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AgustaWestland Products

SERVICE BULLETIN

N° 189-302

DATE: September 13, 2022

REV. : /

TITLE

ATA 46 - AVIONIC FLIGHT SOFTWARE RELEASE PHASE 8.0 INSTALLATION

REVISION LOG

First issue

1. PLANNING INFORMATION

A. EFFECTIVITY

All AW189 helicopters equipped with Avionic Flight Software Release Phase 3.0, Phase 4.0, Phase 5.0 or Phase 6.0.

B. COMPLIANCE

At Customer's option.

C. CONCURRENT REQUIREMENTS

- Compliance with SB189-115 is required for helicopters not equipped with kit transponder ADSB-OUT DO-260B P/N 8G3450F00811 or not equipped with transponder DO-260B P/N 622-9210-551.
- The AW189 Electronic Engine Control Unit Software (EECU) Version 6.00 (refer to GE SB 74-0004 R00 must be installed with Avionic Flight Software Release Phase 8.0.
- In accordance with EASA Rules, this change affects the Operational Suitability Data - Flight Crew Data (OSD-FCD); therefore, the flight crew to operate helicopter equipped with Avionic Software Phase 8.0 shall be trained i.a.w. OSD-FCD. The latest issue of the OSD-FCD publication is available at “MyPublication” section of Leonardo AW Customer Portal.
- Compliance with SB189-250 is required for AW 189 helicopters up to S/N 49055, 89007 and S/N 92010 except those equipped with FIPS kit P/N 8G3000F00111 (Extended Range cabin) or FIPS kit P/N 8G3000F00311 (Standard cabin).

D. REASON

This Service Bulletin is issued in order to provide the necessary instructions on how to perform the Avionic Flight Software Release Phase 8.0 installation.

E. DESCRIPTION

This Service Bulletin provides instructions on how to install the Avionic Flight Software Release Phase 8.0 certified by Leonardo Helicopter.

The following improvements have been applied on Aircraft & Mission Management System (AMMS SW) and Cockpit Display System (CDS SW):

- WX TRANSMITTING caution has been renamed RADAR TX ON (CDS SW).
- In the Monitoring and Diagnostic System (MDS) it has been updated the monitoring of failures (AMMS SW).

The following improvement applied on AMMS SW and CDS SW are devoted to AW189 equipped with GE engine only:

- Power Assurance to Prognostic Diagnostic Based Monitoring (PAPDB), in order to update the CDS logic to display a legend if at least 1 PAC has been performed by FADEC in the current flight.
- Real-time Performance update (AMMS SW).

Moreover, AMMS/CDS/SSEPMS are provisioned to allow proper interface and functioning of the following equipment:

- Kit New Dual Radio Thales
- Kit New Video Management Unit (VMU)
- Kit Radar GABBIANO
- Kit Digital Map (DMAP)
- AIS Tracks Recording
- Kit FLIR WESCAM MX15 provisions, interfacing it also with DMAP.

GE SW FADEC V6.0 is a pre-requirement on AW189 with GE engine and includes the following improvements:

- New Automatic Power Assurance Check logic (Prognostics Diagnostics Based Management);
- Time Limited Dispatch;
- Increased maximum permitted ITT limit at all ratings. As a consequence, PI scale is updated;
- Incorporation of Automatic Power Assurance Checks with Anti-ice on and with IBF installed;
- Improved VG Reversionary Mode Response.

In addition, although is independent from EECU SW update, the GE Engine Safety Analysis allows the extension of the maintenance check interval CM71-02 from 1200 FH to 2400 FH; chapter 4 of maintenance manual has been revised.

The Core Avionics Phase 8 requires the installation of SGCU P/N 8G2480V00152 or P/N 8G2480V00251 and the installation of MISC PANEL P/N 8G3110V00451.

For helicopters equipped with Avionic Flight Software Release 3.0 and FIPS Kit P/N 8G3000F00111 (Extended Range cabin) or FIPS kit P/N 8G3000F00311 (Standard Cabin), in addition to the previously listed software changes, new cable assemblies are required to activate the Modification of ECDU Ice Protection Page.

F. APPROVAL

The technical content of this Service Bulletin is approved under the authority of DOA nr. EASA.21.J.005. For helicopters registered under other Aviation Authorities, before applying the Service Bulletin, applicable Aviation Authority approval must be checked within Leonardo Helicopters customer portal.

EASA states mandatory compliance with inspections, modifications or technical directives and related time of compliance by means of relevant Airworthiness Directives.

If an aircraft listed in the effectivity embodies a modification or repair not LHD certified and affecting the content of this Service Bulletin, it is responsibility of the Owner/Operator to obtain a formal approval by Aviation Authority having jurisdiction on the aircraft, for any adaptation necessary before incorporation of the present Service Bulletin.

G. MANPOWER

To comply with this Service Bulletin the following Maintenance-Man-Hours (MMH) are deemed necessary:

- Seventy (70) MMH for all helicopters equipped with FIPS kit and Avionic Flight Software Release Phase 3.0.
- Twenty-four (24) MMH for helicopters equipped with DTD P/N 4F4620V00551 except those equipped with FIPS kit and Avionic Flight Software Release Phase 3.0.
- Eighteen (18) MMH for all other helicopters.

Maintenance-Man-Hours are based on hands-on time and can change with personnel and facilities available.

H. WEIGHT AND BALANCE

N.A.

