EAGLE TECHNICAL BULLETIN

REF. TCCA STC: SH21-44

Eagle Technical Bulletin Number: **TB-E212-2006-1**

Purpose: To provide instructions for the Installation of the Garmin GTN 650 / 750 Systems while the approved GTN 650H Xi / 750H Xi are reviewed by JCAB.

Eligible Serial Numbers: 31265

Compliance: Temporary until Garmin GTN 650H Xi / 750H Xi receives JCAB approval.

Description: This Technical Bulletin (TB) provides the information required for the installation of the Garmin GTN 650 / 750 Systems.

Parts List:

ITEM	QTY -011	QTY -013	PART NUMBER	DESCRIPTION
	X		TB-E212-2006-011	Garmin GTN 650 GPS/COM/NAV
		X	TB-E212-2006-013	Garmin GTN 750 GPS/COM/NAV
1	1		011-02256-00 *	GTN 650
2		1	011-02282-00 *	GTN 750

* MOD 7 (Garmin P/N 011-04950-01) must be incorporated to meet the exclusions for DO-227A.

Weight and Balance:

ITEM	WEIGHT	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
E2006-99-3 Garmin GPS / NAV / COMM Kit	20.37	-0.47	-9.59	73.99	1507.22
Removed GTN 650H Xi and GTN 750H Xi	-12.60	-	-	-	-
Installed GTN 650 and GTN 750	12.90	-	-	-	-
E2006-99-3 Garmin GPS / NAV / COMM Kit (New Total)	**20.67**	**-0.47**	**-9.71**	**73.99**	**1529.37**

AVIONICS DESIGN SERVICES
APPROVED FOR RELEASE

28-Jan-2022

BY C. Voicu DATE

ORIGINAL IN RED

REV	DESCRIPTION	BY	DATE
B	REVISED APPENDIX B TO ADD A PAGE TO FMS	KB	2022-01-27
A	NEW ISSUE	KB	2022-01-04

DESIGN	KB	**EAGLE COPTERS LTD** CALGARY, AB, CANADA
DRAWN	KB	
CHECKED	WK	DRAWING NO. TB-E212-2006-1 REV. B
MFG. APPR.	CD	SHEET 1 OF 18
RELEASED	KB	TITLE GARMIN GTN 650 / 750 SYSTEM INSTL
DE APPR.		
DATE 2022-01-27		

Installation Procedure:

1. Remove the GTN 750H Xi from the Center Instrument Panel in accordance with Section 4.10.2 of the Garmin GTN Xi Series TSO Installation Manual.
2. Install the GTN 750 in the Center Instrument Panel in accordance with Section 4.10.2 of the Garmin GTN 725/750 TSO Installation Manual.
3. Remove the GTN 650H Xi from the Center Instrument Panel in accordance with Section 4.10.2 of the Garmin GTN Xi Series TSO Installation Manual.
4. Install the GTN 650 in the Center Instrument Panel in accordance with Section 4.10.2 of the Garmin GTN 625/635/650 TSO Installation Manual.
5. Configure the GTN 650 and GTN 750 in accordance with the Configuration Section below.
6. Complete the test procedure for the GTN 650 and GTN 750 in accordance with Section 6 of TR-E212-2006-3 Rev. A.
7. Complete the EMI/EMC/RFI Test for the GTN 750 in in accordance with Section 11.5 of TR-E212-2006-3 Rev. A
8. Complete the EMI/EMC/RFI Test for the GTN 650 in in accordance with Section 11.6 of TR-E212-2006-3 Rev. A
9. Insert the temporary ICA revision as indicated in Instructions for Continued Airworthiness Section.
10. Insert the temporary FMS revision as indicated in Flight Manual Supplement Section.
11. Insert the temporary Electrical Load Analysis (ELA) as indicated in Electrical Load Analysis Section.
12. Make an entry into the aircraft technical reports to indicate TB-E212-2006-1 has been completed.
13. Notify Eagle Copters that this Technical Bulletin has been accomplished by filling out the attached form (Sheet 18) and emailing it to Eagle Copters.

Garmin GTN 650 Configuration:

GTN SETUP		
ARINC 429 MENU		
PARAMETER	**CONFIGURATION**	
	SPEED	**DATA**
ARINC 429 IN 1	LOW	OFF
ARINC 429 IN 2	HIGH	OFF
ARINC 429 OUT 1	LOW	OFF
ARINC 429 OUT 2	LOW	OFF
SDI	COMMON	
SERIAL (RS-232) MENU		
PARAMETER	**CONFIGURATION**	
	INPUT	**OUTPUT**
RS-232 1	OFF	OFF
RS-232 2	OFF	OFF
RS-232 3	OFF	OFF
RS-232 4	OFF	OFF
HSDB MENU		
PARAMETER	**CONFIGURATION**	
ETHERNET PORT 1	NOT CONNECTED	
ETHERNET PORT 2	CONNECTED	
ETHERNET PORT 3	NOT CONNECTED	
ETHERNET PORT 4	NOT CONNECTED	
INTERFACED EQUIPMENT MENU		
UNIT	**PRESENT**	**SETTINGS**
CROSS-SIDE NAVIGATOR	PRESENT	GTN
GDL 69/69A	NOT PRESENT	N/A
GDL 88	NOT PRESENT	N/A
ADS-B IN SOURCE	NOT PRESENT	N/A
GDU #1	PRESENT	GDU TXi
GDU #2	PRESENT	GDU TXi
GDU #3	NOT PRESENT	N/A
GDU #4	NOT PRESENT	N/A
GI 275	NOT PRESENT	N/A
TRANSPONDER #1	PRESENT **(1)**	GTX MODE S+ **(2)**
TRANSPONDER #2	NOT PRESENT	N/A
GSR 56	NOT PRESENT	N/A

MAIN INDICATOR MENU	
PARAMETER	**CONFIGURATION**
SELECTED COURSE	CONFIGURATION NOT REQUIRED
CALIBRATE OBS RESOLVER	CALIBRATE
CDI KEY	ENABLED
SELECTED COURSE FOR GPS	ALLOWED
SELECTED COURSE FOR VOR/LOC	ALLOWED
V-FLAG STATE	NORMAL

ENHANCED LIGHTING MENU		
SOURCE SETTING		
SOURCE SELECTION	**INPUT TYPE**	**RESPONSE TIME**
LIGHTING BUS 1	28V DC	2 SEC
LIGHTING BUS 2	28V DC	2 SEC
PHOTOCELL	N/A	2 SEC
DISPLAY SOURCE	LIGHTING BUS 1	
KEYS SOURCE	LIGHTING BUS 1	
DAY MODE OPERATION		
DISPLAY WINDOW		
PARAMETER	**CONFIGURATION**	
MINIMUM LEVEL	1.00%	
MAXIMUM LEVEL	80.00%	
PHOTOCELL OVERRIDE WINDOW		
PARAMETER	**CONFIGURATION**	
PHOTOCELL TRANSITION	5.0%	
KEY BACKLIGHT CUTOFF	80.0%	
KEYS WINDOW		
PARAMETER	**CONFIGURATION**	
MINIMUM LEVEL	10.00%	
MAXIMUM LEVEL	80.00%	
DISPLAY CONFIGURE CURVE SUB-MENU		
PARAMETER	**CONFIGURATION**	
VERTEX 1	6.0, 1.0	
VERTEX 2	40.0, 5.0	
VERTEX 3	85.0, 17.5	
VERTEX 4	99.0, 80.0	

KEYS CONFIGURE CURVE SUB-MENU	
PARAMETER	**CONFIGURATION**
VERTEX 1	20.0, 20.0
VERTEX 2	40.0, 40.0
VERTEX 3	60.0, 40.0
VERTEX 4	80.0, 40.0
Configuration of the dimming curve may need to be adjusted per aircraft. Use the instructions contained in Garmin GTN 725/750 TSO Installation Manual Section 6.6.6 to make any necessary adjustments to match the display response to the other indicators and displays.	

AUDIO MENU	
PARAMETER	**CONFIGURATION**
ALERT VOLUME	77% (OR AS DESIRED TO BE WELL HEARD IN HEADSETS)
Configuration of the audio function may need to be adjusted per aircraft. Make the level adjustment as desired. Audio alerts must be loud, attention getting, and clearly intelligible under all cockpit noise conditions. Audio alerts should be set slightly louder than the normal volume of COM and intercom transmissions and cannot mask higher priority aircraft alerts or horns.	

VOICE COMMAND PARAMETERS
NO CONFIGURATION REQUIRED

TRAFFIC MENU	
PARAMETER	**CONFIGURATION**
TRAFFIC INTRUDER SYMBOL COLOR	CYAN
GTN CONTROL OF TRAFFIC SYSTEM	YES

MAIN SYSTEM MENU	
PARAMETER	**CONFIGURATION**
AIRFRAME TYPE	ROTORCRAFT
AIR/GROUND THRESHOLD	20 KTS
AIR GROUND DISCRETE	ACTIVE FOR GROUND
GPS ANTENNA HEIGHT ABOVE GROUND	17.0 FT
FUEL TYPE	JET A
GPS SELECT	AUTO
HEADING SOURCE INPUT	CONNECTED
RADIO ALTIMETER INPUT	CONNECTED **(3)**
ALTITUDE SOURCE INPUT	CONNECTED
ENHANCED LIGHTING MODE	ENABLED
CROSSFILL STATUS ALERT	ENABLED
SYSTEM ID	GTN 2

DATABASE SYNC	ENABLED
AIRSPACE LABELS	ENABLED
CHECKLIST PAGE TITLE	CHECKLIST
BLACKOUT MODE	DISABLED
EXTERNAL FLIGHT PLAN	DISABLED
REMOTE DB CONFIRMATION	DISABLED

COM MENU	
PARAMETER	**CONFIGURATION**
COM RADIO	ENABLED
RX SQUELCH MODE	ADVANCED
MIC 1 GAIN	+ 18 dB
SIDESTONE SOURCE	INTERNAL
SIDESTONE VOLUME	+ 20.0 dB
SIDETONE PILOT CONTROL	ENABLED
RX SQUELCH SUB-MENU	
25 KHz	
LOW	30%
MID	30%
HIGH	57%
8.33 KHz	
LOW	57%
MID	57%
HIGH	57%
CARRIER SQUELCH SUB-MENU	
25KHZ CARRIER SQUELCH	0%
8.33KHZ CARRIER SQUELCH	0%

VOR/LOC/GS MENU	
PARAMETER	**CONFIGURATION**
NAV RADIO	ENABLED
SELECTED COURSE	---
CALIBRATE OBS RESOLVER	CALIBRATE
ARINC 429 CONFIGURATION Tx SPEED	HIGH
ARINC 429 CONFIGURATION SDI	VOR/ILS 2
DME MODE	DIRECTED FREQ 1 **(4)**
DME CHANNEL MODE	KING SERIAL **(4)**
FILTERED LOC/GS	DISABLED
NAV RADIO DISPLAY TIMEOUT	ENABLED
ARINC 708 MENU	
NO CONFIGURATION REQUIRED	

DESIGN	KB	**EAGLE COPTERS LTD** CALGARY, AB, CANADA	
DRAWN	KB		
CHECKED	WK	DRAWING NO. TB-E212-2006-1	REV. B SHEET 6 OF 18
MFG. APPR.	CD		
RELEASED	KB	TITLE GARMIN GTN 650 / 750 SYSTEM INSTL	
DE APPR.			
DATE 2022-01-27			

