properly formatted. If not used, this SD card will be discarded as it is no longer needed with the G1000 NXi system. For subsequent database update, it is advised to keep this SD card and dedicate it for this purpose.

RELATED DOCUMENTS :

- Maintenance Manual, Chapter 24–30–04 page 301
- Maintenance Manual, Chapter 24–40–00 page 301
- Maintenance Manual, Chapter 24–60–01 page 401
- Maintenance Manual, Chapter 34–28–10 page 401
- Maintenance Manual, Chapter 34–28–11 page 401
- Maintenance Manual, Chapter 34–28–14 page 401
- Maintenance Manual, Chapter 46–20–01 page 401
- GARMIN “G1000 NXi Line Maintenance Manual” (LMM) P/N 190–02383–00
- Pilot’s guide, G1000 NXi TBM 850 / 900

MANPOWER :

Aircraft with GTS 820 TAS and FS 210

- 1 aeronautical electrician : 11 hours

Aircraft with GTS 820 TAS and without FS 210

- 1 aeronautical electrician : 9 hours

Aircraft without GTS 820 TAS and with FS 210

- 1 aeronautical electrician : 10 hours

Aircraft without GTS 820 TAS and without FS 210

- 1 aeronautical electrician : 8 hours

TECHNICAL INCIDENCES :

Pre–MOD70–0539–00 (G1000 NXi integrated Flight Deck and Software V20.80)

- Weight : – 22 lbs (– 9.98 kg)
- Lever arm : 155.63 in (3952.92 mm)
- Power consumption : – 4.89A / 28V

Post–MOD70–0539–00 (G1000 NXi integrated Flight Deck and Software V20.80)

- Weight : + 15.28 lbs (+ 6.93 kg)
- Lever arm : 155.67 in (3953.90 mm)
- Power consumption : + 1.95A / 28V

If MOD70–0459–46 (Flight Stream 210) must be uninstalled

- Weight : – 0.268 lbs (– 0.120 kg)
- Lever arm : 151 in (3840 mm)
- Power consumption : – 50mA / 28V

DESCRIPTION OF ACCOMPLISHMENT INSTRUCTIONS :

NOTE :
Operations required in this Service Bulletin must be accomplished by persons authorized by their Airworthiness Authorities and according to the procedure described hereafter.

NOTE :
Operations required in this Service Bulletin must be accomplished only in a GARMIN G1000 certified maintenance station. Garmin service centre directory can be downloaded at http://www8.garmin.com/aviation/pdfs/Aviation_Service_Directory.pdf.

A. PREPARATION

1) Make sure the ”SOURCE” selector is set to ”OFF” and the crash lever is down.
2) Make sure the “AVIONICS MASTER” selector is set to “OFF”.
3) Connect the ground power unit – refer to Chapter 24–40–00 page 301 of the Maintenance Manual.

NOTE :
If applicable, make sure that the TAWS enable card, CHARTVIEW enable card, ESP enable card (GX000 Enhanced AFCS Enablement card) and SVS enable card are available in the aircraft bag.

B. SAVING OF USER SETTINGS

1) Set ”SOURCE” selector to ”GPU”.

Aircraft from S/N 434 to S/N 684

2) Set “AVIONICS MASTER” selector to “ON”.

All

3) Select ”Weight planning” in the “AUX” page group and write down the BASIC EMPTY WEIGHT.
4) Select “AUX” page group then go to “OEM DIAGNOSTICS” using the FMS knob. Write down data shown in “GENERAL ECTM DATA” section and/or press the “SAVE IMG” softkey to keep record of the current values.
5) Record “EXCEEDANCES/TREND” on SD card as per procedure provided in LMM Paragraph “SAVE file to SD card”.

NOTE :
The MFD upper SD card shall not contain any .DAT file for the save function to be available.

6) On MFD, select “AUX” page group then go to “SYSTEM SETUP” using the FMS knob.

7) Select pilot profile (several times if required) and keep track of the settings (by writing them down or taking a picture).

NOTE :
Do the same for Map settings (go to Map display and press the Menu button of the GCU) and PFD settings (check the sub—menu of the softkeys).

8) Select “FPL” page group then go to “FLIGHT PLAN CATALOG” using the FMS knob. Export Flight Plans which must be saved — refer to procedure provided in Pilot’s Guide Paragraph ”FLIGHT PLANNING”.

NOTE :
User waypoints can’t be saved so they will have to be re—created especially those included in Flight Plan Catalog.

Aircraft from S/N 434 to S/N 684

9) Set “AVIONICS MASTER” selector to “OFF”.

All

10) Set ”SOURCE” selector to ”OFF” and pull down the crash lever.

C. RECORD OF PARAMETERS

1) On PL1 panel, pull “PFD1”, “PFD2” and “MFD” circuit breakers.

2) Set ”SOURCE” selector to ”GPU”.

Aircraft from S/N 434 to S/N 684

3) Set “AVIONICS MASTER” selector to “ON”

All

4) Successively start “PFD1”, “PFD2” and “MFD” screens in configuration mode — refer to LMM.

5) On PFD1 screen select the ”CAL” page group, then select “FUEL TANK CALIBRATION” page and note on Table 1, K factor displayed in “FUEL FLOW” field on line “ENG 1 SCALE”.

6) Select the GTX page group, then select the “TRANSPONDER CONFIGURATION” page and note recorded configuration parameters on Table 1 (XPDR#1 and XPDR#2, if installed).

7) Use the procedures given in Table 2 to identify the equipment installed on aircraft.

8) Select the ”GDU” page group, then select the “AIRFRAME CONFIGURATION” page and note on Table 1, “ENGINE S/N” value in “AIRFRAME” window.

9) On PL1 panel, pull “PFD1”, “PFD2” and “MFD” circuit breakers.

10) Set ”SOURCE” selector to ”OFF” and pull down the crash lever.

Aircraft from S/N 434 to S/N 684

11) Set “AVIONICS MASTER” selector to “OFF”.

All

D. DATA MANAGEMENT

1) Set ”SOURCE” selector to ”GPU”.

Aircraft from S/N 434 to S/N 684

2) Set “AVIONICS MASTER” selector to “ON”.

All

3) Select AUX-MAINTENANCE LOG page (password refer to LMM).

4) In PAGE MENU, save Folder-0 (then Folder-1) using “Save All Logs In Folder” function.

NOTE :
Files saving time can take a few minutes.