I. REFERENCES

1) PUBLICATIONS

- AW189 Software handbook n°189G0000X007

DATA MODULE		DESCRIPTION	PART
DM01	89-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance.	-
DM02	89-A-06-41-00-00A-010A-A	Access doors and panels - General data	-

DATA MODULE		DESCRIPTION	PART
DM03	89-A-22-11-08-00A-752A-A	Flight control computer – Data loading.	-
DM04	89-A-24-81-00-00A-752A-A	SSEPMS - Remote electric power units (REPUs) - Data loading	-
DM05	89-A-24-81-00-00B-752A-A	SSEPMS - Electrical control display units (ECDUs) - Data loading	-
DM06	89-A-33-11-01-00A-520A-A	Miscellaneous control panel - Remove procedure	
DM07	89-A-33-11-01-00A-720A-A	Miscellaneous control panel - Install procedure	
DM08	89-A-34-21-00-00A-750A-B	Standby attitude director indicator system - Load software procedure	
DM09	89-A-34-22-03-00A-75BA-A	AHRU1 calibrated PROM - Setup procedure	-
DM10	89-A-34-22-07-00A-75BA-A	AHRU2 calibrated PROM - Setup procedure	-
DM11	89-B-34-44-05-00A-752A-A	External compensation unit - Data loading	-
DM12	89-A-34-61-00-00A-752A-A	Digital map system kit - Navigation maps - Data loading	-
DM13	89-A-46-21-00-00A-750A-A	Aircraft mission management system - Load software procedure	-
DM14	89-A-46-21-00-00A-752A-A	Aircraft mission management system - Data loading	-
DM15	89-A-46-21-05-00A-750A-A	Data transfer device (DTD) - Load software procedure	-
DM16	89-A-46-21-05-00A-752A-A	Data transfer device (DTD) - Data loading	-
DM17	89-A-46-21-05-00A-520A-A	Data transfer device (DTD) - Remove procedure	-
DM18	89-A-46-21-05-00A-720A-A	Data transfer device (DTD) - Install procedure	-
DM19	89-B-46-22-06-00A-750A-A	Cabin PC - Load software procedure	-
DM20	89-A-46-31-00-00A-750A-A	Cockpit display system - Load software procedure	-
DM21	89-A-46-32-03-00A-750A-B	Cabin PC - Load software procedure	-
DM22	89-A-20-10-01-00A-259A-A	Ground connections - Other procedures to protect surfaces	-
DM23	89-A-11-00-01-00A-720A-A	Decal - Install procedure.	-
DM24	CSRP-A-51-42-00-00A-720A-D	Potted Inserts - Install procedure	-
DM25	89-A-20-10-10-01A-720B-A	Socket relay - Install procedure	-

DATA MODULE		DESCRIPTION	PART
DM26	89-A-20-10-10-01A-720A-A	Relay - Install procedure	-
DM27	89-A-20-10-03-00A-010A-A	Wire / cable crimping - General data	-
DM28	89-A-20-10-06-04A-720A-A	Sleeve marker - Install procedure	-
DM29	89-A-21-90-00-00A-320A-A	Integrated environmental control system (ECS) kit - Operation test	-

2) ACRONYMS

AFCS	Aircraft Flight Control System
AFDX	Avionic Full Duplex Ethernet
AHRU	Attitude Heading and Reference Unit
AMMC	Aircraft Mission Management Computer
AMMS	Aircraft & Mission Management System
AMP	Aircraft Maintenance Publication
CDS	Cockpit Display System
CRC	Cyclic Redundancy Check
DCL	Deceleration Mode
DMAP	Digital Map
DM	Data Module
DMG	Digital Map Generator
DMGSW	Digital Map Generator Software
DOA	Design Organization Approval
DTD	Data Transfer Device
ECDU	Electrical Control and Display Unit
EECU	Electronic Engine Control Unit
FCD	Flight Crew Data
FIPS	Full Ice Protection System
FMS	Flight Management System
GA	Go-Around
GE	General Electric Company
GSPD	Ground Speed Mode
HUMS	Health and Usage Monitoring System
HTAWS	Helicopter Terrain Awareness and Warning System
IBF	Inlet Barrier Filter
ICS	Intercommunication system.
IPD	Illustrated Part Data
IPS	Ice Protection System

LHD	Leonardo Helicopter
LIPS	Limited Ice Protection System
MCDU	Multifunction Control Display Unit
MDS	Monitoring and Diagnostic System
MMH	Maintenance Man Hour
NGS	Autonomous Glideslope Mode
NGSPD	Autonomous Ground Speed Mode
NLOC	Autonomous Localizer Mode
OPSW	Operational Software
OSD	Operational Suitability Data
PAPDB	Prognostic Diagnostic Based Monitoring
P/N	Part Number
REPU	Remote Electrical Power Unit
RFM	Rotorcraft Flight Manual
SAR	Search and Rescue
SB	Service Bulletin
SGCU	Starter Generator Control Unit
STBY	Stand-By
SW	Software
SSEPMS	Solid State Electrical Power Management System
TCAS	Traffic Alert and Collision Avoidance System
TU-WLVL	Lateral Ground Speed Control or Wings Level Control in Transition Up mode.
VMS	Vehicle Monitoring System
VMU	Video Management Unit
VNE	Never Exceed Speed
XPDR	Transponder

3) ANNEX

N.A.

J. PUBLICATIONS AFFECTED

AW189 Rotorcraft Flight Manual (RFM)

AW189 Operation Suitability Data – Flight Crew Data (OSD-FCD)

AW189 Illustrated Part Data (IPD)

K. SOFTWARE ACCOMPLISHMENT SUMMARY

Software to be updated:

- DMG SW P/N 6F4620VA0201
- AMMC operational software 8.0.9 P/N 8G4620AA0803
- DTD software P/N 8G4620VS0200
- CDS operational software P/N 8G4630AS0800
- AFDX configuration switch P/N 8G4640AO0008
- ECDU Configuration File P/N 8G462AC0XXX
- Option file for AMMC P/N 8G4620AO10XX
- Option file for CDS P/N 8G4630AO10XX
- REPU Configuration File P/N 8G2460AS0600
- DMAP P/N TA00AWHL-XXXXXXXXX
- AMMC VAM SW Rel. 2.2 P/N 8G4620AB0106
- AFCS operational software P/N 8G2210AS0700
- AW189 Meggit avionics ISFD (ADI STBY) P/N 8G4640IB0200

Part numbers of Option files, ECDU configuration files and digital maps are depending upon helicopter configuration that can be different from the one reported in relevant helicopter “Commessa di Vendita”. Customer must contact AW189 Product Support Engineering (engineering.support.lhd@leonardo.com) to request the correct files at least three months in advance from the scheduled embodiment of this Service Bulletin. In order to define the correct files to be installed on the helicopter, the following table has to be compiled by the customer with configuration file P/N.