DISCRETES MENU		
PARAMETER	**FUNCTION**	**DIRECTION**
J1001-16	OFF	IN
J1001-36	OFF	IN
J1001-37	OFF	IN
J1001-38	OFF	IN
J1001-39	OFF	IN
J1002-01	DEMO MODE SELECT	IN
J1002-10	OFF	IN
J1002-11	OFF	IN
J1001-14	OFF	OUT
J1001-15	GPS ANNUNCIATE	OUT
J1001-33	OFF	OUT
J1001-34	OFF	OUT
J1001-35	TAWS AUDIO ACTIVE ANNUNCIATE	OUT
J1001-52	VLOC ANNUNCIATE	OUT
J1001-53	OFF	OUT
J1001-54	OFF	OUT
J1001-55	OFF	OUT
J1001-56	ILS/GPS APPROACH ANNUNCIATE	OUT
J1001-57	OFF	OUT
J1001-71	OFF	OUT
J1001-72	OFF	OUT
J1001-73	OFF	OUT
J1001-74	OFF	OUT
J1001-75	OFF	OUT
J1002-76	OFF	OUT
J1002-03	OFF	OUT
J1002-12	OFF	OUT
NAVIGATION FEATURES MENU		
PARAMETER	**CONFIGURATION**	
MARK ON TARGET	DISABLED	
RF PROCEDURE LEGS	DISABLED	

VERTICAL NAVIGATION CONFIGURE SUB-MENU	
VERTICAL NAVIGATION TYPE WINDOW	
PARAMETER	**CONFIGURATION**
VCALC	OFF / DISABLED (GREEN BAR EXTINGUISHED)
VNAV	ON / ENABLED (GREEN BAR ILLUMINATED)
TRANSITION TO APPROACH	ON / ENABLED (GREEN BAR ILLUMINATED)
TRANSITION ALTITUDE	FL180
VDI SCALE	500 FT
OWNSHIP MENU	
PARAMETER	**CONFIGURATION**
COLOR OWNSHIP	WHITE
AIRCRAFT PICTURE	2-BLADE ROTORCRAFT
FLIGHT STREAM MENU	
PARAMETER	**CONFIGURTAION**
STREAM ACTIVE FLIGHT DATA	ENABLED
TRANSFER PAST FLIGHT DATA LOGS	ENABLED
GTN OPTIONS	
TERRAIN MENU	
PARAMETER	**CONFIGURATION**
HTERRAIN PROXIMITY	ON / ENABLED (GREEN BAR ILLUMINATED)
HTERRAIN ALERTING	OFF / DISABLED (GREEN BAR EXTINGUISHED)
HTAWS	OFF / DISABLED (GREEN BAR EXTINGUISHED)
ALERT CONFIGURATION WINDOW	
PARAMETER	**CONFIGURATION**
AUDIO CLIPS	GREYED OUT
ALERT SETTINGS	GREYED OUT
CHARTS MENU	
PARAMETER	**CONFIGURATION**
NONE	ON / ENABLED (GREEN BAR ILLUMINATED)
FLITECHARTS	OFF / DISABLED (GREEN BAR EXTINGUISHED)
CHARTVIEW	OFF / DISABLED (GREEN BAR EXTINGUISHED)
COM TRANSMIT POWER MENU	
PARAMETER	**CONFIGURATION**
NORMAL	ON / ENABLED (GREEN BAR ILLUMINATED)
16W	OFF / DISABLED (GREEN BAR EXTINGUISHED)
WEATHER RADAR MENU	
PARAMETER	**CONFIGURATION**
DIGITAL RADAR	OFF / DISABLED (GREEN BAR EXTINGUISHED)
TURBULENCE DETECTION	OFF / DISABLED (GREEN BAR EXTINGUISHED)
GROUND CLUTTER SUPPRESSION	OFF / DISABLED (GREEN BAR EXTINGUISHED)

FLIGHT SIMULATOR MENU	
PARAMETER	**CONFIGURATION**
FLIGHT SIMULATOR	OFF / DISABLED (GREEN BAR EXTINGUISHED)
SEARCH AND RESCUE	
PARAMETER	**CONFIGURATION**
SEARCH AND RESCUE	OFF / DISABLED (GREEN BAR EXTINGUISHED)
SAR PATTERNS WINDOW	
PARALLEL TRACK	OFF / DISABLED (GREEN BAR EXTINGUISHED)
EXPANDING SQUARE	OFF / DISABLED (GREEN BAR EXTINGUISHED)
SECTOR SEARCH	OFF / DISABLED (GREEN BAR EXTINGUISHED)
ORBIT	OFF / DISABLED (GREEN BAR EXTINGUISHED)
SAR STATUS	LOCKED
GTN DIAGNOSTICS	
NO CONFIGURATION REQUIRED	
GTN EXTERNAL SYSTEMS	
GDL 69 MENU	
NO CONFIGURATION REQUIRED	
STORMSCOPE MENU	
NO CONFIGURATION REQUIRED	
TRAFFIC MENU	
NO CONFIGURATION REQUIRED	
GAD 42 MENU	
NO CONFIGURATION REQUIRED	
XPDR MENU	
SYSTEM CONFIGURED USING GTX 3X5 INSTALL TOOL **(5)**	
AUDIO PANEL MENU	
NO CONFIGURATION REQUIRED	
GDL 88 MENU	
NO CONFIGURATION REQUIRED	
GSR 56 MENU	
NO CONFIGURATION REQUIRED	
WEATHER RADAR MENU	
NO CONFIGURATION REQUIRED	

1) For LRU Options -101/-107/-109 : "NOT PRESENT"
2) For LRU Options -101/-107/-109 : N/A
3) For LRU Options -101/-103/-105/-109/-113/-117 : "NOT CONNECTED"
4) For LRU Options -101/-103/-105/-107/-111/-115 : Default settings
5) For LRU Options -101/-107/-109 : "NO CONFIGURATION REQUIRED"

Garmin GTN 750 Configuration:

GTN SETUP		
ARINC 429 MENU		
PARAMETER	**CONFIGURATION**	
	SPEED	**DATA**
ARINC 429 IN 1	LOW	OFF
ARINC 429 IN 2	LOW	OFF
ARINC 429 IN 3	LOW	OFF
ARINC 429 IN 4	LOW	OFF
ARINC 429 OUT 1	HIGH	ARINC 429
ARINC 429 OUT 2	LOW	OFF
ARINC 429 OUT 3	LOW	OFF
SDI	COMMON	
SERIAL (RS-232) MENU		
PARAMETER	**CONFIGURATION**	
	INPUT	**OUTPUT**
RS-232 1	GTX Mode S+ #1 **(1)**	GTX Mode S+ #1 **(1)**
RS-232 2	OFF	OFF
RS-232 3	OFF	OFF
RS-232 4	OFF	OFF
RS-232 5	OFF	OFF
RS-232 6	OFF	OFF
MORE RS-232 SETUP	FORWARD ALT TO GTX	ENABLED
HSDB MENU		
PARAMETER	**CONFIGURATION**	
ETHERNET PORT 1	NOT CONNECTED	
ETHERNET PORT 2	CONNECTED	
ETHERNET PORT 3	CONNECTED	
ETHERNET PORT 4	NOT CONNECTED	
INTERFACED EQUIPMENT MENU		
UNIT	**PRESENT**	**SETTINGS**
CROSS-SIDE NAVIGATOR	PRESENT	GTN
GDL 69/69A	NOT PRESENT	N/A
GDL 88	NOT PRESENT	N/A
ADS-B IN SOURCE	NOT PRESENT	N/A
GDU #1	PRESENT	GDU TXi
GDU #2	PRESENT	GDU TXi
GDU #3	NOT PRESENT	N/A
GDU #4	NOT PRESENT	N/A
GI 275	NOT PRESENT	N/A
TRANSPONDER #1	PRESENT **(2)**	GTX MODE S+ **(3)**
TRANSPONDER #2	NOT PRESENT	N/A

GSR 56	NOT PRESENT	N/A
GWX	NOT PRESENT	N/A
MAIN INDICATOR MENU		
PARAMETER	**CONFIGURATION**	
SELECTED COURSE	CONFIGURATION NOT REQUIRED	
CALIBRATE OBS RESOLVER	CALIBRATE	
CDI KEY	ENABLED	
SELECTED COURSE FOR GPS	ALLOWED	
SELECTED COURSE FOR VOR/LOC	ALLOWED	
V-FLAG STATE	NORMAL	
ENHANCED LIGHTING MENU		
SOURCE SETTINGS		
PARAMETER	**CONFIGURATION**	
DISPLAY SOURCE	LIGHTING BUS 1	
KEYS SOURCE	LIGHTING BUS 1	
PARAMETER	**INPUT TYPE**	**RESPONSE TIME**
LIGHTING BUS 1	28V DC	2 SEC
LIGHTING BUS 2	28V DC	2 SEC
PHOTOCELL	N/A	2 SEC
DAY MODE OPERATION		
PHOTOCELL OVERRIDE WINDOW		
PARAMETER	**CONFIGURATION**	
PHOTOCELL TRANSITION	5.0%	
KEY BACKLIGHT CUTOFF	80.0%	
DISPLAY WINDOW		
PARAMETER	**CONFIGURATION**	
MINIMUM LEVEL	10.00%	
MAXIMUM LEVEL	80.00%	
KEYS WINDOW		
PARAMETER	**CONFIGURATION**	
MINIMUM LEVEL	10.00%	
MAXIMUM LEVEL	80.00%	
DISPLAY CONFIGURE CURVE SUB-MENU		
PARAMETER	**CONFIGURATION**	
VERTEX 1	10.5, 10.0	
VERTEX 2	16.0, 26.5	
VERTEX 3	35.0, 53.0	
VERTEX 4	99.0, 80.0	

KEYS CONFIGURE CURVE SUB-MENU	
PARAMETER	**CONFIGURATION**
VERTEX 1	10.5, 10.0
VERTEX 2	16.0, 26.5
VERTEX 3	35.0, 53.0
VERTEX 4	99.0, 80.0
Configuration of the dimming curve may need to be adjusted per aircraft. Use the instructions contained in Garmin GTN 625/635/650 TSO Installation Manual Section 6.6.6 to make any necessary adjustments to match the display response to the other indicators and displays.	

AUDIO MENU	
PARAMETER	**CONFIGURATION**
ALERT VOLUME	52% (OR AS DESIRED TO BE WELL HEARD IN HEADSETS)
Configuration of the audio function may need to be adjusted per aircraft. Make the level adjustment as desired. Audio alerts must be loud, attention getting, and clearly intelligible under all cockpit noise conditions. Audio alerts should be set slightly louder than the normal volume of COM and intercom transmissions and cannot mask higher priority aircraft alerts or horns.	