CAUTION

DO NOT DELETE FOLDER-1

CAUTION

DO NOT USE “DELETE ALL LOGS” FUNCTION

5) Set ”SOURCE” selector to ”OFF” and pull down the crash lever.

6) On MFD screen, extract ECTM SD card from top slot.

7) Connect SD card to a computer fitted with a SD card port or through a USB card reader.

NOTE :
To guide you through this process a video tutorial is available from www.mysocata.com section Support Corner/Support Release/Technical Video.

8) Save SD card files on your computer in a folder.

NOTE :
This procedure is only applicable with a windows computer.

CAUTION

NAME THE COMPRESSED FILE WITH THE AIRCRAFT SERIAL NUMBER (EX: 659.ZIP FOR THE S/N 659)

9) Compress them to a Zip file format (right click → Send to → compress zipped folder).

10) Log into website http://www.echanges–daher.com with user name “daher” and password “tbm2016”.

11) Select the “Langue : English”.

12) Click on “Datas TBM folders”, “add files” and “browse”.

13) Select zip file created in step 9) and import it (“open” and “start importing”)

NOTE :
File loading time can take 1 to 30 mn (depending on file size and internet connection quality).

14) Log out from “daher” account.

15) Delete the DATA logs.

16) Open the peripheral which enables to read SD card and create a saving folder “SAVE SW15” at the card root.

17) Save all “.dat”, Folder–0 and Folder–1 files contained in SD card in “SAVE SW15” folder.

NOTE :
It is advised to save a copy of SAVE SW15 folder (and any other “SAVE folder” already on the card) in a safe location as it contains the data for exceedence that won’t be transferred to the new NXi system.

18) Delete the “.dat” files, Folder–0 and Folder–1 from the SD card root.

19) Connect to http://www.mysocata.com, enter your login and password, ask for them if necessary. Click on “Technical Documentation”.

20) Download Zip file “ECTM_3.0.zip” from TBM 850 or TBM 900 TECH DATA folder.

21) Extract the content of “ECTM_3.0.zip” file from the SD card root (replace the old “html” folder by the one from “ECTM_3.0.zip” and merge the “print” folders).

22) With a text editor, complete the file ”tbm_config.js” included in html folder with the values noted at Paragraph B.4).

23) In case of Electronic checklist presence on the ECTM card (*.ace file), the file needs to be converted to comply with the new system. The checkset tool necessary for this operation will be made available on GARMIN Website soon.

24) Extract safely SD card from the computer.

NOTE :
The ECTM card will later be inserted in the new display unit.

25) On MFD screen, extract database card from bottom slot.

NOTE :
It is advised to save the Folder–0 and Folder–1 included in this card in a safe location as they contain the raw exceedance data (not readable from the text editor). They can be needed to analyse exceedance in case saved files in SAVE SW15 folder has been corrupted.

E. LRU MODIFICATION – See Figures 1, 2 and 2A

CAUTION

PRIOR TO ANY OPERATION ON PL1 PANEL, DISCONNECT THE BATTERY AND MAKE SURE NO EXTERNAL POWER SOURCE IS CONNECTED TO THE AIRCRAFT ELECTRICAL SYSTEM.
INSTALL THE FOLLOWING WARNING SIGN ON BOTH THE BATTERY RECEPTACLE AND THE GROUND POWER RECEPTACLE.

WARNING

MAINTENANCE WORK IN PROGRESS ON ELECTRICAL SYSTEM.
DO NOT CONNECT

1) Disconnect the battery – refer to Chapter 24–30–04 page 301 of the Maintenance Manual.
2) Remove A4 keyboard – refer to Chapter 34–28–14 page 401 of the Maintenance Manual.

   NOTE :
   Contact GARMIN for the conditions governing the LRU recovery.

3) Remove PFD1 / PFD2 units – refer to Chapter 34–28–10 page 401 of the Maintenance Manual.

   NOTE :
   Contact GARMIN for the conditions governing the LRU recovery.

4) Remove MFD unit – refer to Chapter 34–28–11 page 401 of the Maintenance Manual.

   NOTE :
   Contact GARMIN for the conditions governing the LRU recovery.

If GTS 820 TAS installed

5) According to Figures 2 and 2A, remove and discard wires SHB42, X825 and X826 between connector P406 pins D, E and F and A77P12 connector pins 58 and 59.

If FS 210 installed

6) Remove the two upper screws and tilt PL1 panel without disconnecting it.
7) Remove and discard UFX100 and UFA100 wires.
8) Remove and discard X571 and X588 wires.
9) Remove and discard FS 210 circuit breaker (2) – refer to Chapter 24–60–01 page 401 of the Maintenance Manual and replace it by plug.
10) Unstick Bluetooth label.

11) Remove Flight stream 210 (1) – refer to Chapter 46–20–01 page 401 of the Maintenance Manual.

CAUTION

WIRES MUST BE INSULATED INDIVIDUALLY AND FIXED UNDER FLOOR PANEL USING ANY APPROPRIATE MEANS.

12) Cut and discard A210 P1 connector.

13) According to Figure 1, install insulated spare wire caps (4).

Aircraft equipped with GDL option and on which SB70–234–46 Paragraph E has been applied

14) Remove and discard X1363 and X1364 wires.

All

15) Install new MFD unit – refer to Chapter 34–28–11 page 401 of the Maintenance Manual.

16) Install new PFD1 / PFD2 units – refer to Chapter 34–28–10 page 401 of the Maintenance Manual.

17) Install new A4 keyboard – refer to Chapter 34–28–14 page 401 of the Maintenance Manual.

F. DATA LOADING TO UPGRADE SOFTWARE TO VERSION 20.80

1) Set ”SOURCE” selector to ”GPU”.

Aircraft from S/N 434 to S/N 684

2) Set “AVIONICS MASTER” selector to “ON”.

All

NOTE :
Do not take into account the first message : “UPDATE FAILED”.

3) Set “AP TRIMS MASTER” selector to “ON”.

4) Using SD card P/N 010–02054–00, successively perform :

CAUTION

THE GMA SOFTWARE HASN'T EVOLVED COMPARED TO THE PREVIOUS SW RELEASE (V15.11). IN ORDER TO AVOID ISSUES WHEN RELOADING THE SOFTWARE VERSION 20.80, THE GMAs SOFTWARE SHALL NOT BE SELECTED FOR LOADING. ONLY CONFIGURATION ITEMS MUST BE LOADED – REFER TO FIGURE HEREAFTER.

a) "LOADING DISPLAY SOFTWARE" procedure operation as per procedure provided in LMM.

b) "LOADING BASELINE SOFTWARE" procedure operation as per procedure provided in LMM.