SW DESCRIPTION	S/N HELICOPTER P/N SW INSTALLED (COMPILED BY CUSTOMER)	 P/N SW TO BE ORDERED (COMPILED BY LEONARDO COMPANY)
AFCS OPERATIONAL SW		
AFDX CONFIG SWITCH		
AMMC DMG SW (if installed)		
AMMC OPSW		
AMMC OPTION FILE		
AMMC VAM SW		
CDS OPTION FILE		
ECDU CONFIGURATION FILE		
DIMMER CONFIG FILE		
ECDU OP SW		
REPU CONFIG TABLE		
ICS SETTING FILE		
DMAP SOFTWARE		
DTD SOFTWARE		

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

1) PARTS

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	**8G4600A00119**		**SOFTWARE INSTALLATION PHASE 8.0**	**REF**	**.**		**-**
2	**8G4640A00119**		**AVIONICS FLIGHT SOFTWARE INSTALLATION**	**REF**	**..**		**-**
3	6F4620VA0201		DMGSW	1	...	(1)	-
4	8G2210AS0700		AFCS operational software	1	…	(1)	-
5	8G3450AO0001	8G3450AO0002	TSS configuration file	1	…	(1)(9)(17)	-
6	8G4620AA0803		AMMC operational software 8.0.9	1	...	(1)	-
7	8G4620AB0106		AMMC VAM SW Rel. 2.2	1	…	(1)(10)	-
8	8G4620VS0200		DTD software	1	…	(1)(8)	-
9	8G4630AS0800		CDS operational software	1	…	(1)	-
10	8G4640AO0008		AFDX configuration switch	1	…	(1)	-
11	8G4620AO10XX		Option File for AMMC	1	..	(1)(13)	-
12	8G4630AO10XX		Option File for CDS	1	..	(1)(13)	-
13	8G4640IB0200		AW189 Meggitt Avionics ISFD (ADI STBY)	1	..	(1)(12)	
14	TA00AWHL-XXXXXXXXX	DMG6845XXXXXXXXXX	Digital Map	1	.	(8)	-
15	**8G4600A00319**		**SSEPMS SOFTWARE INSTALLATON**	**REF**	**..**		**-**
16	8G4620AC0XXX		ECDU Configuration file	1	…	(1)(2)	-
17	8G2460AS0600		REPU Configuration file	1	…	(1)(3)	-
18	**8G1130A30511**		**SOFTWARE INSTALLATION PHASE 8.0 PLACARD**		**..**		**-**
19	AW002DBHS081E11D		Placard	1	…		-
20	**8G2420A01511**		**IPS GEN CURRENT INSTL STD-CABIN**	**REF**	**.**		**-**
21	8G9A21B35401	8G9A21B35401A1R	IPS GEN MONITORING C/A (A1B354)	1	..		189-149L2
22	8G9B21B43201	8G9B21B43201A1R	IPS GEN MONITORING C/A (B1B432)	1	..		189-149L2
23	**8G2420A01611**		**IPS GEN CURRENT INSTL U/B**	**REF**	**.**		**-**
24	8G9A21B35401	8G9A21B35401A1R	IPS GEN MONITORING C/A (A1B354)	1	..		189-149L3
25	8G9B21B43202		IPS GEN MONITORING C/A (B1B432)	1	..		189-149L3
26	8G4620FS0200		Cabin PC application software REL. 2.3.0	1	.	(1)(11)	-
27	**8G4600P00611**		**WOW DTD RETROMOD**	**REF**	**.**		
28	A523A-A02		Contact	4	..		189-103L2
29	M81824/1-1		Splice	2	..		189-103L2

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
30	A556A-T22		Wire	4 m	.		189-103L2
31	A579A02-002		Marker sleeve	4	.		189-103L2
32	8G4620V00451		Data transfer device	1	.		189-103L2
33	**8G3110P00811**		**VNE PLACARD RETROMOD**	**REF**	**.**		
34	8G3110A05051		Plate	1	..		189-240L1
35	8G3110A05151		Washer	1	..		189-240L1
36	A407A08C1P		Anchor Nut	4	..		189-240L1
37	MS35206-230		Screw	2	..		189-240L1
38	MS35214-29		Screw	2	..		189-240L1
39	NAS1149CN816R		Washer	2	..		189-240L1
40	**8G3110P01211**		**VNE PLACARD REMOVAL RETRO MOD**	**REF**	**.**		
41	8G1130A06931		Plate	1	.		189-302L1
42	MS35206-230		Screw	2	.		189-302L1
43	NAS1149CN816R		Washer	2	.		189-302L1
44	**8G2480P00511**		**EPGDS RETROMOD**	**REF**	**.**	**(18)**	-
45	**8G7160P01511**		**RELAY INSTALLATION**	**REF**	**..**		**-**
46	A556A-T22		Electrical Wire	15	…		189-250L2
47	A593A-H02		Terminal Board	2	…		189-250L2
48	A657A01		Relay	2	…		189-250L2
49	A657A02		Socket Relay	2	…		189-250L2
50	ED300K297		Decal	1	…		189-250L2
51	ED300K298		Decal	1	…		189-250L2
52	ED300TB222		Decal	1	…		189-250L2
53	ED300TB227		Decal	1	…		189-250L2
54	A523A-A05		Electrical contact	2	.		189-250L2
55	A523A-A07		Electrical contact	2	.		189-250L2
56	M39029/101-553		Electrical contact	24	.		189-250L2
57	M39029/56-351		Electrical contact	8	.		189-250L2
58	**8G2420P00811**		**SGCU PIN STRAPPING**	**REF**	**..**		**-**
59	A556A-T22		Electrical Wire	5	…		189-250L2
60	A583A2418C		Stowage Cap	2	…		189-250L2
61	A523A-A03		Electrical contact	2	.		189-250L2
62	A815A03A1		Support	2	.		189-250L2
63	NAS1836-3-09		Insert	4	.		189-250L2
64	MS27039-1-04		Screw	4	.		189-250L2
65	NAS1149D0363K		Washer	4	.		189-250L2
66	MS21069L08		Anchor nut	4	.		189-250L2
67	MS27039-08-07		Screw	4	.		189-250L2
68	NAS1097AD3-8		Rivet	8	.		189-250L2
69	NAS1149CN832R		Washer	4	.		189-250L2
70	8G3110V00451		Miscellaneous control panel	1	.	(21)	-
71	8G3110V00551		Miscellaneous control panel	1	.	(22)	-
72	**8G3110P01111**		**RETROMOD MISCELLANEOUS PANEL UPDATE**	**REF**	**.**	**(19)**	**-**
73	**8G9A01B45501**		**Miscellaneous panel update C/A (A1B455)**	**REF**	**..**	**(23)**	**-**
74	A529A400-1502T		Backshell	1	…		189-302L2
75	D38999/26JD35SA		Connector	1	…		189-302L2