VOICE COMMAND PARAMETERS
NO CONFIGURATION REQUIRED

TRAFFIC MENU	
PARAMETER	**CONFIGURATION**
TRAFFIC INTRUDER SYMBOL COLOR	CYAN
GTN CONTROL OF TRAFFIC SYSTEM	YES

MAIN SYSTEM MENU	
PARAMETER	**CONFIGURATION**
AIRFRAME TYPE	ROTORCRAFT
AIR/GROUND THRESHOLD (0 TO 99)	20 KTS
AIR GROUND DISCRETE	ACTIVE FOR GROUND
GPS ANTENNA HEIGHT (FT) ABOVE GROUND (0.0-99.9)	8.0 FT
FUEL TYPE	JET A
SYNCHRO HEADING INPUT	NOT CONNECTED
GPS SELECT	AUTO
HEADING SOURCE INPUT	CONNECTED
RADIO ALTIMETER INPUT	CONNECTED **(4)**
ALTITUDE SOURCE INPUT	CONNECTED
ENHANCED LIGHTING MODE	ENABLED
PILOT POSITION	RIGHT
CROSSFILL STATUS ALERT	ENABLED
SYSTEM ID	GTN 1

DATABASE SYNC SETTINGS	PILOT CONTROL
AIRSPACE LABELS	ENABLED
CHECKLIST PAGE TITLE	CHECKLIST
BLACKOUT MODE	DISABLED
EXTERNAL FLIGHT PLAN	DISABLED
REMOTE DATABASE CONFIRMATION	DISABLED

COM MENU	
PARAMETER	**CONFIGURATION**
COM RADIO	ENABLED
RX SQUELCH MODE	ADVANCED
MIC 1 GAIN	+ 12 dB
SIDESTONE SOURCE	INTERNAL
SIDESTONE VOLUME	+ 25.0 dB
SIDETONE PILOT CONTROL	ENABLED
RX SQUELCH SUB-MENU	
25 KHz	
LOW	30%
MID	30%
HIGH	30%
8.33 KHz	
LOW	30%
MID	30%
HIGH	30%
CARRIER SQUELCH SUB-MENU	
25KHZ CARRIER SQUELCH	0%
8.33KHZ CARRIER SQUELCH	0%

VOR/LOC/GS MENU	
PARAMETER	**CONFIGURATION**
NAV RADIO	ENABLED
SELECTED COURSE	---
CALIBRATE OBS RESOLVER	CALIBRATE
ARINC 429 CONFIGURATION Tx SPEED	HIGH
ARINC 429 CONFIGURATION SDI	VOR/ILS 1
DME MODE	DIRECTED FREQUENCY 1 **(5)**
DME CHANNEL MODE	KING SERIAL **(5)**
FILTERED LOC/GS	DISABLED
NAV RADIO DISPLAY TIMEOUT	ENABLED

ARINC 708 MENU	
PARAMETER	**CONFIGURATION**
PORT 1: EXTERNAL WEATHER RADAR	OFF

DISCRETES MENU		
PARAMETER	**FUNCTION**	**DIRECTION**
J1001-16	OFF	IN
J1001-36	TAWS AUDIO INHIBIT	IN
J1001-37	OFF	IN
J1001-38	OFF	IN
J1001-39	OFF	IN
J1002-01	DEMO MODE SELECT	IN
J1002-10	OFF	IN
J1002-11	OFF	IN
J1005-33	SYNCHRO VALID - LOW	IN
J1005-53	OFF	IN
J1005-54	SYNCHRO VALID - HIGH	IN
J1001-14	OFF	OUT
J1001-15	GPS ANNUNCIATE	OUT
J1001-33	OFF	OUT
J1001-34	OFF	OUT
J1001-35	TAWS AUDIO ACTIVE ANNUNCIATE	OUT
J1001-52	VLOC ANNUNCIATE	OUT
J1001-53	OFF	OUT
J1001-54	OFF	OUT
J1001-55	OFF	OUT
J1001-56	ILS/GPS APPROACH ANNUNCIATE	OUT
J1001-57	OFF	OUT
J1001-71	OFF	OUT
J1001-72	OFF	OUT
J1001-73	OFF	OUT
J1001-74	OFF	OUT
J1001-75	OFF	OUT
J1001-76	OFF	OUT
J1002-03	OFF	OUT
J1002-12	OFF	OUT
J1005-13	OFF	OUT
J1005-34	OFF	OUT

NAVIGATION FEATURES MENU	
PARAMETER	**CONFIGURATION**
MARK ON TARGET	DISABLED
RF PROCEDURE LEGS	DISABLED
VERTICAL NAVIGATION CONFIGURE SUB-MENU	
VERTICAL NAVIGATION TYPE WINDOW	
PARAMETER	**CONFIGURATION**
VCALC	OFF / DISABLED (GREEN BAR EXTINGUISHED)
VNAV	ON / ENABLED (GREEN BAR ILLUMINATED)
TRANSITION TO APPROACH	ON / ENABLED (GREEN BAR ILLUMINATED)
TRANSITION ALTITUDE	FL180
VDI SCALE	500 FT
OWNSHIP MENU	
PARAMETER	**CONFIGURATION**
COLOR OWNSHIP	WHITE
AIRCRAFT PICTURE	2-BLADE ROTORCRAFT
FLIGHT STREAM MENU	
PARAMETER	**CONFIGURTAION**
STREAM ACTIVE FLIGHT DATA	ENABLED
TRANSFER PAST FLIGHT DATA LOGS	ENABLED
GTN OPTIONS	
TERRAIN MENU	
PARAMETER	**CONFIGURATION**
HTERRAIN PROXIMITY	ON / ENABLED (GREEN BAR ILLUMINATED)
HTERRAIN ALERTING	OFF / DISABLED (GREEN BAR EXTINGUISHED)
HTAWS	OFF / DISABLED (GREEN BAR EXTINGUISHED)
ALERT CONFIGURATION WINDOW	
PARAMETER	**CONFIGURATION**
AUDIO CLIPS	GREYED OUT
ALERT SETTINGS	GREYED OUT
CHARTS MENU	
PARAMETER	**CONFIGURATION**
NONE	ON / ENABLED (GREEN BAR ILLUMINATED)
FLITECHARTS	OFF / DISABLED (GREEN BAR EXTINGUISHED)
CHARTVIEW	OFF / DISABLED (GREEN BAR EXTINGUISHED)
COM TRANSMIT POWER MENU	
PARAMETER	**CONFIGURATION**
NORMAL	ON / ENABLED (GREEN BAR ILLUMINATED)
16W	OFF / DISABLED (GREEN BAR EXTINGUISHED)

DESIGN	KB	**EAGLE COPTERS LTD** CALGARY, AB, CANADA
DRAWN	KB	
CHECKED	WK	DRAWING NO. TB-E212-2006-1 REV. B SHEET 15 OF 18
MFG. APPR.	CD	
RELEASED	KB	TITLE GARMIN GTN 650 / 750 SYSTEM INSTL
DE APPR.		
DATE 2022-01-27		

WEATHER RADAR MENU	
PARAMETER	**CONFIGURATION**
DIGITAL RADAR	OFF / DISABLED (GREEN BAR EXTINGUISHED)
TURBULENCE DETECTION	OFF / DISABLED (GREEN BAR EXTINGUISHED)
GROUND CLUTTER SUPPRESSION	OFF / DISABLED (GREEN BAR EXTINGUISHED)
FLIGHT SIMULATOR MENU	
PARAMETER	**CONFIGURATION**
FLIGHT SIMULATOR	OFF / DISABLED (GREEN BAR EXTINGUISHED)
SEARCH AND RESCUE	
PARAMETER	**CONFIGURATION**
SEARCH AND RESCUE	OFF / DISABLED (GREEN BAR EXTINGUISHED)
SAR PATTERNS WINDOW	
PARALLEL TRACK	OFF / DISABLED (GREEN BAR EXTINGUISHED)
EXPANDING SQUARE	OFF / DISABLED (GREEN BAR EXTINGUISHED)
SECTOR SEARCH	OFF / DISABLED (GREEN BAR EXTINGUISHED)
ORBIT	OFF / DISABLED (GREEN BAR EXTINGUISHED)
SAR STATUS	LOCKED
GTN DIAGNOSTICS	
NO CONFIGURATION REQUIRED	
GTN EXTERNAL SYSTEMS	
GDL 69 MENU	
NO CONFIGURATION REQUIRED	
STORMSCOPE MENU	
NO CONFIGURATION REQUIRED	
TRAFFIC MENU	
NO CONFIGURATION REQUIRED	
GAD 42 MENU	
NO CONFIGURATION REQUIRED	
XPDR MENU	
SYSTEM CONFIGURED USING GTX 3X5 INSTALL TOOL **(6)**	
AUDIO PANEL MENU	
NO CONFIGURATION REQUIRED	
GDL 88 MENU	
NO CONFIGURATION REQUIRED	
GSR 56 MENU	
NO CONFIGURATION REQUIRED	
WEATHER RADAR MENU	
NO CONFIGURATION REQUIRED	

1) For LRU Options -101/-107/-109 : "OFF"
2) For LRU Options -101/-107/-109 : "NOT PRESENT"
3) For LRU Options -101/-107/-109 : N/A
4) For LRU Options -101/-103/-105/-109/-113/-117 : "NOT CONNECTED"
5) For LRU Options -101/-103/-105/-107/-111/-115 : Default settings
6) For LRU Options -101/-107/-109 : "NO CONFIGURATION REQUIRED"

Instructions for Continued Airworthiness:

1. Insert the temporary ICA revision (located in Appendix A of this TB) into the ICA at the pages indicated and remove the previous pages. Retain the removed pages to re-insert once the GTN 650 and GTN 750 are removed and replaced with the GTN 650H Xi and the GTN 750H Xi

Flight Manual Supplement:

1. Insert the temporary FMS revision (located in Appendix B of this TB) into the FMS at the pages indicated and remove the previous pages. Retain the removed pages to re-insert once the GTN 650 and GTN 750 are removed and replaced with the GTN 650H Xi and the GTN 750H Xi

Electrical Load Analysis:

1. Insert the temporary ELA revision (located in Appendix C of this TB) into the aircraft ELA at the pages indicated and remove the previous pages. Retain the removed pages to re-insert once the GTN 650 and GTN 750 are removed and replaced with the GTN 650H Xi and the GTN 750H Xi

NOTIFY EAGLE COPTERS THAT THE TB-E212-2006-1 HAS BEEN INCORPORATED INTO THE AIRCRAFT LISTED BELOW.

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AIRCRAFT OWNER:

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DATE TB-E212-2006-1 WAS INCORPORATED ON THE ABOVE AIRCRAFT:

_____

SIGNATURE OF PERSON RESPONSIBLE FOR ENTRY INTO AIRCRAFT TECHNICAL RECORD:

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APPENDIX A

TEMPORARY ICA REVISION

DESIGN	KB	**EAGLE COPTERS LTD** CALGARY, AB, CANADA	
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Mid-Continent MD 302 Standby Attitude Module	a) Visually inspect the equipment, mounting hardware and surrounding structure for installation security and damage such as fastener deterioration, cracks, corrosion, paint exfoliation, and other signs of structural deterioration. b) Check the equipment and external connectors for damage, corrosion, and correct installation. c) Examine electrical wiring harness and circuit breaker for condition and correct installation and any evidence of damage, fraying, chafing, overheating, damage, or corrosion. d) Check equipment bonding to the airframe. e) Follow the pitot static system inspect schedule and process in accordance with ICA-D212-725 Chapter 5 and Chapter 95.
E2006-99-3 Garmin GPS / NAV / COMM KIT	
Garmin GTN 750 GPS/COM/NAV	a) Visually inspect the equipment, mounting hardware and surrounding structure for installation security and damage such as fastener deterioration, cracks, corrosion, paint exfoliation, and other signs of structural deterioration. b) Check the equipment and external connectors for damage, corrosion, and correct installation. c) Examine electrical wiring harness and circuit breaker for condition and correct installation and any evidence of damage, fraying, chafing, overheating, damage, or corrosion. d) Check equipment bonding to the airframe.
Garmin GTN 650 GPS/COM/NAV	a) Visually inspect the equipment, mounting hardware and surrounding structure for installation security and damage such as fastener deterioration, cracks, corrosion, paint exfoliation, and other signs of structural deterioration. b) Check the equipment and external connectors for damage, corrosion, and correct installation. c) Examine electrical wiring harness and circuit breaker for condition and correct installation and any evidence of damage, fraying, chafing, overheating, damage, or corrosion. d) Check equipment bonding to the airframe.
Comant CI-2480-200 VHF/GPS Antenna	a) Inspect the antenna for proper installation and condition of the sealant around the antenna. b) Perform a visual inspection of the surrounding structure. Check for damage such as fastener deterioration, cracks, corrosion, paint exfoliation, and other signs of structural deterioration of the skin structure. c) Check antenna coaxial connectors for signs of corrosion and verify securely connected. d) Check antenna bonding to the airframe.
Comant CI-292-2 COMM Antenna	a) Inspect the antenna for proper installation and condition of the sealant around the antenna. b) Perform a visual inspection of the surrounding structure. Check for damage such as fastener deterioration, cracks, corrosion, paint exfoliation, and other signs of structural deterioration of the skin structure. c) Check antenna coaxial connectors for signs of corrosion and verify securely connected. d) Check antenna bonding to the airframe.
Garmin GA 35 GPS Antenna	a) Inspect the antenna for proper installation and condition of the sealant around the antenna. b) Perform a visual inspection of the surrounding structure. Check for damage such as fastener deterioration, cracks, corrosion, paint exfoliation, and other signs of structural deterioration of the skin structure. c) Check antenna coaxial connectors for signs of corrosion and verify securely connected. d) Check antenna bonding to the airframe.
Tail Rotor Gearbox GPS Bracket	a) Visually inspect the bracket, mounting hardware and surrounding structure for installation security and damage such as fastener deterioration, cracks, corrosion, paint exfoliation, and other signs of structural deterioration. [1] b) Check bracket bonding to the airframe.
E2006-99-5 Garmin Transponder Kit	
Garmin GTX 345R Transponder	a) Visually inspect the equipment, mounting hardware and surrounding structure for installation security and damage such as fastener deterioration, cracks, corrosion, paint exfoliation, and other signs of structural deterioration. b) Check the equipment and external connectors for damage, corrosion, and correct installation. c) Examine electrical wiring harness and circuit breaker for condition and correct installation and any evidence of damage, fraying, chafing, overheating, damage, or corrosion. d) Check equipment bonding to the airframe.
Comant CI-105 Transponder Antenna	a) Inspect the antenna for proper installation and condition of the sealant around the antenna. b) Perform a visual inspection of the surrounding structure. Check for damage such as fastener deterioration, cracks, corrosion, paint exfoliation, and other signs of structural deterioration of the skin structure. c) Check antenna coaxial connectors for signs of corrosion and verify securely connected. d) Check antenna bonding to the airframe.

CHAPTER 08 – WEIGHING AND BALANCE (08-00-00)

NOTE: The following table shows the weight increase associated with each of the E2006 Kits. All weights are net, except where indicated by "*".

Table 8-1 – Weight and Balance

Item	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
E2006-99-1 Garmin G500H TXi PFD / MFD Kit*	22.82	0	0	47.62	1086.68
E2006-99-3 Garmin GPS / NAV / COMM Kit	20.67	-0.47	-9.71	73.99	1529.37
E2006-99-5 Garmin Transponder Kit	3.75	8.69	32.58	20.93	78.50
E2006-99-7 Garmin TCAS I Kit	15.15	-5.78	-87.60	17.28	261.84
E2006-99-9 Garmin RADAR Altimeter Kit	4.20	22.02	92.50	220.93	927.92
E2006-99-11 DME Kit	5.89	3.31	19.49	14.62	86.11

***** Weights indicated are gross weight increases. Subtract the weight of the removed parts to determine the net weight change.

CHAPTER 95 – INSTRUMENT SYSTEM (95-00-00)

95.1 E2006-99-1 Garmin G500H TXi PFD / MFD Kit

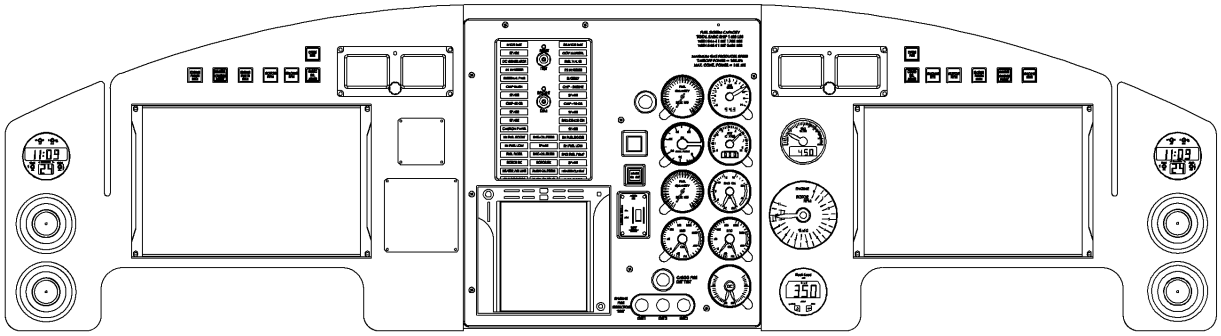


Figure 95-1 – Instrument Panel Installation.

CAUTION: OBSERVE ALL SAFETY PRECAUTIONS AND FOLLOW APPROVED PROCEDURES WHEN APPLYING OR REMOVING AIRCRAFT ELECTRICAL POWER AS NOTED IN THE AIRCRAFT MAINTENANCE MANUAL (AMM).

Table 95-1 – Instrument Panel Equipment

Item	Description	Part Number
1	Instrument Panel Assembly	E2006-02-1-041
2	Garmin GDU 1060 PFD / MFD	011-03308-20
3	Garmin GTN 750 GPS / COMM / NAV	011-04634-00
4	Mid-Continent MD 302 SAM	6420302-7
5	Overlay	E2006-03-1-001

97.2 E2006-99-3 Garmin GPS / NAV / COMM Kit

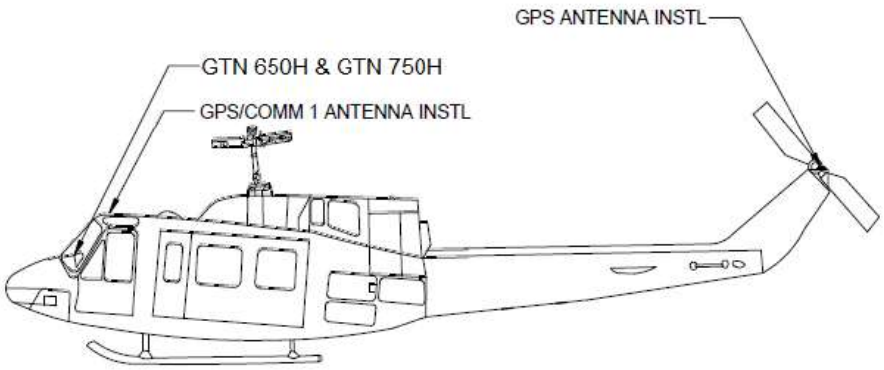


Figure 97-1 – GPS / NAV / COMM System Installation.

CAUTION: OBSERVE ALL SAFETY PRECAUTIONS AND FOLLOW APPROVED PROCEDURES WHEN APPLYING OR REMOVING AIRCRAFT ELECTRICAL POWER AS NOTED IN THE AIRCRAFT MAINTENANCE MANUAL (AMM).

Table 97-6 – GPS / NAV / COMM System Equipment

Item	Description	Part Number
1	Garmin GTN 750 GPS / COMM / NAV	011-02282-00*
2	Garmin GTN 650 GPS / COMM / NAV	011-02256-00*
3	GPS/COMM Antenna	CI2480-200
4	COMM Antenna	CI292-2
5	GPS Antenna	013-00235-00

* MOD 7 (Garmin P/N 011-04950-01) must be incorporated to meet the exclusions for DO-227A.

97.2.1 Garmin GTN 750 – Removal / Installation

A. APPLICABLE DOCUMENTS
TB-E212-2006-1 Appendix B Garmin GTN 650 / 750 Wiring Diagram
ICA-D212-725 Eagle Single Instruction for Continuing Airworthiness
BHT-212-MM Bell 212 Maintenance Manual
BHT-ELEC-SPM Bell Electrical Standard Practices Manual

B. SPECIAL TOOLS
None

C. CONSUMABLE MATERIALS
None

D. ROUTINE REPLACEMENT PARTS
None

E. JOB SET UP
E.1 Comply with the general safety instructions for the electrical power supply system (ICA-D212-725, BHT-212-MM, and BHT-ELEC-SPM).
E.2 Comply with the general safety instructions for the mechanical assemblies (ICA-D212-725 and BHT-212-MM).

F. PROCEDURE
F.1 Removal
a. Ensure that the NO 1 VHF and the NO 1 NAV/GPS circuit breakers, located on the ESS AVIONICS BUSS are pulled out (opened) and collared.
b. Remove the GTN 750 by locating the unit retention mechanism access hole at the bottom-left corner of the unit face.
c. Insert a 3/32" hex tool into the access hole and turn the fastener counter clockwise until the unit is forced out about 3/8 inches and can be freely pulled from the rack.
d. Gently pull the GTN 750 out.

F.2 Installation
a. Ensure that the NO 1 VHF and the NO 1 NAV/GPS circuit breakers, located on the ESS AVIONICS BUSS are pulled out (opened) and collared.
b. Slide the GTN 750 straight into the rack until it stops about 1 inch short of the fully seated position.
c. Insert a 3/32" hex drive into the unit retention mechanism access hole at the bottom of the unit face and turn the tool clockwise while pressing the bezel until the unit is firmly seated in the rack.
d. Ensure that the NO 1 VHF and the NO 1 NAV/GPS circuit breakers have the collar removed and are pushed in (closed).
e. Apply power to the GTN 750
f. Ensure the configuration has been completed IAW Section 1.6.
g. Function test the GTN 750 IAW Section 97.2.5 Steps D.1, D.2, and D.3.

97.2.2 Garmin GTN 650 – Removal / Installation

A. APPLICABLE DOCUMENTS
TB-E212-2006-1 Appendix B Garmin GTN 650 / 750 Wiring Diagram
ICA-D212-725 Eagle Single Instruction for Continuing Airworthiness
BHT-212-MM Bell 212 Maintenance Manual
BHT-ELEC-SPM Bell Electrical Standard Practices Manual

B. SPECIAL TOOLS
None

C. CONSUMABLE MATERIALS
None

D. ROUTINE REPLACEMENT PARTS
None

E. JOB SET UP
E.1 Comply with the general safety instructions for the electrical power supply system (ICA-D212-725, BHT-212-MM, and BHT-ELEC-SPM).
E.2 Comply with the general safety instructions for the mechanical assemblies (ICA-D212-725 and BHT-212-MM).

F. PROCEDURE
F.1 Removal
a. Ensure that the NO 2 VHF and the NO 2 NAV/GPS circuit breakers, located on the NON-ESS AVIONICS BUSS are pulled out (opened) and collared.
b. Remove the GTN 650 by locating the unit retention mechanism access hole at the bottom-left corner of the unit face.
c. Insert a 3/32" hex tool into the access hole and turn the fastener counter clockwise until the unit is forced out about 3/8 inches and can be freely pulled from the rack.
d. Gently pull the GTN 650 out.