NOTE :
In the "SYSTEM UPLOAD" page choose and activate the "GROUP" field box :
- "TBM 850 STD1" for aircraft S/N 434 to S/N 684
- "TBM 900 STD1" for aircraft S/N 687 to S/N 1049
- "TBM 900 STD2" for aircraft S/N 1050 to S/N 1159

Depending on the optional equipment installed on the aircraft (refer to Table 2), perform the options loading as per procedure provided in LMM Paragraph "LOADING SOFTWARE FOR OPTIONAL EQUIPMENT" and "RELOADING LRU SOFTWARE".

NOTE :
If GTX 345R has been installed out of the Type Certificate scope (for example with GARMIN STC), the operator shall refer to SB70–250–34 to identify the transponders configuration and shall modify aircraft wiring accordingly.

c) In the same "SYSTEM UPLOAD" page, press on "UPDT CFG" softkey and confirm "OK".

5) On the PFD1, select the "GDU" page group, then select the "AIRFRAME CONFIGURATION" page.

6) Observe display and verify engine S/N in "AIRFRAME" field.

NOTE :
Change it if different from the value recorded in Paragraph "RECORD OF PARAMETERS".

NOTE :
The serial number must only comprise 6 characters (2 letters and 4 digits) without blank. For example "RV0123".

7) Successively perform :

a) Select "SYSTEM" page group then go to the SYSTEM STATUS page using the FMS knob and activate the cursor. Highlight the specified items in the LRU window and verify the software part numbers and versions against the ones listed in Table 3 of this Service Bulletin.

b) Do "Aircraft Registration Number Entry" operation as per procedure provided in LMM Paragraph "AIRCRAFT CONFIGURATION PAGE".

c) If applicable (refer to Table 2) and if unlock cards are available, for optional features that need to be activated through unlock cards, perform the "ENABLING OPTIONAL FEATURES" operations – refer to LMM.

d) Depending on the installation of the HF option on the aircraft (refer to Table 2 select the "GMA" page group and press the "OPTIONS" softkey. Set the "DISABLE COM3" field as not active (for GMA#1 and GMA#2).

e) In the "SYSTEM UPLOAD" page, press on "UPDT CFG" softkey and confirm "OK".

f) Press "CONFIRM CFG" softkey in the GDU > CONFIGURATION MANAGER page.

Aircraft from S/N 434 to S/N 684

8) Set "AVIONICS MASTERS" selector to "OFF".

All

9) Set "SOURCE" selector to "OFF" and pull down the crash lever.

10) Insert the ECTM SD card on the MFD top slot.

G. FLIGHT STREAM 510 INSTALLATION

1) Insert Flight Stream 510 into the bottom slot of the MFD.

H. DATABASE LOADING

1) Restore all applicable databases. Refer to the Pilot's guide. Use the blank SD Card listed in Paragraph "TOOLS".

NOTE :
It is advised to keep this SD card available in the plane and dedicate it for the subsequent database updates (instead of using FS 510 for this purpose).

I. RESTORING USER SETTINGS

1) Set "SOURCE" selector to "GPU".

Aircraft from S/N 434 to S/N 684

2) Set "AVIONICS MASTERS" selector to "ON".

All

3) Select "SYSTEM" page and restore the basic empty weight noted in Paragraph B. 3).

4) Select "AUX" page group then go to "SYSTEM SETUP" using the FMS knob.

5) Restore Pilot Profile, Map settings and PFD settings in accordance with values noted in paragraph B.7).

NOTE :
User waypoints cannot be saved. They must be restored, especially those included in Flight Plan Catalog. Flight plans must be restored too.

6) Select “FPL” page group then go to “FLIGHT PLAN CATALOG” using the FMS knob.

7) Import flight plans from the SD card – refer to Pilot’s guide Paragraph ”FLIGHT PLANNING”.

8) Adjust passenger headset volume

   a) On PFD1, select GMA Configuration page

   b) Scroll to “Passenger Volume” line item

   c) Use the small FMS knob to turn the volume up or down as needed between 0 and 64.

      NOTE :
      To obtain optimum audio comfort (balanced between ATC, Intercom, and Alarms), after several attempts we suggest a volume around 46.

   d) Press the ENT key to save your change.

J. RECONDITIONING

1) On PFD and MFD screens, check :

   a) Validity of COM/NAV information in top corners of the screens,

   b) Validity of altitude, air data, vertical speed and outside air temperature information,

   c) Validity of attitude and heading information,

   d) Validity of areas dedicated to engine parameters (on MFD screen),

   e) Check for proper engagement and proper disengagement of autopilot.

2) Set “AP TRIMS MASTER” selector to “OFF”.

3) Disconnect the ground power unit – refer to Chapter 24–40–00 page 301 of the Maintenance Manual.

4) Discard the MFD and PFD1 bottom slot card prior to 20.80 and if not used for database update the SD cards from the bottom slot of PFD2.

5) Keep it in the aircraft the SD Card identified “20.80 G1000 NXi”.

6) Close PL1 panel.

7) Install the two upper screws.

UPDATING OF THE AIRCRAFT DOCUMENTATION :

Upon completion of Service Bulletin No. SB 70–247–34 Revision 1 "GARMIN G1000 NXi INTEGRATED FLIGHT DECK AND SOFTWARE V20.80 (P/N 006–B3086–00)" (Reference MOD, see hereunder), make an appropriate maintenance record entry.