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
76	**8G9A21A48201**		**Miscellaneous panel update C/A (A1A482)**	**REF**	**..**	**(23)**	
77	A529A400-1902C		Backshell	1	…		189-302L2
78	A556A-T22		Wire	5m	…		189-302L2
79	D38999/26JF32SA		Connector	1	…		189-302L2
80	M39029/56-348		Electrical contact	1	…		189-302L2
81	M39029/56-351		Electrical contact	2	…		189-302L2
82	M39029/58-360		Electrical contact	1	…		189-302L2
83	M39029/58-363		Electrical contact	1	…		189-302L2
84	M81824/1-1		Splice	1	…		189-302L2
85	**8G9B21A52901**		**Miscellaneous panel update C/A (B1A529)**	**REF**	**..**	**(23)**	
86	A556A-T22		Wire	2m	…		189-302L2
87	M39029/56-348		Electrical contact	1	…		189-302L2
88	M39029/58-363		Electrical contact	1	…		189-302L2
89	**8G9B21B55701**		**Miscellaneous panel update C/A (B1B557)**	**REF**	**..**	**(23)**	
90	A556A-T22		Wire	5m	…		189-302L2
91	M39029/56-351		Electrical contact	1	…		189-302L2
92	M39029/56-352		Electrical contact	1	…		189-302L2
93	**8G9C21A36701**		**Miscellaneous panel update C/A (C1A367)**	**1**	**REF**	**(23)**	
94	A523A-A03		Electrical contact	1	…		189-302L2
95	A556A-T22		Wire	5m	…		189-302L2
96	M39029/56-348		Electrical contact	2	…		189-302L2
97	M39029/56-351		Electrical contact	1	…		189-302L2
98	**8G9C21B34401**		**Miscellaneous panel update C/A (C1B344)**	**REF**	**..**	**(23)**	
99	A523A-A03		Electrical contact	1	…		189-302L2
100	A556A-T22		Wire	7m	…		189-302L2
101	M39029/56-348		Electrical contact	2	…		189-302L2
102	M39029/58-363		Electrical contact	1	…		189-302L2
103	M39029/58-364		Electrical contact	1	…		189-302L2
104	M81824/1-1		Splice	1	…		189-302L2
105	**8G3110P01311**		**RETROMOD MISCELLANEOUS PANEL UPDATE**	**REF**	**.**	**(20)**	**-**
106	**8G9A01B45501**		**Miscellaneous panel update C/A (A1B455)**	**REF**	**..**	**(23)**	
107	A529A400-1502T		Backshell	1	…		189-302L3
108	D38999/26JD35SA		Connector	1	…		189-302L3
109	**8G9A21A48201**		**Miscellaneous panel update C/A (A1A482)**	**REF**	**..**	**(23)**	
110	A529A400-1902C		Backshell	1	…		189-302L3
111	A556A-T22		Wire	5m	…		189-302L3
112	D38999/26JF32SA		Connector	1	…		189-302L3
113	M39029/56-348		Electrical contact	1	…		189-302L3
114	M39029/56-351		Electrical contact	2	…		189-302L3
115	M39029/58-360		Electrical contact	1	…		189-302L3
116	M39029/58-363		Electrical contact	1	…		189-302L3
117	M81824/1-1		Splice	1	…		189-302L3
118	**8G9B21A52902**		**Miscellaneous panel update C/A (B1A529)**	**REF**	**..**	**(23)**	
119	A556A-T22		Wire	3m	…		189-302L3
120	M39029/56-348		Electrical contact	1	…		189-302L3
121	M39029/58-363		Electrical contact	1	…		189-302L3

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
122	**8G9B21B55702**		**Miscellaneous panel update C/A (B1B557)**	**REF**	**..**	**(23)**	
123	A556A-T22		Wire	5m	…		189-302L3
124	M39029/56-351		Electrical contact	1	…		189-302L3
125	M39029/56-352		Electrical contact	1	…		189-302L3
126	**8G9C21A36701**		**Miscellaneous panel update C/A (C1A367)**	**REF**	**..**	**(23)**	
127	A523A-A03		Electrical contact	1	…		189-302L3
128	A556A-T22		Wire	5m	…		189-302L3
129	M39029/56-348		Electrical contact	2	…		189-302L3
130	M39029/56-351		Electrical contact	1	…		189-302L3
131	**8G9C21B34401**		**Miscellaneous panel update C/A (C1B344)**	**REF**	**..**	**(23)**	
132	A523A-A03		Electrical contact	1	…		189-302L3
133	A556A-T22		Wire	7m	…		189-302L3
134	M39029/56-348		Electrical contact	2	…		189-302L3
135	M39029/58-363		Electrical contact	1	…		189-302L3
136	M39029/58-364		Electrical contact	1	…		189-302L3
137	M81824/1-1		Splice	1	…		189-302L3

2) CONSUMABLES

The following consumable materials, or equivalent, are necessary to accomplish this Service Bulletin:

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
138	199-05-002 Type I, Class 2.	EA9309.3NA (C021)	AR	(24)	-
139	900004953 or AW001CK03LC	Lacing cord	AR	(24)	-

Refer also to AMDI for the consumable materials required to comply with the AMP DM referenced in the accomplishment instructions.