F.2 Installation
a. Ensure that the NO 2 VHF and the NO 2 NAV/GPS circuit breakers, located on the NON-ESS AVIONICS BUSS are pulled out (opened) and collared.
b. Slide the GTN 650 straight into the rack until it stops about 1 inch short of the fully seated position.
c. Insert a 3/32" hex drive into the unit retention mechanism access hole at the bottom of the unit face and turn the tool clockwise while pressing the bezel until the unit is firmly seated in the rack.
d. Ensure that the NO 2 VHF and the NO 2 NAV/GPS circuit breakers have the collar removed and are pushed in (closed).
e. Ensure the configuration has been completed IAW Section 1.6.
f. Function test the GTN 650 IAW Section 97.2.5 Steps D.1, D.2, and D.3.

97.2.3 Garmin GTN 750 GPS/COMM #1 Antenna – Removal / Installation

A. APPLICABLE DOCUMENTS
E2006-01-6 GPS/COMM 1 Antenna Installation
TB-E212-2006-1 Appendix B Garmin GTN 650 / 750 Wiring Diagram
ICA-D212-725 Eagle Single Instruction for Continuing Airworthiness
BHT-212-MM Bell 212 Maintenance Manual
BHT-ELEC-SPM Bell Electrical Standard Practices Manual

B. SPECIAL TOOLS
None

C. CONSUMABLE MATERIALS
None

D. ROUTINE REPLACEMENT PARTS
None

E. JOB SET UP
E.1 Comply with the general safety instructions for the electrical power supply system (ICA-D212-725, BHT-212-MM, and BHT-ELEC-SPM).
E.2 Comply with the general safety instructions for the mechanical assemblies (ICA-D212-725 and BHT-212-MM).

F. PROCEDURE
F.1 Removal
a. Ensure that the NO 1 VHF and the NO 1 NAV/GPS circuit breakers, located on the ESS AVIONICS BUSS are pulled out (opened) and collared.
b. Disconnect the coax connector, put a protective cover on the GPS/COMM antenna connector and cap and stow the antenna cable.
c. Remove sealant from around the antenna and the fastener holes with a non-metallic tool (to prevent scribing or scratching of the airframe).
d. Remove the four (4) fasteners. Retain the mounting hardware.

CAUTION: DO NOT PULL ON THE ANTENNA WHILE THE CABLES ARE STILL ATTACHED.

e. Remove and retain the GPS/COMM antenna from the top of the fuselage.

F.2 Installation

a. Ensure that the NO 1 VHF and the NO 1 NAV/GPS circuit breakers, located on the ESS AVIONICS BUSS are pulled out (opened) and collared.
b. Unstow the GPS/COMM antenna coax cable.
c. Remove the dust caps from the GPS/COMM antenna connector and the coax cable.
d. Connect the coax cable to the GPS/COMM antenna connector.
e. Install the GPS/COMM antenna using four (4) fasteners, antenna gasket, and O-ring that were previously retained. Torque all fasteners IAW Section 1.5.
f. Ensure that the GPS/COMM antenna bonding to adjacent airframe structure is 0.003Ω or less. All electrical grounding and bonding is to be done IAW BHT-ELEC-SPM.
g. Dome seal the antenna fasteners and fillet seal the edges of GPS/COMM antenna IAW Bell BHT-ALL-SPM Chapter 8.
h. Ensure that the NO 1 VHF and the NO 1 NAV/GPS circuit breakers have the collar removed and are pushed in (closed).
i. Function test the GTN 750 IAW Section 97.2.5 Steps D.2 and D.3.

97.2.4 Garmin GTN 650 GPS Antenna – Removal / Installation

A. APPLICABLE DOCUMENTS
E2006-01-4 GPS Antenna Installation
TB-E212-2006-1 Appendix B Garmin GTN 650 / 750 Wiring Diagram
ICA-D212-725 Eagle Single Instruction for Continuing Airworthiness
BHT-212-MM Bell 212 Maintenance Manual
BHT-ELEC-SPM Bell Electrical Standard Practices Manual

B. SPECIAL TOOLS
None

C. CONSUMABLE MATERIALS
None

D. ROUTINE REPLACEMENT PARTS
None

E. JOB SET UP
E.1 Comply with the general safety instructions for the electrical power supply system (ICA-D212-725, BHT-212-MM, and BHT-ELEC-SPM).
E.2 Comply with the general safety instructions for the mechanical assemblies (ICA-D212-725 and BHT-212-MM).

F. PROCEDURE
F.1 Removal
a. Ensure that the NO 2 VHF and the NO 2 NAV/GPS circuit breakers, located on the NON-ESS AVIONICS BUSS are pulled out (opened) and collared.
b. Disconnect the coax connector, put a protective cover on the GPS antenna connector and cap and stow the antenna cable.
c. Remove sealant from around the antenna and the fastener holes with a non-metallic tool (to prevent scribing or scratching of the airframe).
d. Remove the four (4) fasteners. Retain the mounting hardware.

CAUTION: DO NOT PULL ON THE ANTENNA WHILE THE CABLES ARE STILL ATTACHED.

e. Remove and retain the GPS antenna from the top of the tail rotor gear box mount.

F.2 Installation

a. Ensure that the NO 2 VHF and the NO 2 NAV/GPS circuit breakers, located on the NON-ESS AVIONICS BUSS are pulled out (opened) and collared.
b. Unstow the GPS antenna coax cable.
c. Remove the dust caps from the GPS antenna connector and the coax cable.
d. Connect the coax cable to the GPS antenna connector.
e. Install the GPS antenna using four (4) fasteners, antenna gasket, and O-ring that were previously retained. Torque all fasteners IAW Section 1.5.
f. Ensure that the GPS antenna bonding to adjacent airframe structure is 0.003Ω or less. All electrical grounding and bonding is to be done IAW BHT-ELEC-SPM.
g. Dome seal the antenna fasteners and fillet seal the edges of GPS antenna IAW Bell BHT-ALL-SPM Chapter 8.
h. Ensure that the NO 2 VHF and the NO 2 NAV/GPS circuit breakers have the collar removed and are pushed in (closed).
i. Function test the GTN 650 IAW Section 97.2.5 Step D.3.

97.2.5 Garmin GTN 750 / 650 – Functional Test

A. APPLICABLE DOCUMENTS
ICA-D212-725 Eagle Single Instruction for Continuing Airworthiness
BHT-212-MM Bell 212 Maintenance Manual
BHT-ELEC-SPM Bell Electrical Standard Practices Manual

B. SPECIAL TOOLS
None

C. JOB SET UP
C.1 Comply with the general safety instructions for the electrical power supply system (ICA-D212-725, BHT-212-MM, and BHT-ELEC-SPM).
C.2 Comply with the general safety instructions for the mechanical assemblies (ICA-D212-725 and BHT-212-MM).

D. PROCEDURE
D.1 Power Up Self-test Ground Check
a. Ensure that the rotorcraft is in a serviceable configuration, all circuit breaker collars are removed, and all circuit breakers are pushed in (closed).
b. Apply ground power to the aircraft.
c. Power up the GTN 750 and / or GTN 650 and touch continue until the Instrument Panel Self-Test page is displayed.
d. Ensure all outputs match Table 97-7.
e. Turn off power to the GTN 750 and / or GTN 650.
f. Disconnect power from the aircraft.

Table 97-7 - Self-Test Values

PARAMETER	SELF-TEST VALUE
Course Deviation	Half-scale left deviation, TO indication, flag pulled
Glideslope/Vert. Deviation	Half-scale up deviation, flag pulled
Annunciators	All On
Selected Course (OBS)	The GTN Xi displays the OBS value (149.5° if interfaced to an HIS with driven course pointer).
Desired Track	149.5° (Displayed as 150°)
Items below are not displayed on the Instrument Panel Self-Test page	
Distance to Go	10.0 nautical miles
Time to Go	4 minutes
Bearing to Waypoint (RMI)	135°
Active Waypoint	“GARMN”
Groundspeed	150 knots
Present Position	N 39°04.05’, W 94°53.86’
Waypoint Alert	Active
Phase of Flight	En Route
Message Alert	Active
Leg/OBS Mode	Leg Mode
GPS Integrity	Invalid

D.2 COMM / NAV Audio Ground Check

a. Apply ground power to the aircraft.
b. Power up all the avionics systems.
c. Connect a headset to the pilot's headset output and mic input jack.
d. Using a handheld radio, verify that the GTN 750 and/or GTN 650 radio can receive audio when selected on the audio control panel.
e. Verify that the GTN 750 and/or GTN 650 radio sidetone is appropriate and can be heard under all operating conditions.
f. Using a handheld radio, verify that the GTN 750 and/or GTN 650 radio keys for transmission and transmits clear audio from the pilot's mic when selected for on the audio control panel.
g. Tune the GTN 750 and / or GTN 650 (NAV) receiver to a local VOR station.
h. On the GTN 750 and/or GTN 650 verify that the navigation morse code identifier audio is being received over the crew headsets and ensure the volume is sufficient for all anticipated cockpit noise conditions.
i. Move the headset to the co-pilot's headset jacks and repeat steps d through h.
j. Repeat steps c through i on the GTN650H Xi.
k. Power down all the rotorcrafts avionics systems.
l. Disconnect power from the aircraft.

D.3 GPS Antenna Ground Check

a. Apply ground power to the aircraft.
b. Ensure the GTN Xi is able to acquire sufficient satellites to compute a GPS position by performing the following steps:
    1. Tap System > GPS Status.
    2. Under GPS Solution, ensure that a 3D NAV or 3D DIFF NAV fix is obtained.
    3. If the unit is unable to acquire satellites, move the aircraft away from obstructions which might be shading GPS reception. If the situation does not improve, check the GPS antenna installation.
c. Once GPS position information is available, perform the following steps:
    1. Verify the LAT/LON agree with a known reference position.

97.2.6 Garmin GTN 750 / 650 – Fault Isolation

A. APPLICABLE DOCUMENTS
TB-E212-2006-1 Appendix B Garmin GTN 650 / 750 Wiring Diagram
ICA-D212-725 Eagle Single Instruction for Continuing Airworthiness
BHT-212-MM Bell 212 Maintenance Manual
BHT-ELEC-SPM Bell Electrical Standard Practices Manual

B. SPECIAL TOOLS
None

C. CONSUMABLE MATERIALS
None

D. ROUTINE REPLACEMENT PARTS
None

E. JOB SET UP
E.1 Comply with the general safety instructions for the electrical power supply system (ICA-D212-725, BHT-212-MM, and BHT-ELEC-SPM).
E.2 Comply with the general safety instructions for the mechanical assemblies (ICA-D212-725 and BHT-212-MM).

F. PROCEDURE
F.1 Continuity Checks
a. To determine cause of problem, troubleshoot wiring for continuity IAW the E2006-11-3 Garmin 750 Xi and 650 Xi Wiring Diagram. Inspect connectors for bent, pushed-back or damaged pins. If problem persists, perform system component check as describe in step F.2.

F.2 System Component Checks
a. If a problem remains after conducting a continuity check, continue troubleshooting rotorcraft systems IAW AMM or other OEM documents. Faulty items are identified through observation and/or performance.
b. Repair is accomplished through the removal and replacement of faulty items with known-serviceable items. Remove and replace defective components IAW Removal and Installation Section of this manual.
c. Verification of repair is accomplished through observation and performing a system functional test IAW Section 97.2.5.