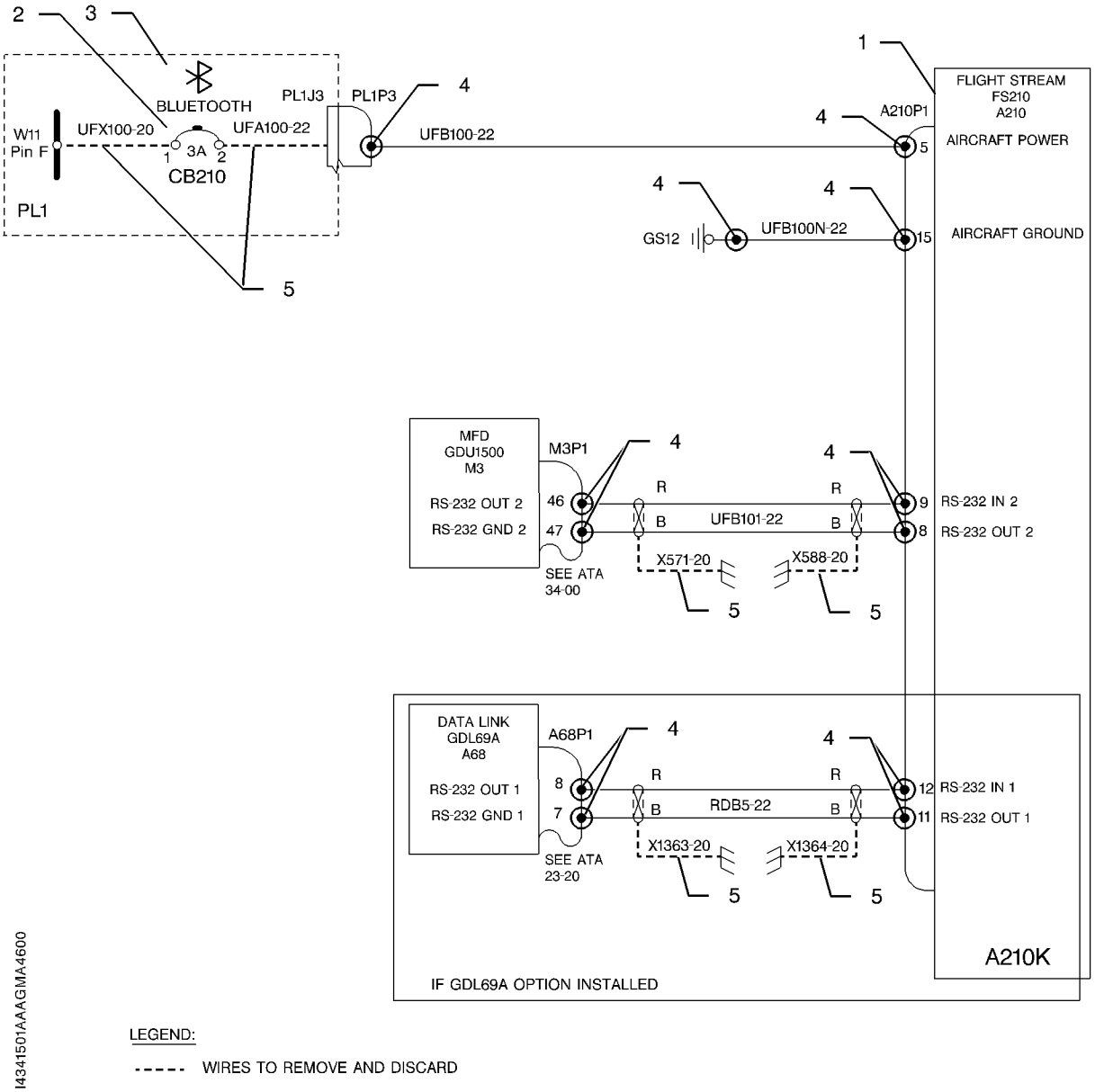
If FS 210 removed : MOD70–0459–46 Version E
If GTS 820 present : MOD70–0258–00 Version F
All : MOD70–0539–00 Version D, Version E
MOD70–0547–46 Version B)

Insert Supplement 66 ("GARMIN" G1000 NXi retrofit) into Pilot's Operating Handbook.

WARNING : DAHER considers that it is VERY IMPORTANT for operators to comply with the instructions of this SB.

Operators who arbitrarily ignore the compliance statement indicated in this SB do so at their own risk.

1 – Flight Stream 210
2 – Circuit breaker
3 – Sticker
4 – Insulated spare wire caps
5 – Wires to remove and discard



I4341501AAAGMA4600

LEGEND:

----- WIRES TO REMOVE AND DISCARD

Figure 1 – FS 210 Removal – Wiring modification

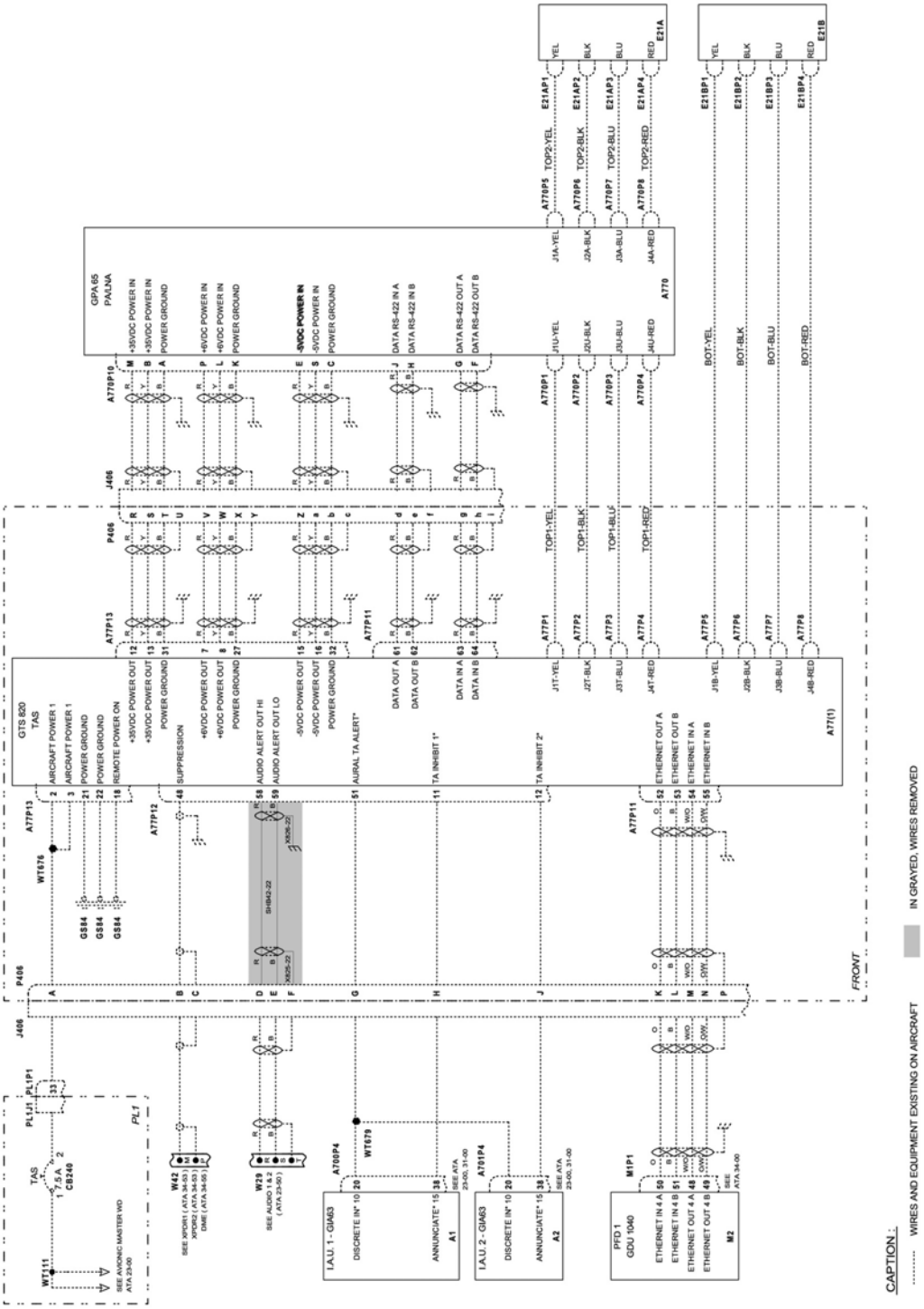


Figure 2 — TAS GTS 820 Wiring modification — Pre—SB70—247—34

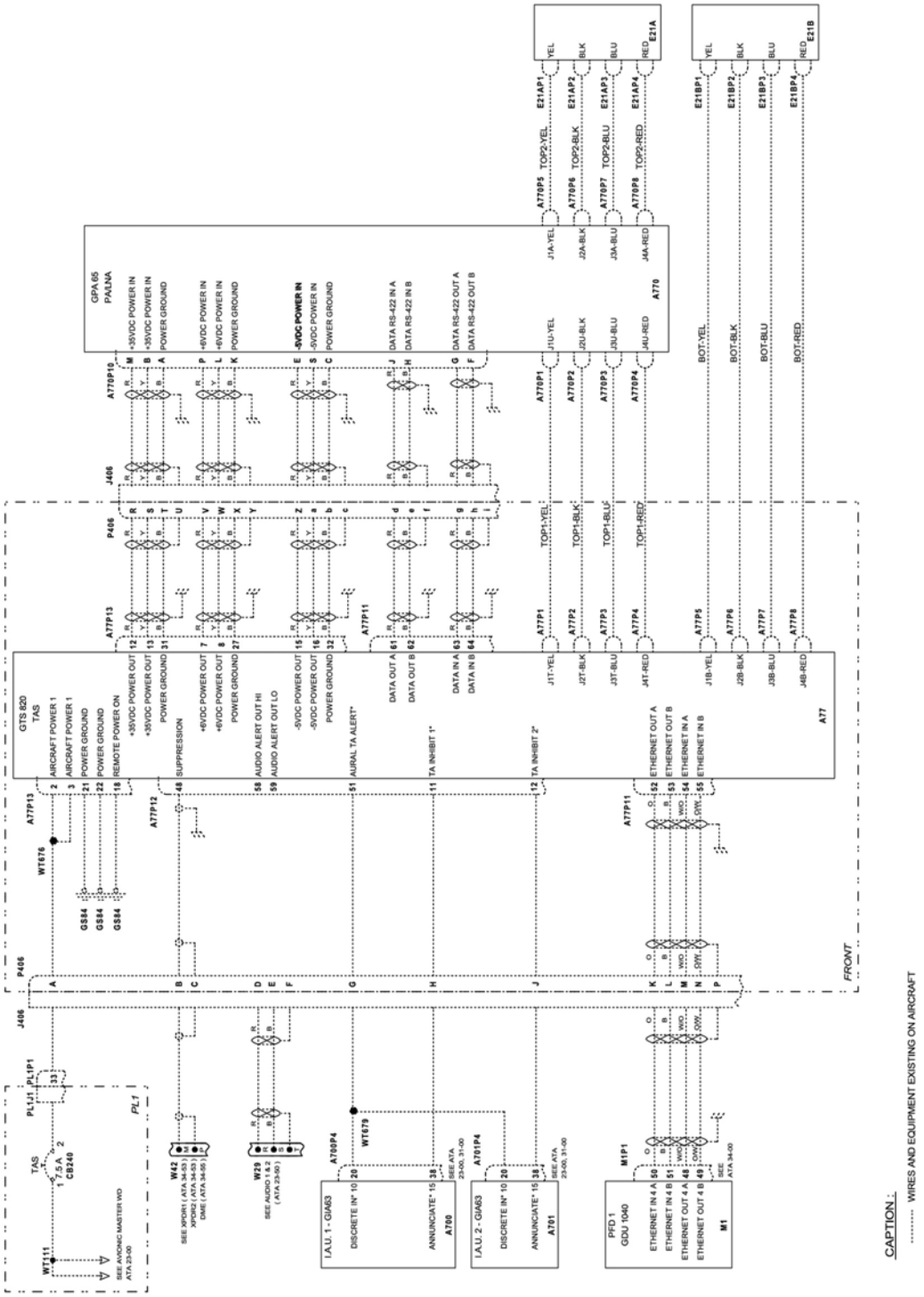


Figure 2A – TAS GTS 820 Wiring modification – Post–SB70–247–34

TBM 850/900 S/N : Date

Fuel Flow K factor :
Engine S/N :

XPDR	XPDR1	XPDR2 (if installed)
VFR code		
Aircraft weight		
Max Airspeed		
Address Type		
ICAO Address		
Flight ID Type		
Flight ID		
ENHANCED SURVEIL		

Table 1

	XPDR1 and XPDR2 (if installed)
CONFIGURATION FRAME	
LATERAL OFFSET FROM CENTER (M)	UNKNOWN
LONGITUDINAL OFFSET FROM NOSE (M)	UNKNOWN
AIRFRAME CONFIGURATION FRAME	
1090 IN	ENABLED
UAT IN	DISABLED
ADS–B TRANSIT	ENABLED
AIRCRAFT WIDTH	± 23 MT
AIRCRAFT LENGTH	± 15 MT
SURVEIL INTEGRITY	$< 1x10^{-7}$ ERR/HR FLT