3) LOGISTIC MATRIX

In order to apply this Service Bulletin, the following Logistic P/N can be ordered in accordance with the applicable notes:

LOGISTIC P/N	Q.TY (PER HELO)	NOTE	PART
AW002DBHS081E11D	1	(4)	-
189-149L2	1	(6)	-
189-149L3	1	(7)	-
6F4620VA0201	1	(1)(4)	-
8G2210AS0700	1	(1)(4)	-
8G3450AO0001	1	(1)(9)	-
8G3450AO0002	1	(1)(9)(17)	-
8G4620AB0106	1	(1)(10)	-
8G4620AA0803	1	(1)(4)	-
8G4620VS0200	1	(1)(8)	-
8G4630AS0800	1	(1)(4)	-
8G4640AO0008	1	(1)(4)	-
8G2460AS0600	1	(1)(3)	-
8G4620FS0200	1	(1)(11)	-
8G4640IB0200	1	(1)(12)	-
8G4620AC0XXX	1	(1)(2)(5)	-

LOGISTIC P/N	Q.TY (PER HELO)	NOTE	PART
8G4620AO10XX	1	(1)(5)(13)	-
8G4630AO10XX	1	(1)(5)(13)	-
189-103L2	1	(14)	-
TA00AWHL-XXXXXXXXX	1	(5)(8)(15)	-
189-240L1	1	(16)	-
189-302L1	1	(4)	-
189-250L2	1	(18)	-
189-302L2	1	(19)	-
189-302L3	1	(20)	-
8G3110V00451	1	(21)	
8G3110V00551	1	(22)	

NOTE

(1) This software will not be supplied; it will be available, along with relevant certification document, in “My Software” sub-section of Leonardo AW Customer Portal website https://leonardo.agustawestland.com.

(2) The new ECDU configuration file is required for helicopters equipped with Software Phase 3.0 and FIPS kit P/N 8G3000F00111 (Extended Range cabin) or FIPS kit P/N 8G3000F00311 (Standard Cabin) or LIPS kit P/N 8G3000F00211 or 8G3000F00212 or Ice Detector Installation kit P/N 8G3080F00111.

(3) The new REPU configuration table is required only for helicopters equipped with Software Phase 3.0 and FIPS kit P/N 8G3000F00111 (Extended Range cabin) or FIPS kit P/N 8G3000F00311 (Standard Cabin) or LIPS kit P/N 8G3000F00211 or 8G3000F00212 or Ice Detector Installation kit P/N 8G3080F00111.

(4) Applicable to all AW189 helicopters.

(5) Refer to Software Accomplishment Summary section.

(6) Applicable only to Standard Cabin helicopters (S/N 49xxx) equipped with FIPS kit P/N 8G3000F00311 and Avionic Flight Software Release Phase 3.0. Same Logistic P/N of SB189-149 Avionic Flight Software Phase 4.0.

(7) Applicable only to Extended Range helicopters (S/N 89xxx or S/N 92xxx) equipped with FIPS kit P/N 8G3000F00111 and Avionic Flight Software Release Phase 3.0. Same Logistic P/N of SB189-149 Avionic Flight Software Phase 4.0.

(8) Applicable only to helicopters equipped with Avionic Flight Software Phase 3.0 or Phase 4.0.

(9) Applicable only to helicopters equipped with TSS-4100 P/N 822-2132-001. Not applicable to helicopters equipped with TCAS II kit P/N 8G3450F00411 or P/N 8G3450F00111. P/N 8G3450AO0002 is alternative to P/N 8G3450AO0001 and it is required only for helicopters equipped with “15000 feet service ceiling kit“ P/N 8G0000F00511.

(10) Applicable only to helicopters AW189 from S/N 49007 to S/N 49023, from S/N 49025 to S/N 49039, from S/N 49042 to S/N 49053, from S/N 49055 to S/N 49060, from S/N 89001 to S/N 89004, from S/N 89007 to S/N 89012, from S/N 92001 to S/N 92010, not already compliant with SB189-227 or not already equipped with Software Phase 6.0.

(11) Applicable only to helicopters equipped with “mission console system kit” P/N 8G4620F00211 or P/N 8G4620F00411.

(12) Not applicable to AW189 helicopters from S/N 49007 thru S/N 49072 (S/N’s 49024, 49036, 49040 49041, 49068 and 49071 excluded), from S/N 89001 thru S/N 89012 (S/N's 89005 and 89006 excluded) and from S/N 92001 to S/N 92010, already compliant with SB189-267.

(13) Applicable only to helicopters equipped with Software Phase 3.0 or Phase 4.0 that will install the OIL RIG APPROACH functionality.

(14) Applicable only to helicopters equipped with DTD P/N 4F4620V00551.

(15) P/N DMG6845XXXXXXXXXXX can be supplied as valid alternative.

(16) Applicable to all helicopters not equipped with FIPS kit P/N 8G3000F00111 (Extended Range cabin) or FIPS kit P/N 8G3000F00311 (Standard Cabin) or LIPS kit P/N 8G3000F00211 or 8G3000F00212 and “15000 feet service ceiling kit” P/N 8G0000F00511.

(17) Not applicable to helicopter already equipped with Avionic Phase Software Phase 6.0.

(18) Applicable to helicopters S/N 49051, S/N 49054, from S/N 49056 to S/N 49070 and from S/N 89008 to S/N 89013 that are equipped with SGCU P/N 8G2480V00152, ECS relay box P/N 8G2150V00952 and not equipped with FIPS kit P/N 8G3000F00111 or P/N 8G3000F00311.