F.3 Fault Isolation Table Troubleshooting

Table 97-8 - FAULT ISOLATION - GTN 750 / 650		
FAILURE	**PROBABLE CAUSE**	**CORRECTIVE ACTION**
No system power	Ground Power is not connected	Apply power IAW ICA-D212-725, BHT-212-MM
	Power switched off	Ensure all Switches are ON
	Wiring Installation inoperative	Inspect electrical wiring
Rotorcraft power on but system will not operate	Check if circuit breakers open	Push in (close) circuit breaker
	Check if circuit breakers fail	Replace THE circuit breaker
Equipment failure	Connector disconnected	Trouble shoot IAW TB-E212-2006-1 Appendix B
	Power or signal wire is damaged	Connect, repair or replace wire
	Equipment inoperative	Remove equipment for servicing

APPENDIX B

TEMPORARY FLIGHT MANUAL SUPPLEMENT

DESIGN	KB	**EAGLE COPTERS LTD** CALGARY, AB, CANADA	
DRAWN	KB		
CHECKED	WK	DRAWING NO.	REV. B
MFG. APPR.	CD	TB-E212-2006-1	APPENDIX B
RELEASED	KB	TITLE GARMIN GTN 650 / 750 SYSTEM INSTL	
DE APPR.			
DATE 2022-01-27			

TEMPORARY CHANGE

INSERT AFTER PAGE 4 OF 8 IN FMS21011-2

When Eagle Copters Technical Bulletin TB-E212-2006-1 is incorporated, the Garmin GTN 750Xi and GTN 650Xi GPS/WAAS/NAV/COM Navigators are replaced with standard GTN 750 and GTN 650 GPS/WAAS/NAV/COM Navigators.

Page 4 is amended as shown below.

GENERAL INFORMATION

This flight manual supplement (FMS) is intended to supplement Eagle Single Flight Manual Supplement FMS-D212-725-1.

This installation consists of the following systems / equipment:

Garmin GTN 650 GPS/WAAS/NAV/COM Navigator (Qty 1)
Garmin GTN 750 GPS/WAAS/NAV/COM Navigator (Qty 1)
GPS/COMM Antenna (Qty 1)
GPS Antenna (Qty 1)
COMM Antenna (Qty 1)
VOR/LOC Antenna (Qty 1)
GTX 345R Transponder (Qty 1)
Transponder Antenna (Qty 1)

This flight manual is divided into six sections as follows:

Section 1 Limitations
Section 2 Normal Procedures
Section 3 Emergency and Malfunction Procedures
Section 4 Performance Data
Section 5 Weight and Balance Data
Section 6 Systems Description

Sections 1 through 4 contain Transport Canada approved data necessary to operate the helicopter in a safe and efficient manner.

ALL REFERENCES TO GTN 750Xi AND GTN 650Xi IN THE REMAINDER OF THIS SUPPLEMENT ARE APPLICABLE TO THE GTN 750 AND GTN 650, RESPECTIVELY.

TEMPORARY CHANGE

REPLACE PAGE 5 OF 8 IN FMS21011-2

When Eagle Copters Technical Bulletin TB-E212-2006-1 is incorporated, the Garmin GTN 750Xi and GTN 650Xi GPS/WAAS/NAV/COM Navigators are replaced with standard GTN 750 and GTN 650 GPS/WAAS/NAV/COM Navigators.

Page 5 is amended as shown below.

SECTION 1 LIMITATIONS

The Limitations of Section 1 remain applicable with the addition of the following:

GARMIN GTN 650 / GTN 750 NAVIGATION SYSTEM

1. The GTN 650 and GTN 750 must utilize the following software versions or later FAA approved versions:

SUB-SYSTEM	GTN 650 SOFTWARE	GTN 750 SOFTWARE
Main Sw Version	6.7 (or later approved)	6.7 (or later approved)
GPS Sw version	8.1 (or later approved)	8.1 (or later approved)

2. The Fuel Planning page of the GTN 650 / GTN 750 shall not be used to determine actual fuel on board the aircraft.

3. Operating the GTN 650 / 750 for primary navigation for latitudes above 89.00° N and below 89.00° S is prohibited.

TERRAIN PROXIMITY LIMITATIONS

1. Rotorcraft Maneuvers and navigation shall not be predicated upon the use of the terrain display.

APPENDIX C

TEMPORARY ELECTRICAL LOAD ANALYSIS

DESIGN	KB	**EAGLE COPTERS LTD** CALGARY, AB, CANADA	
DRAWN	KB		
CHECKED	WK	DRAWING NO.	REV. B
MFG. APPR.	CD	TB-E212-2006-1	APPENDIX C
RELEASED	KB	TITLE GARMIN GTN 650 / 750 SYSTEM INSTL	
DE APPR.			
DATE 2022-01-27			

ELECTRICAL DELTA LOAD ANALYSIS

Core Equipment Added	Total Units	Amps/ Unit	Amps Total	GROUND (BATT OR GPU) 5 SEC	GROUND (BATT OR GPU) 2 MIN	GROUND (BATT OR GPU) CONT.	GROUND - STARTING 5 SEC	GROUND - STARTING 2 MIN	GROUND - STARTING CONT.	FLIGHT - TAKE OFF OR LAND 5 SEC	FLIGHT - TAKE OFF OR LAND 2 MIN	FLIGHT - TAKE OFF OR LAND CONT.	FLIGHT - CRUISE 5 SEC	FLIGHT - CRUISE 2 MIN	FLIGHT - CRUISE CONT.	FLIGHT - EMERGENCY 5 SEC	FLIGHT - EMERGENCY 2 MIN	FLIGHT - EMERGENCY CONT.
ESSENTIAL AVIONICS BUS																		
PFD/MFD (GDU 1060)	1	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80
ADAHRS (GSU 75)	1	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
MAGNETOMETER (GMU 44)	1	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
ADDED - ESSENTIAL AVIONICS BUS TOTAL LOADS			4.56															
NON-ESSENTIAL AVIONICS BUS																		
PFD/MFD (GDU 1060)	1	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80
ADAHRS (GSU 75)	1	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
MAGNETOMETER (GMU 44)	1	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
ADDED - NON-ESSENTIAL AVIONICS BUS TOTAL LOADS			4.56															
MAIN DC BUS																		
SAM (MD 302) See Note 1	2	0.22	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
ADDED - MAIN DC BUS TOTAL LOADS			0.44															
ADDED TOTAL CORE LOADS TO MAIN DC BUS				9.56	9.56	9.56	9.56	9.56	9.56	9.56	9.56	9.56	9.56	9.56	9.56	9.56	9.56	9.56
% GENERATOR CAPACITY				3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%

Optional Equipment Added	Total Units	Amps/ Unit	Amps Total	GROUND (BATT OR GPU) 5 SEC	GROUND (BATT OR GPU) 2 MIN	GROUND (BATT OR GPU) CONT.	GROUND - STARTING 5 SEC	GROUND - STARTING 2 MIN	GROUND - STARTING CONT.	FLIGHT - TAKE OFF OR LAND 5 SEC	FLIGHT - TAKE OFF OR LAND 2 MIN	FLIGHT - TAKE OFF OR LAND CONT.	FLIGHT - CRUISE 5 SEC	FLIGHT - CRUISE 2 MIN	FLIGHT - CRUISE CONT.	FLIGHT - EMERGENCY 5 SEC	FLIGHT - EMERGENCY 2 MIN	FLIGHT - EMERGENCY CONT.
ESSENTIAL AVIONICS BUS																		
COMM 1 (GTN 750) See Note 2	1	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
NAV/GPS 1 (GTN 750)	1	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
TRANSPONDER (GTX 345R)	1	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
TCAS (GTS 855)	1	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70
ADDED - ESSENTIAL AVIONICS BUS TOTAL LOADS			5.91															
NON-ESSENTIAL AVIONICS BUS																		
COMM 2 (GTN 650) See Note 2	1	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
NAV/GPS 2 (GTN 650)	1	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
RAD ALT (GRA 5500)	1	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DME (KN 63)	1	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
ADAPTER (GAD 43E)	1	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
ADDED - NON-ESSENTIAL AVIONICS BUS TOTAL LOADS			4.97															
ADDED TOTAL OPTIONAL LOADS TO MAIN DC BUS				10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88	10.88
% GENERATOR CAPACITY				3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%
ALL ADDED TOTAL LOADS TO MAIN DC BUS				20.44	20.44	20.44	20.44	20.44	20.44	20.44	20.44	20.44	20.44	20.44	20.44	20.44	20.44	20.44
% GENERATOR CAPACITY				6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%

Note 1: MD 302 Standby SAM max current draw is 1.43 amp when charging and heating the battery. For load calculations, it is assumed the MD 302 internal battery is fully charged. The load provided represents a fully charged battery and normal loading with bus power supplied.

Note 2: GTN 750/650 (Transmit load 1.76 AMP, Standby Load 0.21 AMP). Loads are based on a 10% transmit duty cycle.

APPENDIX D

TEMPORARY WIRING DIAGRAM REVISION

DESIGN	KB	**EAGLE COPTERS LTD** CALGARY, AB, CANADA	
DRAWN	KB		
CHECKED	WK	DRAWING NO. TB-E212-2006-1	REV. B APPENDIX D
MFG. APPR.	CD		
RELEASED	KB	TITLE GARMIN GTN 650 / 750 SYSTEM INSTL	
DE APPR.			
DATE 2022-01-27			

REV	DESCRIPTION	INITIAL	YYYY-MM-DD
A	NEW ISSUE	EB	2021-12-13

NEW WIRE / UNIT

EXISTING WIRE / UNIT

NOTES:

1. PERFORM ALL WORK IN ACCORDANCE WITH BELL HELICOPTER STANDARD PRACTICES MANUAL BHT-ELEC-SPM.
2. ALL NEW UNSHIELDED WIRE USE M22759/41-(XX)-9 OR EQUIVALENT TYPE WIRE. (M22759/41-(XX)-9 IS NOT INTENDED TO BE USED IN SOLDER APPLICATIONS, SOLDERABILITY CAN BE ACHIEVED WITH THE PROPER SOLDER. USE CRIMP SPLICES FOR REPAIR). ALL WIRES 22 AWG UNLESS OTHERWISE SPECIFIED BY WIRE CODE. ALL JUMPERS TO BE LESS THAN 6 INCHES.
3. ALL NEW SHIELDED WIRE USE M27500-(XX)SM(X)N23 OR EQUIVALENT TYPE WIRE. (M27500-(XX)SM(X)N23 IS NOT INTENDED TO BE USED IN SOLDER APPLICATIONS, SOLDERABILITY CAN BE ACHIEVED WITH THE PROPER SOLDER. USE CRIMP SPLICES FOR REPAIR). SOLDER SLEEVES SHALL USE SN96 SOLDER, USE P/N S200-X-00 OR EQUIVALENT.
4. ALL SHIELD TERMINATIONS SHALL BE INSTALLED PER MIL-S-83519 OR EQUIVALENT. SHIELD TERMINATIONS SHOWN AS "DAISY-CHAINED" ARE FOR DRAWING CLARITY ONLY. INDIVIDUAL SHIELD EXTENSIONS SHALL BE SPLICED AT A COMMON TIE POINT TO THE TERMINATING WIRES. THE BACK SHELL OR AIRFRAME GROUND MAY BE USED.
5. ALL AIRFRAME GROUNDS SHALL BE VIA AMP LUG OR GROUNDING BLOCK AND PROVIDE SEPARATE GROUND STUD LOCATIONS FOR DC POWER GROUNDS, AC POWER GROUNDS, CHASSIS GROUNDS, SIGNAL GROUNDS AND SHIELD GROUNDS.
6. ALL EQUIPMENT BONDING TO ADJACENT AIRFRAME STRUCTURE TO BE 0.003 OHM OR LESS. ALL ELECTRICAL GROUNDING AND BONDING TO BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF BHT-ELEC-SPM CHAPTER 8.
7. ALL TERMINALS TO BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF BHT-ELEC-SPM CHAPTER 4 PARAGRAPH 4-9.
8. ALL CONNECTORS TO BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF BHT-ELEC-SPM CHAPTER 5 AND / OR CIRCULAR CONNECTOR INSTALLATION INSTRUCTIONS (GARMIN DOCUMENT 190-00313-12). ENSURE ALL UNUSED CONNECTOR CONTACTS ARE FILLED WITH SPARE PINS/SOCKETS OR PLASTIC GROMMET SEALING PLUGS. ENSURE ALL BULKHEAD MOUNTED CONNECTORS ARE PROPERLY BONDED TO AIRFRAME.
9. ENSURE ALL SWITCHES, CIRCUIT BREAKERS, AND REMOTE MOUNTED BOXES ARE LABELED WITH A CONSISTENT SIZE, FONT, COLOR, BACKGROUND AND ARE ILLUMINATED CONSISTENT AS EXISTING LABELS.
10. ROUTE ALL WIRES AND CABLES WITH EXISTING WIRE ROUTES WHERE POSSIBLE AND CLAMP IN ACCORDANCE WITH THE LATEST REVISION OF BHT-ELEC-SPM CHAPTER 6. WIRES MUST BE ROUTED WITH A MINIMUM OF 6 INCHES OF SEPARATION FROM OXYGEN AND FLUID LINES (MIN 2 INCHES IF WIRES IN CONDUIT).
11. INSTALL SYSTEM IN ACCORDANCE WITH THE LATEST REVISION OF THE MANUFACTURERS INSTALLATION MANUAL.
12. LOWERCASE LETTER CONNECTOR PIN DESIGNATORS ARE SHOWN AS UNDERLINED UPPERCASE LETTERS.
13. INCLUDED IN KIT PN: 011-02325-02
14. INCLUDED IN KIT PN: 011-02326-02
15. THE CUMULATIVE COAX CABLE LENGTH BETWEEN LRU AND ANTENNA NOT TO EXCEED 50 FT WHEN USING P/N S44193 FOR GPS.
16. THE CUMULATIVE COAX CABLE LENGTH BETWEEN LRU AND ANTENNA NOT TO EXCEED 35 FT WHEN USING P/N RG142B FOR GPS.
17. POWER WIRES NOT TO EXCEED 20 FT FROM A 5A CIRCUIT BREAKER.
18. GARMIN OPTIONAL MOD 7 (LOW CAPACITY BATTERY OPTION, GARMIN P/N 011-04950-01) MUST BE INCORPORATED.

DESIGN	EB
DRAWN	EB
CHECKED	WK
MFG. APPR.	LJ / CD
DM RLSED.	
DE RLSED.	N/A
SCALE: NTS	
DATE: 2021-12-13	

EAGLE
CALGARY, ALBERTA, CANADA

TITLE: GARMIN GTN 650 / 750 WIRING DIAGRAM

NO: TB-E212-2006-1 APPENDIX D

BILL OF MATERIALS

ITEM	QTY PER	PART NUMBER	DESCRIPTION	POTENTIAL SUPPLIER	
1	1	011-02282-00	GTN 750	GARMIN	18
2	4	MS22073-5	CIRCUIT BREAKER, 5A	MIL SPEC	
3	2	330-00185-78	CONNECTOR, PLUG	GARMIN	13 14
4	2	330-00185-26	CONNECTOR, PLUG	GARMIN	13 14
5	2	330-00185-44	CONNECTOR, PLUG	GARMIN	13 14
6	2	330-00185-62	CONNECTOR, PLUG	GARMIN	13 14
7	AR (420)	336-00021-00	CONTACT, PIN	GARMIN	13 14
8	2	125-00085-00	BACKSHELL	GARMIN	13 14
9	2	125-00082-00	BACKSHELL	GARMIN	13 14
10	2	125-00083-00	BACKSHELL	GARMIN	13 14
11	2	125-00084-00	BACKSHELL	GARMIN	13 14
12	2	011-00979-03	KIT, CONFIGURATION MODULE	GARMIN	
13	--	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	
14	1	011-02256-00	GTN 650	GARMIN	18
15	1	CI 507	ANTENNA, DIPLEXER	COMANT	
16	1	ZFSC-2-1B+	COAXIAL POWER SPLITTER	MINI CIRCUITS	
17	1	CI-292-1	ANTENNA, GPS/COMM	COMANT	
18	REF (1)	DMN4-4	ANTENNA, VOR/LOC	DORNE AND MARGOLIN	
19	1	013-00235-00	ANTENNA, GPS	GARMIN	
20	1	CI-292-2	ANTENNA, COMM	COMANT	
21	AR (40)	S44193	CABLE, COAX	PIC	15
22	16	190112	CONNECTOR, BNC	PIC	
23	AR (20)	392404	CABLE, ETHERNET	CARLISLE	
24	1	RHT-615-0236	CONNECTOR, BULKHEAD TNC	AMHPENOL	
25	REF (1)	RGS10-48	ANTENNA, GLIDESLOPE	DAYTON-GRANGER	
26	6	190108	CONNECTOR, TNC	PIC	
27	1	011-00878-04	16 WATT COM ENABLEMENT CARD	GARMIN	
28	1	011-02045-41	SD DATACARD W/ NAVIGATION	GARMIN	
29	1	UG-914/U	CONNECTOR, BULKHEAD BNC	AMHPENOL	
30	AR (260)	M17/60-RG142	CABLE, COAX	MIL SPEC	16

EAGLE
CALGARY, ALBERTA, CANADA

TITLE
GARMIN GTN 650 / 750
WIRING DIAGRAM

DATE: 2021-12-13	DWG:	REV	SHEET
RELEASED:	TB-E212-2006-1	A	2 OF 5

GARMIN GTN 750
GPS/NAV/COMM (1)

2006-1P1003 (5) (7) (10)

AIRCRAFT POWER 30 — 2006-1GTN012A20 — NO 1 (2) 5A ESS AVIONICS BUSS — VHF REF: D212-725-2-G2 REV. C
AIRCRAFT POWER 43
AIRCRAFT POWER 44
AIRCRAFT GND 37
AIRCRAFT GND 38 — 2006-1GTN015A20N — 2006-1N3 E — LOC: AFT CTR CONSOLE
AIRCRAFT GND 40

2006-1P1004 (6) (7) (11)

AIRCRAFT POWER 51 — 2006-1GTN001A20 — NO 1 (2) 5A ESS AVIONICS BUSS — NAV/GPS REF: D212-725-2-G2 REV. C
AIRCRAFT POWER 52
AIRCRAFT GND 61 — 2006-1GTN003A20N — 2006-1N4 D — LOC: AFT CTR CONSOLE
AIRCRAFT GND 62

2006-1P1001 (3) (7) (8)

AIRCRAFT POWER 19 — 2006-1GTN007A20
AIRCRAFT POWER 20
AIRCRAFT GND 77 — 2006-1GTN005A20N — 2006-1N3 K — LOC: AFT CTR CONSOLE
AIRCRAFT GND 78

LIGHTING BUS 1 HI 18 — 2006-1GTN009A22 — J34A — P34A — 2006-1GTN009B22
LIGHTING BUS 1 LO 17 — 2006-1GTN010A22N — 2006-1N1 N — LOC: AFT CTR CONSOLE
LOC: INST PNL

FAN POWER OUT 59 — R BK — FAN
FAN GROUND 43 — R BK — FAN
FAN TACH IN 58 — R Y — FAN

CONFIG MODULE PWR 65 — R — CONFIG MOD (12) 4
CONFIG MODULE GND 64 — BK — 1
CONFIG MODULE DATA 62 — Y — 3
CONFIG MODULE CLOCK 63 — W — 2

27 TB 1 MJ — REF: D212-725-2-G2 REV. C

AUDIO OUT HI 4 — W B — 2006-1GTN201A22
AUDIO OUT LO 23

2006-1P1004
500 Ω VOR/LOC AUDIO OUT HI 16 — W B — 2006-1GTN202A22
500 Ω VOR/LOC AUDIO OUT LO 17

2006-1P1003
500 Ω COMM AUDIO HI 7 — W B — 2006-1GTN203A22
500 Ω COMM AUDIO LO 18
COMM MIC HI 5 — W B — 2006-1GTN204A22
COMM MIC LO 20
COMM MIC KEY 11 — 2006-1GTN017A22

CONT. ON SHEET 3

EAGLE P178
AUDIO MIXER
2006-20P1
AUDIO OUT HI 6
AUDIO OUT LO 19
INPUT 5 HI
INPUT 5 LO
REF: 7002-MI-001
LOC: LOWER NOSE SHELF
2006-20P1
INPUT 6 HI 7
INPUT 6 LO 20

EAGLE P139-HD
AUDIO ROUTER
2006-5P1
500 Ω VOR/LOC AUDIO OUT HI 39
500 Ω VOR/LOC AUDIO OUT LO 40
RX 9 HI
RX 9 LO
500 Ω COMM AUDIO HI 1
500 Ω COMM AUDIO LO 2
RX 1 HI
RX 1 LO
COMM MIC HI 3
COMM MIC LO 4
TX 1 HI
TX 1 LO
COMM MIC KEY 5
TX 1 KEY
REF: G13004
LOC: LOWER NOSE SHELF
2006-5P2
RX 17 HI 34
RX 17 LO 35
RX 2 HI 1
RX 2 LO 2
TX 2 HI 3
TX 2 LO 4
TX 2 KEY 5

NON-ESS AVIONICS BUSS — (2) NO 2 5A — VHF REF: D212-725-2-G2 REV. C
2006-2P1003 (10) (7) (5) — 2006-2GTN012A20 — 30 AIRCRAFT POWER; 43 AIRCRAFT POWER; 44 AIRCRAFT POWER; 37 AIRCRAFT GND; 38 AIRCRAFT GND; 40 AIRCRAFT GND
2006-2N1 E — LOC: AFT CTR CONSOLE — 2006-2GTN015A20N

NON-ESS AVIONICS BUSS — (2) NO 2 5A — NAV/GPS REF: D212-725-2-G2 REV. C
2006-2P1004 (11) (7) (6) — 2006-2GTN001A20 — 51 AIRCRAFT POWER; 52 AIRCRAFT POWER; 61 AIRCRAFT GND; 62 AIRCRAFT GND
2006-2N1 H — LOC: AFT CTR CONSOLE — 2006-2GTN003A20N

TB12 (1) (2) (3) (4) — REF: D212-725-2-G2 REV. C
2006-2P1001 (8) (7) (3) — 2006-2GTN008A20 — 19 AIRCRAFT POWER; 20 AIRCRAFT POWER; 77 AIRCRAFT GND; 78 AIRCRAFT GND
2006-2N1 K — LOC: AFT CTR CONSOLE — 2006-2GTN005A20N

2006-2GTN009A22 — 18 LIGHTING BUS 1 HI
2006-2N2 T — LOC: AFT CTR CONSOLE — 2006-2GTN010A22N — 17 LIGHTING BUS 1 LO

FAN — R BK — 59 FAN POWER OUT; R BK — 43 FAN GROUND; R Y — 58 FAN TACH IN

(12) CONFIG MOD — 4 R — 65 CONFIG MODULE PWR; 1 BK — 64 CONFIG MODULE GND; 3 Y — 62 CONFIG MODULE DATA; 2 W — 63 CONFIG MODULE CLOCK