Table 1A

Option designation	Procedure to check installation	Applicable to TBM850 STD1	Applicable to TBM900 STD1	Applicable to TBM900 STD2	Installed Before Update	Installed After Update
GTX 33(D)ES (XPDR1) and GTX 33ES (XPDR2) Installation	Config Mode > GIA > GIA SERIAL CONFIGURATION. Select unit GIA1 or GIA2, on RS-232 / CHNL5, the GTX 33ES # 1 w/TIS and GTX 33ES # 2 w/TIS are selected.	X	X	X		
GTX 33(D)ES (XPDR1) and GTX 33 non ES (XPDR2) Installation	Config Mode > GIA > GIA SERIAL CONFIGURATION. Select unit GIA1 or GIA2, on RS-232 / CHNL5, the GTX 33ES # 1 w/TIS and GTX 33 # 2 w/TIS are selected.	X	X	X		
GTX 33(D)ES (XPDR1) and GTX 345 (XPDR2) Installation	Config Mode > GIA > GIA SERIAL CONFIGURATION. Select unit GIA1 or GIA2, on RS-232 / CHNL5, the GTX 33ES # 1 w/TIS and GTX 3x5 # 2 w/TIS are selected.	X	X	X		
GTX 33(D) nonES (XPDR1) and GTX 33 nonES (XPDR2) Installation	Config Mode > GIA > GIA SERIAL CONFIGURATION. Select unit GIA1 or GIA2, on RS-232 / CHNL5, the GTX 33 # 1 w/TIS and GTX 33 # 2 w/TIS are selected.	X	X	X		
GTX 345R (XPDR1) and GTX 345R (XPDR2) Installation	Config Mode > GIA > GIA SERIAL CONFIGURATION. Select unit GIA1 or GIA2, on RS-232 /CHNL5, theGTX 3x5 # 1w/TIS and GTX 3x5 # 2 w/TIS are selected.	X	X	X		
GTX 345R (XPDR1) and GTX 33ES (XPDR2) Installation	Config Mode > GIA > GIA SERIAL CONFIGURATION. Select unit GIA1 or GIA2, on RS-232 /CHNL5, the GTX 3x5 # 1w/TIS and GTX 33 ES # 2 w/TIS are selected	X	X	X		
GTX 345R (XPDR1) and GTX 33 nonES (XPDR2) Installation	Config Mode > GIA > GIA SERIAL CONFIGURATION. Select unit GIA1 or GIA2, on RS-232 /CHNL5, theGTX 3x5 # 1w/TIS and GTX 33 ES # 2 w/TIS are selected	X	X	X		

Table 2 (1/6) – Option List

Option designation	Procedure to check installation	Applicable to TBM850 STD1	Applicable to TBM900 STD1	Applicable to TBM900 STD2	Installed Before Update	Installed After Update
Fuel Pressure Enable Option	Normal Mode > MFD, the option is installed if there is a PSI field and a value in it in the FUEL QTY section of the EICAS strip.	X				
FS 510 Installation	Not installed up to this SB application.	X	X	X	N/A	To be loaded
AOA/USP/ Coupled GA Installation	PFD> AoA /WIND >AoA > AoA AUTO to enable the AoA gage display within the corresponding PFD. Check that the AoA gage appears	X	X	X		
ESP Installation (ESP unlock prerequisite)	In normal mode, on MFD System> AUX > System-Setup > Setup2, ESP option is installed if "STABILITY AND PROTECTION" menu can be set to "enabled" or "disabled".	X	X	X		
GTS 820 Installation	Config Mode > System > SYSTEM CONFIGURATION. GTS is installed if there is a green tick in front of GTS in the OTHER LRUS PRESENT Frame.	X	X	X		
GRA 55 RS Installation	Config Mode > System > SYSTEM CONFIGURATION. GRA is installed if there is a green tick in front of GRA 1 in the OTHER LRUS PRESENT frame.			X		
GWX 70 Installation	Config Mode > SYSTEM DATA PATH CONFIGURATION. Press the HSDB softkey. This option is installed if GWX1 is listed with a green tick on MFD1 Port4.		X	X		
KN63 DME Installation	Config Mode > GIA > GIA RS-485 CONFIGURATION. Select unit GIA2. KN63 is installed if CHNL1 of CLOCKED DATA INTERFACE frame is set with "DME KN63 1".	X	X	X		
WX 500 Installation	Config Mode > GIA > GIA SERIAL CONFIGURATION. Select unit GIA2. WX 500 is installed if CHNL3 has a green tick and the bus is called WX-500.	X	X	X		
GDL 69A SXM Installation	Config Mode > SYSTEM DATA PATH CONFIGURATION. Press the HSDB softkey. This option is installed if GDL 69 is listed on MFD1 port 1 AND Config Mode > SYSTEM > SYTEMSTATUS, select the GDL item. Check GDL 69A P/N 011-03177-10 (SXM units).		X	X		

Table 2 (2/6) – Option List

Option designation	Procedure to check installation	Applicable to TBM850 STD1	Applicable to TBM900 STD1	Applicable to TBM900 STD2	Installed Before Update	Installed After Update
GWX 68 (MFD port4, No GDL 69A) Installation	Config Mode > SYSTEM DATA PATH CONFIGURATION. Press the HSDB softkey. This option is installed if GWX1 is listed with a green tick on MFD1 Port4, and NONE is indicated on MFD1 Port1.	X				
GDL 69A (MFD port1), GWX 68 (MFD Port4) Installation	Config Mode > SYSTEM DATA PATH CONFIGURATION. Press the HSDB softkey. This option is installed if GWX1 is listed with a green tick on MFD1 Port4, and GDL 69 is listed on MFD1 Port1. Config mode > SYSTEM> SYSTEM-STATUS, select the GDL item. Check GDL 69A P/N 011-00987-00 (non SXM units).	X				
GWX 68 (MFD port1, No GDL 69A) Installation	Config Mode > SYSTEM DATA PATH CONFIGURATION. Press the HSDB softkey. This option is installed if GWX1 is listed with a green tick on MFD1 Port1.	X				
GDL 69A (MFD port1), GWX 68 (GDL Port2) Installation	Config Mode > SYSTEM DATA PATH CONFIGURATION. Press the HSDB softkey. This option is installed if GDL 69 is listed with a green tick on MFDPort1 and GWX1 is listed with a green tick on GDL Port2. Config mode > SYSTEM> SYSTEM STATUS, select the GDL item. Check GDL 69A P/N 011-00987-00 (non SXM units).	X				
GSR 56 Installation	Config Mode > GIA > GIA SERIAL CONFIGURATION. Select unit GIA2. GSR 56 is installed if CHNL4 has a green tick and the bus is called IRIDIUM 1.	X	X	X		(1)
FS 210 Installation	Config Mode > GDU > SERIAL CONFIGURATION. FS 210 is installed if MFD RS232#2 is allocated to connext	X	X	X		Not to load
Becker ADF3502 Installation	Config Mode > GIA > GIA-485 CONFIGURATION. Select unit GIA2. ADF3502 is installed if CHNL3 of RS-485 frame has a green tick and is listed as "ADF 3502 1".	X	X	X		