(19) Applicable only to helicopters from S/N 89001 to S/N 89013 (S/N’s 89005 and 89006 excluded) and from S/N 92001 to S/N 92010.

(20) Applicable only to helicopters from S/N 49007 to S/N 49071 (S/N’s 49024, 49036, 49040 and 49041 excluded).

(21) Applicable only to helicopters from S/N 49007 to S/N 49071 (S/N’s 49024, 49036, 49040 and 49041 excluded), from S/N 89001 to S/N 89013 (S/N’s 89005 and 89006 excluded) and from S/N 92001 to S/N 92010 NOT equipped with NVG kit.

(22) Applicable only to helicopters from S/N 49007 to S/N 49071 (S/N’s 49024, 49036, 49040 and 49041 excluded), from S/N 89001 to S/N 89013 (S/N’s 89005 and 89006 excluded) and from S/N 92001 to S/N 92010 equipped with NVG kit.

(23) This item can be supplied already assembled as productive P/N.

(24) Item to be procured as local supply.

B. SPECIAL TOOLS

Refer to ITEP for the special tools required to comply with the AMP DM referenced in the accomplishment instructions.

C. INDUSTRY SUPPORT INFORMATION

Product Enhancement

3. ACCOMPLISHMENT INSTRUCTIONS

GENERAL NOTES

a) Place an identification tag on all components that are re-usable, including the attaching hardware that has been removed to gain access to the modification area and adequately protect them until their later re-use.

1. In accordance with AMP DM 89-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.

NOTE

Perform the following Step 2 only if the helicopter is equipped with Avionic Flight Software Release Phase 3.0 and kit FIPS P/N 8G3000F00111 or P/N 8G3000F00311.

2. Perform the IPS GEN CURRENT INSTALLATION (STD cabin) P/N 8G2420A01511 or IPS GEN CURRENT INSTALLATION U/B (Extended Range Cabin) P/N 8G2420A01611 as described in the following procedure:

2.1 With reference to Figures 1 to 3 route the following cables following the existing routes unless otherwise indicated on the figures:

- 8G9A21B35401 IPS GEN MONITORING C/A (A1B354).
- 8G9B21B43201 IPS GEN MONITORING C/A (B1B432) (only Standard cabin helicopters).
- 8G9B21B43202 IPS GEN MONITORING C/A (B1B432) (only Extended Range helicopters).

2.2 With reference to Figure 4 wiring diagram, perform electrical connection of the cable assy A1B354 to connector A2P4 and to connector P114.

2.3 With reference to Figure 4 wiring diagram, perform electrical connection of the cable assy B2B432 to connector J114 and to connector A333P1.

NOTE

Make sure that on the Computer you have the following file:

- Aircraft Flight Control System (AFCS) software;

- Aircraft Mission Management Computer (AMMC) software;
- CDS Operational Software;
- AMMC option file (if required);
- CDS option file (if required);
- DMG Software;
- DTD Software;
- AFDX Configuration switch;
- Helo Perf Database;
- ECDU Configuration File;
- Navigation (Jeppesen) database.

3. Download all the HUMS data from AMMC to DTD.
4. Upload the HUMS data to Heliwise.
5. Require to change the Heliwise software alignment to the HUMS Support Group opening a Technical Query via Heliwise Query Management function.
6. Check the P/N of the installed DTD. If the DTD is P/N 4F4620V00551, perform the following procedure to replace the existing DTD with the new one. Otherwise go to Step 7.

   6.1 In accordance with AMP DM 89-A-46-21-05-00A-520A-A, remove existing DTD P/N 4F4620V00551 from the helicopter.

   6.2 With reference to Figure 7 wiring diagram, perform the DTD upgrade retromod P/N 8G4600P00611 as described in the following procedure:

   6.2.1 From the TB1014, disconnect the pin 1A and the pin 2A; connect together the wire 4600-101-22G and 4600-300-22G by means of n°1 splice P/N M81824/1-1. Mark the splice as SP4600-001.

   6.2.2 Cut a piece of wire P/N A556A-T22 at adequate length between TB1014 and TB150-5, following existing cable routing; crimp on each wire end a contact P/N A523A-A02 and connect the pin 1A of TB1014 with pin J of TB150-5. Install n°2 marker sleeve A579A02-002, one near each TB, and mark the wire as 4600-005.

   6.2.3 From the TB1015, disconnect the pin 1B and the pin 2B; connect together the wire 4600-294-22G and 4600-299-22G by means of n°1 splice P/N M81824/1-1. Mark the splice as SP4600-002.

   6.2.4 Cut a piece of wire P/N A556A-T22 at adequate length between TB1015 and TB137-5, following existing cable routing; crimp on each wire end a contact P/N A523A-A02 and connect the pin 2B of TB1015 with pin H of

TB137-5. Install n°2 marker sleeve A579A02-002, one near each TB, and mark the wire as 4600-006.

6.3 In accordance with AMP DM 89-A-46-21-05-00A-720A-A, install the new DTD P/N 8G4620V00451 to the helicopter.

6.4 In accordance with applicable steps of the AMP DM 89-A-46-21-05-00A-750A-A, perform the upload of the DTD SW P/N 8G4620VS0200.

7. In accordance with AMP DM 89-A-22-11-08-00A-752A-A, perform the upload of the Aircraft Flight Control System (AFCS) software P/N 8G2210AS0700 and verify the CRC is 0x6D2B315A.

8. In accordance with applicable steps of the AMP DM 89-A-46-21-00-00A-750A-A, perform the upload of the following software:

8.1 Install Aircraft Mission Management Computer (AMMC) OPWS 8.0.9 software P/N 8G4620AA0803. Verify that the CRC is 0xdbca6e36 for AMMC software. Verify that helicopter tail number on MCDU and helicopter serial number on DTD are correct.