2006-2GTN201A22 — W B — 4 AUDIO OUT HI; 23 AUDIO OUT LO

2006-2P1004
2006-2GTN202A22 — W B — 16 500 Ω VOR/LOC AUDIO OUT HI; 17 500 Ω VOR/LOC AUDIO OUT LO

2006-2P1003
2006-2GTN203A22 — W B — 7 500 Ω COMM AUDIO HI; 18 500 Ω COMM AUDIO LO
2006-2GTN204A22 — W B — 5 COMM MIC HI; 20 COMM MIC LO
2006-2GTN017A22 — 11 COMM MIC KEY

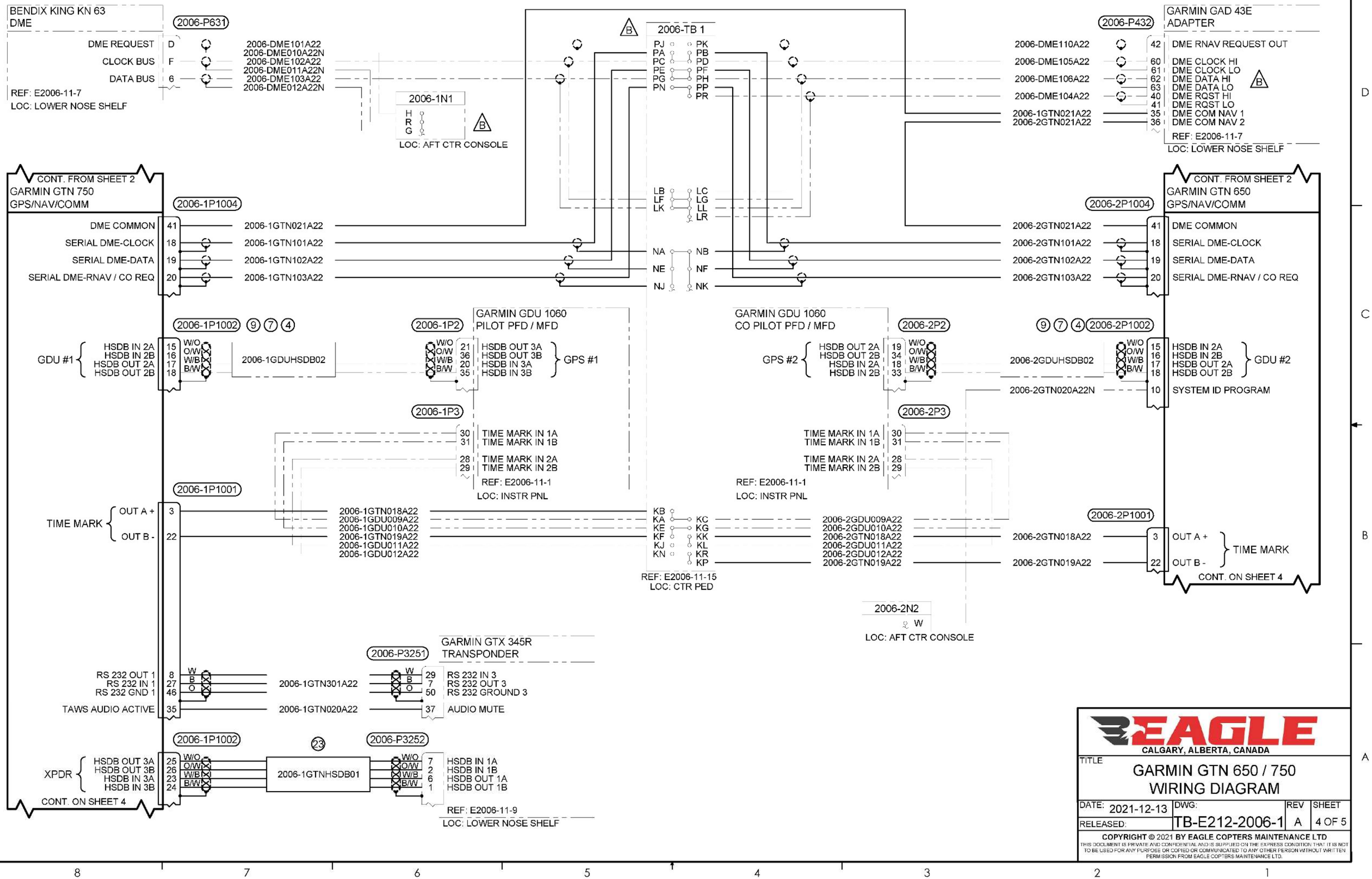
CONT. ON SHEET 3

GARMIN GTN 650
GPS/NAV/COMM (14)

EAGLE
CALGARY, ALBERTA, CANADA

TITLE
GARMIN GTN 650 / 750
WIRING DIAGRAM

DATE: 2021-12-13	DWG: TB-E212-2006-1	REV A	SHEET 3 OF 5
RELEASED:			


BENDIX KING KN 63
DME
2006-P631
DME REQUEST D
CLOCK BUS F
DATA BUS 6
2006-DME101A22
2006-DME010A22N
2006-DME102A22
2006-DME011A22N
2006-DME103A22
2006-DME012A22N
REF: E2006-11-7
LOC: LOWER NOSE SHELF
2006-1N1
H
R
G
LOC: AFT CTR CONSOLE
2006-TB 1
PJ PK
PA PB
PC PD
PE PF
PG PH
PN PP
PR
LB LC
LF LG
LK LL
LR
NA NB
NE NF
NJ NK
GARMIN GAD 43E
ADAPTER
2006-P432
2006-DME110A22 42 DME RNAV REQUEST OUT
2006-DME105A22 60 DME CLOCK HI
61 DME CLOCK LO
2006-DME106A22 62 DME DATA HI
63 DME DATA LO
2006-DME104A22 40 DME RQST HI
41 DME RQST LO
2006-1GTN021A22 35 DME COM NAV 1
2006-2GTN021A22 36 DME COM NAV 2
REF: E2006-11-7
LOC: LOWER NOSE SHELF
CONT. FROM SHEET 2
GARMIN GTN 750
GPS/NAV/COMM
2006-1P1004
DME COMMON 41
SERIAL DME-CLOCK 18
SERIAL DME-DATA 19
SERIAL DME-RNAV / CO REQ 20
2006-1GTN021A22
2006-1GTN101A22
2006-1GTN102A22
2006-1GTN103A22
CONT. FROM SHEET 2
GARMIN GTN 650
GPS/NAV/COMM
2006-2P1004
2006-2GTN021A22 41 DME COMMON
2006-2GTN101A22 18 SERIAL DME-CLOCK
2006-2GTN102A22 19 SERIAL DME-DATA
2006-2GTN103A22 20 SERIAL DME-RNAV / CO REQ
2006-1P1002 9 7 4
GDU #1
HSDB IN 2A 15
HSDB IN 2B 16
HSDB OUT 2A 17
HSDB OUT 2B 18
W/O
O/W
W/B
B/W
2006-1GDUHSDB02
2006-1P2
GARMIN GDU 1060
PILOT PFD / MFD
21 HSDB OUT 3A
36 HSDB OUT 3B
20 HSDB IN 3A
35 HSDB IN 3B
GPS #1
GARMIN GDU 1060
CO PILOT PFD / MFD
2006-2P2
GPS #2
HSDB OUT 2A 19
HSDB OUT 2B 34
HSDB IN 2A 18
HSDB IN 2B 33
9 7 4 2006-2P1002
2006-2GDUHSDB02
15 HSDB IN 2A
16 HSDB IN 2B
17 HSDB OUT 2A
18 HSDB OUT 2B
GDU #2
2006-2GTN020A22
10 SYSTEM ID PROGRAM
2006-1P3
TIME MARK IN 1A 30
TIME MARK IN 1B 31
TIME MARK IN 2A 28
TIME MARK IN 2B 29
REF: E2006-11-1
LOC: INSTR PNL
2006-2P3
TIME MARK IN 1A 30
TIME MARK IN 1B 31
TIME MARK IN 2A 28
TIME MARK IN 2B 29
REF: E2006-11-1
LOC: INSTR PNL
2006-1P1001
TIME MARK
OUT A + 3
OUT B - 22
2006-1GTN018A22
2006-1GDU009A22
2006-1GDU010A22
2006-1GTN019A22
2006-1GDU011A22
2006-1GDU012A22
KB
KA KC
KE KG
KF KK
KJ KL
KN KR
KP
REF: E2006-11-15
LOC: CTR PED
2006-2GDU009A22
2006-2GDU010A22
2006-2GTN018A22
2006-2GDU011A22
2006-2GDU012A22
2006-2GTN019A22
2006-2N2
W
LOC: AFT CTR CONSOLE
2006-2P1001
2006-2GTN018A22 3 OUT A +
2006-2GTN019A22 22 OUT B -
TIME MARK
CONT. ON SHEET 4
GARMIN GTX 345R
TRANSPONDER
2006-P3251
RS 232 OUT 1 8
RS 232 IN 1 27
RS 232 GND 1 46
2006-1GTN301A22
W
B
O
29 RS 232 IN 3
7 RS 232 OUT 3
50 RS 232 GROUND 3
TAWS AUDIO ACTIVE 35
2006-1GTN020A22
37 AUDIO MUTE
2006-1P1002
23
2006-P3252
XPDR
HSDB OUT 3A 25
HSDB OUT 3B 26
HSDB IN 3A 23
HSDB IN 3B 24
2006-1GTNHSDB01
7 HSDB IN 1A
2 HSDB IN 1B
6 HSDB OUT 1A
1 HSDB OUT 1B
REF: E2006-11-9
LOC: LOWER NOSE SHELF
CONT. ON SHEET 4
EAGLE
CALGARY, ALBERTA, CANADA
TITLE
GARMIN GTN 650 / 750
WIRING DIAGRAM
DATE: 2021-12-13
DWG: TB-E212-2006-1
REV A
SHEET 4 OF 5
RELEASED:
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CONT. FROM SHEET 3
GARMIN GTN 750
GPS/NAV/COMM

COMM — 2006-1P1007 (22) (30) — COMM 1 ANT
GPS — 2006-1P1006 (26) (30) — GPS 1 ANT
NAV — 2006-1P1008 (22) (30) — NAV 1 ANT

LOC: INSTR PNL

COMM 1 ANT: (22) (17) (26) — LOC: ROOF

NAV 1 ANT: (22) — SPLTR (1, 2, S) (16) (22) — LOC: UPPER NOSE SHELF (22)

SPLTR COAX: (30) (22) — CI 507 (ANT, G/S, VOR) (15) (22) — LOC: UPPER NOSE SHELF (22)

GS ANT: (30) — LOC: NOSE (25)

VOR ANT: (30) — (22) (29) (22) — LOC: TAILBOOM — (30) VOR ANT (22) — LOC: AFT TAIL (18)

CONT. FROM SHEET 3
GARMIN GTN 650
GPS/NAV/COMM

NAV — 2006-2P1008 (22) (30) — NAV 2 ANT

GPS — 2006-2P1006 (26) (21) — GPS 2 ANT — (26) (24) (26) — LOC: TAILBOOM — (21) GPS 2 ANT — LOC: AFT TAIL (19) (26)

COMM — 2006-2P1007 (22) (30) — COMM 2 ANT

LOC: CTR PED

LOC: BELLY (20) (22)

EAGLE
CALGARY, ALBERTA, CANADA

TITLE
GARMIN GTN 650 / 750 WIRING DIAGRAM

DATE: 2021-12-13	DWG:	REV	SHEET
RELEASED:	TB-E212-2006-1	A	5 OF 5