Table 2 (3/6) – Option List

Option designation	Procedure to check installation	Applicable to TBM850 STD1	Applicable to TBM900 STD1	Applicable to TBM900 STD2	Installed Before Update	Installed After Update
KTA 810 TAS Installation	Config Mode > GIA > GIA SERIAL CONFIGURATION. Select unit GIA2. In the ARINC 429 frame, KTA 810 is installed if CHNL 4 has a green tick and the bus is called TRAFFICADVISORY	X				
KRA 405B RA Installation	To be skipped if KRA 4500RA installed - ConfigMode > GIA >GIA SERIAL CONFIGURATION. Select unit GIA2. If a Radio Altimeter is installed, the ARINC429 IN1 has a green tick and the bus is called RADALT. There is noway to know which type of RA is installed through G1000 interface. Refer to description of the Aircraft or check RA unit between frames 9 and 10 to know if RA 4500 or KRA 405B option should be installed	X				
RA 4500 Installation	To be skipped if KRA 405B RA installed - ConfigMode > GIA >GIA SERIAL CONFIGURATION. Select unit GIA2. If a Radio Altimeter is installed, the ARINC429 IN1 has a green tick and the bus is called RADALT. There is noway to know which type of RA is installed through G1000 interface. Refer to description of the Aircraft or check RA unit between frames 9 and 10 to know if GRA 55 or RA 4500 option should be installed.	X	X	X		
GDL 69A Installation	ConfigMode > SYSTEMSTATUS. Select GDL69 in LRUfield. GDL 69A option is installed if the PRODUCT item is GDL69 A in the DATA field AND Config Mode > SYSTEM > SYTEMSTATUS, select the GDL item. Check GDL 69A P/N 011-00987-00 (non SXM units).		X	X		
GSR 56 - GFDS voice/SMS only Configuration	Config Mode > GIA > GIA SERIAL CONFIGURATION. Select unit GIA2. GSR 56 is installed if CHNL 4 has a green tick and the bus is called IRIDIUM 1. If the aircraft owner has not activated GARMIN CONNEXT (also known as GFDS) registration, the installation of this option may be considered as it allows using the iridium phone without being disturbed by advisory messages requiring to register to GARMIN CONNEXT.	X	X	X		(2)

Table 2 (4/6) — Option List

Option designation	Procedure to check installation	Applicable to TBM850 STD1	Applicable to TBM900 STD1	Applicable to TBM900 STD2	Installed Before Update	Installed After Update
Aircraft Data Recording System Installation	Not installed.	X	X			
TBM900-STD1 Oil Pressure Sensor Installation	Not installed.			X		
TBM900-STD2 Oil Pressure Sensor Installation	Not installed.		X			
Alternate Oil Pressure Sensor Installation	Config Mode > GEA > GEA CONFIGURATION. Press successively the softkeys 1 to 4. Press softkey 2 (ANLG In). Select GEA2 in SELECT GEA UNIT field. Select GEA I/OA in SELECT GEA BOARD field. Select Channel 3 in CHANNEL field (name : ENG 1 OP). Check that the value of parameter 3 is 2,06782E7.	X				
GDL 69A SXM (MFD port1), GWX 68 (MFD Port4) Installation	Config Mode > SYSTEM DATA PATH CONFIGURATION. Press the HSDB softkey. This option is installed if GWX1 is listed with a green tick on MFD1 Port4, and GDL 69 is listed on MFD1 Port1. Config mode > SYSTEM> SYSTEMSTATUS, select the GDL item. Check GDL 69A P/N 011-03177-10 (SXM units).	X				
GDL 69A SXM (MFD port1), GWX 68 (GDL Port2) Installation	Config Mode > SYSTEM DATA PATH CONFIGURATION. Press the HSDB softkey. This option is installed if GWX1 is listed with a green tick on MFD1 Port4, and GDL 69 is listed on MFD1 Port1. Config mode > SYSTEM> SYSTEM STATUS, select the GDL item. Check GDL 69A P/N 011-03177-10 (SXM units).	X				
ENABLE GTS ADS-B IN Installation Option	GTX 33 (D) with extended squitter (ES) installed and no GTX 345R installed (see above options in the table) and Config Mode > GTS > GTS CONFIGURATION : check ADS-B TX configuration is listed as INSTALLED.	X	X	X		

Table 2 (5/6) – Option List

Option designation	Procedure to check installation	Applicable to TBM850 STD1	Applicable to TBM900 STD1	Applicable to TBM900 STD2	Installed Before Update	Installed After Update
KTA with GTX 345 (XPDR1) Installation	Check combination of the previous option on the list : "KTA 810 TAS installation" AND any option listing GTX 345R (XPDR1).	X				
KTA with GTX 345 (XPDR2) Installation	Check combination of the previous option on the list : "KTA 810 TAS installation" AND GTX 33(D)ES (XPDR1) and GTX 345R (XPDR2) installation.	X				
(1) : If willing to use only the Voice / SMS function of GSR 56 (no GARMIN connext subscription) a dedicated option available below should be loaded instead of this one. (2) : There is no intention of using GARMIN connext weather service.						