8.2 If helicopter is equipped with Software Phase 3.0 or 4.0 and it is equipped with OIL RIG APPROACH functionality, install relevant AMMC option file.

8.3 Install DMGSW P/N 6F4620VA0201. Verify that the CRC is 0xe2189daa.

NOTE

The following Step 8.4 is not applicable for the helicopters equipped with Avionic Flight Software Release Phase 6.0 or already compliant with SB189-227.

8.4 Load the AMMC VAM SW REL. P/N 8G4620AB0106. Verify that the CRC is 0x8B49BEB7.

9. In accordance with applicable steps of the AMP DM 89-A-46-31-00-00A-750A-A, perform the upload of the following software:

9.1 Install CDS Operational Software P/N 8G4630AS0800. Verify that the CRC is 41D3 for CDS software.

9.2 If helicopter is equipped with Software Phase 3.0 or 4.0 and it is equipped with OIL RIG APPROACH functionality, install relevant CDS option file.

9.3 Install AFDX Configuration Switch P/N 8G4640AO0008.

10. In accordance with applicable steps of the AMP DM 89-A-46-21-00-00A-752A-A perform the upload of the HELO PERF database P/N HELO_PERF_023 available on Leonardo website: https:// leonardo.agustawestland.com. Verify that the CRC is 0x1F0B5017.

NOTE

Perform the following Steps 11 and 12 only if the helicopter is equipped with Software Phase 3.0 and FIPS kit P/N 8G3000F00111 or P/N 8G3000F00311, LIPS kit P/N 8G3000F00211 or P/N 8G3000F00212 or ice detector installation kit P/N 8G3080F00111.

11. In accordance with applicable steps of AMP DM 89-A-24-81-00-00B-752A-A perform the ECDU configuration file (PM) - Load procedure.
12. In accordance with applicable steps of AMP DM 89-A-24-81-00-00A-752A-A, perform the upload of the REPU Configuration Table.

CAUTION

To install the Navigation (Jeppesen) Database download from Leonardo website http://leonardo.agustawestland.com the updated version of the Navigation Database.

13. In accordance with Maintenance Publication DM 89-A-46-21-05-00A-752A-A, perform the upload of the Navigation Jeppesen database.

NOTE

Perform the following Step 14 only if the helicopter is equipped with Digital Map kit P/N 8G3460F00111.

14. In accordance with applicable steps of AMP DM 89-A-34-61-00-00A-752A-A, perform the upload of the applicable DMAP.

NOTE

Perform the following Step 15 only if the helicopter is equipped with mission console system kit P/N 8G4620F00211 or P/N 8G4620F00411.

15. In accordance with applicable steps of AMP DM 89-A-46-32-03-00A-750A-B or DM 89-B-46-22-06-00A-750A-A, perform the Cabin PC application software P/N 8G4620FS0200 installation.

NOTE

Perform the following Step 16 only for AW189 helicopters from S/N 49007 thru S/N 49072 (S/N's 49024, 49036, 49040 49041, 49068 and 49071 excluded), from S/N 89001 thru S/N 89012 (S/N's 89005 and 89006 excluded) and from S/N 92001 to S/N 92010, NOT already compliant with SB189-267.

16. In accordance with applicable steps of AMP DM 89-A-34-21-00-00A-750A-B, perform the loading the configuration file P/N 8G4640IB0200.

NOTE

Perform the following Step 17 only if the helicopter is equipped with TSS-4100 P/N 822-2132-001 and not equipped with Avionic Flight Software Release Phase 6.0. Not applicable to helicopters equipped with TCAS II kit P/N 8G3450F00411 or P/N 8G3450F00111.

17. In accordance with AMP DM 89-B-34-44-05-00A-752A-A, install TSS configuration file P/N 8G3450AO0001 or P/N 8G3450AO0002.
18. With reference to Figure 5, replace existing decal with decal P/N AW002DBHS081E11D "SOFTWARE PHASE 8.0 INSTALLED".

NOTE

Perform the following Steps 19 and 20 only if the helicopter is equipped with Software Phase 3.0 or 4.0.

19. In accordance with AMP DM 89-A-34-22-03-00A-75BA-A perform the setup procedure of AHRU1 calibration PROM.
20. In accordance with AMP DM 89-A-34-22-07-00A-75BA-A perform the setup procedure of AHRU2 calibration PROM.

NOTE

Perform the following Step 21 only if the helicopter is not equipped with:

- FIPS kit P/N 8G3000F00111 or 8G3000F00311,
- LIPS kit P/N 8G3000F00211 or 8G3000F00212,
- 15000 feet service ceiling kit P/N 8G0000F00511,
- Avionic Flight Software Release Phase 6.0.

21. With reference to Figure 8, gain access to the cockpit area and perform the VNE placard retromod P/N 8G3110P00811 as described in the following procedure:
    21.1 With reference to Figure 8 View A, remove the existing placard. Discard the existing hardware.
    21.2 With reference to Figure 8 View A, remove the cockpit logo P/N 8G1130A01331. Retain existing hardware for later reuse.
    21.3 With reference to Figure 8 View A, remove plate P/N 4F3110A07351. Discard the existing hardware.
    21.4 With reference to Figure 8 View B and section C-C, install n°4 nut plates P/N A407A08C1P by means of EA9309.3NA adhesive on the plate P/N 8G3110A05051.
    21.5 With reference to Figure 8 View A, install washer P/N 8G3110A05151 and plate P/N 8G3110A05051 by means of n°2 screws P/N MS35206-230 and n°2 washers P/N NAS1149CN816R.
    21.6 With reference to Figure 8 View A, re-install the cockpit logo P/N 8G1130A01331. Use existing hardware.
22. With reference to Figure 10 wiring diagram, gain access to the cockpit area and perform the VNE wiring diagram and cable stowage retromod P/N 8G3310P00211 as described in the following procedure:
    22.1 With reference to Figure 10 wiring diagram (WAS), remove or disconnect and stow the electrical connections between sectioning connector J81 and terminal board TB1031.Remove all the tools and other items from the work area.
    22.2 With reference to Figure 10 wiring diagram (BECOME), tie the terminal board TB1031 to relative route A1A1 by means of lacing cord P/N 900004953.
23. With reference to Figure 8 View A, remove the existing placard and install the plate P/N 8G1130A06931 by means of n°2 screws P/N MS35206-230 and n°2 washers P/N NAS1149CN816R.