Table 2 (6/6) – Option List

SW Type	Instances	SW Version	SW P/N	COMMENT
GCU System	GCU 1	3.10	006-B0742-12	
GDC System	GDC 1	3.11	006-B0261-21	
	GDC 2	3.11	006-B0261-21	
GDC FPGA	GDC FPGA 1	1.05	006-C0055-00	
	GDC FPGA 2	1.05	006-C0055-00	
GEA System	GEA 1	2.07	006-B0193-05	
	GEA 2	2.07	006-B0193-05	
GIA System	GIA 1	8.11.1	006-B0544-6E	
	GIA 2	8.11.1	006-B0544-6E	
	GIA 1 AUDIO	2.03	006-D4751-03	
	GIA 2 AUDIO	2.03	006-D4751-03	
	GIA 1 GFC CERT	2.07 2.08 (TBM850)	006-D0734-06 006-B0734-07 (TBM850)	
	GIA 2 GFC CERT	2.07 2.08 (TBM850)	006-D0734-06 006-B0734-07 (TBM850)	
	GIA 1 BB	6.10	006-B0544-BE	
	GIA 2 BB	6.10	006-B0544-BE	
GMA System	GMA 1	4.04	006-B0203-44	
	GMA 2	4.04	006-B0203-44	
GMC System	GMC	3.00	006-B0387-20	
GMU System	GMU 1	2.05	006-B0224-01	
	GMU 2	2.05	006-B0224-01	
GMU FPGA	GMU 1 FPGA	2.00	006-C0048-00	
	GMU 2 FPGA	2.00	006-C0048-00	
GPS System	GPS 1	5.10	006-B0339-21	
	GPS 2	5.10	006-B0339-21	
GRS System	GRS 1	3.05	006-B0223-25	
	GRS 2	3.05	006-B0223-25	
GRS FPGA	GRS 1 FPGA	2.00	006-C0049-00	
	GRS 2 FPGA	2.00	006-C0049-00	
GS System	GS 1	6.02	006-B0082-XX	
	GS 2	6.02	006-B0082-XX	

Table 3 (1/4) – Software versions

SW Type	Instances	SW Version	SW P/N	COMMENT
GFCX Cert X	GSA GFC CERT PTCH CTL	2.07 2.08 (TBM850)	006-D0734-06 006-D0734-07 (TBM850)	
	GSA GFC CERT PTCH MON	2.07 2.08 (TBM850)	006-D0734-06 006-D0734-07 (TBM850)	
	GSA GFC CERT PTCH TRM C	2.07 2.08 (TBM850)	006-D0734-06 006-D0734-07 (TBM850)	
	GSA GFC CERT PTCH TRM M	2.07 2.08 (TBM850)	006-D0734-06 006-D0734-07 (TBM850)	
	GSA GFC CERT ROLL CTL	2.07 2.08 (TBM850)	006-D0734-06 006-D0734-07 (TBM850)	
	GSA GFC CERT ROLL MON	2.07 2.08 (TBM850)	006-D0734-06 006-D0734-07 (TBM850)	
	GSA GFC CERT YAW CTL	2.07 2.08 (TBM850)	006-D0734-06 006-D0734-07 (TBM850)	
	GSA GFC CERT YAW MON	2.07 2.08 (TBM850)	006-D0734-06 006-D0734-07 (TBM850)	
	GSA GFC CERT YAW TRM	2.07 2.08 (TBM850)	006-D0734-06 006-D0734-07 (TBM850)	
	GTA GFC CERT	2.07 2.08 (TBM850)	006-D0734-06 006-D0734-07 (TBM850)	
GSA XX - GIA X Servos	GSA PTCH CTL	3.10 2.40 (TBM850)	006-B0398-34 006-B0398-21 (TBM850)	
	GSA PTCH MON	3.10 2.40 (TBM850)	006-B0398-34 006-B0398-21 (TBM850)	
	GSA PTCH TRM C	3.10 2.40 (TBM850)	006-B0398-34 006-B0398-21 (TBM850)	
	GSA PTCH TRM M	3.10 2.40 (TBM850)	006-B0398-34 006-B0398-21 (TBM850)	
	GSA ROLL CTL	3.10 2.40 (TBM850)	006-B0398-34 006-B0398-21 (TBM850)	
	GSA ROLL MON	3.10 2.40 (TBM850)	006-B0398-34 006-B0398-21 (TBM850)	

Table 3 (2/4)— Software versions

SW Type	Instances	SW Version	SW P/N	COMMENT
	GSA YAW CTL	3.10 2.40 (TBM850)	006-B0398-34 006-B0398-21 (TBM850)	
	GSA YAW MON	3.10 2.40 (TBM850)	006-B0398-34 006-B0398-21 (TBM850)	
	GSA YAW TRM	3.10 2.40 (TBM850)	006-B0398-34 006-B0398-21 (TBM850)	
GTA System	GTA YAW TRM	2.03	006-B0267-13	
GDU System	MFD 1	20.80	006-B1177-64	
	PFD 1	20.80	006-B1177-64	
	PFD 2	20.80	006-B1177-64	
GTX System (GTX 33)	GTX 33(D)ES	8.04	006-B0172-14	See Version E of MOD70-0264-34
	GTX 33(D)ES BB	N/A	N/A	
	GTX 33(D)ES SYNCHED CONFIG	N/A	N/A	
GTX System (GTX 345R)	GTX 345R	2.12	006-B1607-09	See Version D of MOD70-0542-34
	GTX 345R AUDIO	2.02	006-D4910-01	
	GTX 345R ADS-B	2.10	006-B1797-04	
	GTX 345R ADS-B FPGA	2.10	006-C0157-21	
	GTX 345R XHTML	2.21	006-D6674-11	
GTX FPGA (GTX 345R)	GTX 345R FPGA	2.20	006-C0153-22	
GTS System	GTS - SW	4.01	006-B0551-31	See Version B of MOD70-0258-00 for applicability
	GTS REGION LIST	4.00	006-D0725-02	
	GTS - AUDIO	2.00	006-D0726-00	
	GTS MAGNETIC VAR	2005.00	006-D0159-01	
GTS FPGA	GTS - FPGA	2.00	006-C0081-20	
GRA System	GRA	2.40	006-B1447-0A	See Version A of MOD70-0451-34 for applicability
	GRA - CPU	2.20	006-B1448-06	
	GRA - BB	2.00	006-B1447-BD	
	GRA - RGN LIST	2.00	006-D3609-02	

Table 3 (3/4)– Software versions

SW Type	Instances	SW Version	SW P/N	COMMENT
GWX 70 System	GWX	2.55	006-B0756-17	See Version B of MOD70-0394-34 for applicability
	GWX FPGA	1.20	006-C0119-02	
	GWX RGN LIST	2.00	006-D1307-02	
GWX 68 System	GWX	2.20	006-B0266-12	See Version C of MOD70-0176-00 for applicability
GDL 69SXM System	GDL 69SXM	5.20	006-B1902-05	See Version A of MOD70-0458-23 for applicability
	GDL APP PACKAGE	1.10	006-D5402-02	
	GDL XM FIRMWARE	1.20	006-B2181-03	
GDL 69A System	GDL 69A	4.02.00	006-B0317-22	See Version B of MOD70-0176-00 for applicability

Table 3 (4/4)— Software versions