NOTE

The following Steps 24 and 25 are applicable only to helicopters S/N 49051, S/N 49054, from S/N 49056 to S/N 49070 and from S/N 89008 to S/N 89013 that are equipped with SGCU P/N 8G2480V00152, ECS relay box P/N 8G2150V00952 and not equipped with FIPS kit P/N 8G3000F00111 or P/N 8G3000F00311.

24. In accordance with AMP DM 89-A-06-41-00-00A-010A-A and with reference to Figures 11 thru 16, gain access to the area affected by the installation and perform “Relay installation with ECS box -952” P/N 8G7160P01511 as described in the following procedure:

24.1 With reference to Figure 15 wiring diagram, from sectioning connector J230 disconnect the following wires ID:

- 7160-431-22G;
- 7160-432-22G;
- 7160-434N-22G;
- 7160-435-22G.

24.2 With reference to Figure 12 View A, drill n°2 holes Ø 4.27 ÷ 4.39 on the structure BL 800.0 according to terminal board P/N A593A-H02.

24.3 With reference to Figure 12 View A, install n°2 anchor nuts P/N MS21069L08 by means of n°4 rivets P/N NAS1097AD3-8.

24.4 In accordance with applicable steps of AMP DM 89-A-20-10-01-00A-259A-A and with reference to Figure 12 View A, install terminal board P/N A593A-H02 by means of n°2 screws P/N MS27039-08-07 and n°2 washers P/N NAS1149CN832R.

24.5 In accordance with AMP DM 89-A-11-00-01-00A-720A-A and with reference to Figure 12 View A, install decal P/N ED300TB222 in an area adjacent to previously installed terminal board.

24.6 In accordance with CSRP DM CSRP-A-51-42-00-00A-720A-D and with reference to Figure 12 View B, install n°2 inserts P/N NAS1836-3-09 by means of adhesive EA934NA (C054) according to support P/N A815A03A1.

24.7 With reference to Figure 12 View B, install support P/N A815A03A1 by means of n°2 screws P/N MS27039-1-04 and n°2 washers P/N NAS1149D0363K.

24.8 In accordance with AMP DM 89-A-20-10-10-01A-720B-A and with reference to Figure 12 View B, install the socket relay P/N A657A02 on the previously installed support P/N A815A03A1. Identify the socket by means of marker sleeve P/N A579A03.

24.9 In accordance with AMP DM 89-A-20-10-10-01A-720A-A and with reference to Figure 12 View B, install the relay P/N A657A01 on the previously installed socket relay P/N A657A02.

24.10 In accordance with AMP DM 89-A-11-00-01-00A-720A-A and with reference to Figure 12 View B, install decal P/N ED300K298 in an area adjacent to previously installed relay.

24.11 With reference to Figures 11, 12 and Figures 14 and 16 wiring diagrams, cut n°7 wires P/N A556A-T22 of adequate length and lay them down, following the existing route, between the following components:

- terminal boards TB212-1 and TB222;
- socket relays K298P1, K222P1 and K224P1;
- sectioning connector J230.

24.12 In accordance with AMP DM 89-A-20-10-03-00A-010A-A with reference to Figures 14 and 16 wiring diagrams, crimp on wires by means of proper crimping tool the following electrical contacts:

- electrical contact P/N A523A-A05 (TB222 side);
- electrical contact P/N A523A-A07 (TB212-1 side);
- n°8 electrical contacts P/N M39029/101-553 (K298P1, K222P1 and K224P1 sides);
- n°4 electrical contacts P/N M39029/56-351 (J230 side).

24.13 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figures 14 and 16 wiring diagrams, mark wires as 7160-002, 7160-009, 7160-010, 7160-011, 7160-012, 7160-013, and 7160-014 by means of marker sleeve P/N A578A03-9.

24.14 With reference to Figure 12 View B and Figure 16 wiring diagram, reroute the following wires previously disconnected:

- 7160-431-22G;
- 7160-432-22G;
- 7160-434N-22G;
- 7160-435-22G.

24.15 In accordance with AMP DM 89-A-20-10-03-00A-010A-A with reference to Figure 16 wiring diagram, crimp on wires n°4 electrical contacts P/N M39029/101-553 (K298P1 side) by means of proper crimping tool.

24.16 With reference to Figures 14 and 16 wiring diagrams, perform the electrical connections between the following components:

- terminal boards TB212-1 and TB222;

- socket relays K298P1, K222P1 and K224P1;
- sectioning connector J230.

24.17 With reference to Figure 15 wiring diagram, from sectioning connector J237 disconnect the following wires ID:

- 7160-425N-22G;
- 7160-426-22G;
- 7160-427-22G;
- 7160-428-22G.

24.18 With reference to Figure 13 View C, drill n°2 holes Ø 4.27 ÷ 4.39 on the structure at BL -800.0 according to terminal board P/N A593A-H02.

24.19 With reference to Figure 13 View C, install n°2 anchor nuts P/N MS21069L08 by means of n°4 rivets P/N NAS1097AD3-8.

24.20 In accordance with applicable steps of AMP DM 89-A-20-10-01-00A-259A-A and with reference to Figure 13 View C, install terminal board P/N A593A-H02 by means of n°2 screws P/N MS27039-08-07 and n°2 washers P/N NAS1149CN832R.

24.21 In accordance with AMP DM 89-A-11-00-01-00A-720A-A and with reference to Figure 13 View C, install decal P/N ED300TB227 in an area adjacent to previously installed terminal board.

24.22 In accordance with CSRP DM CSRP-A-51-42-00-00A-720A-D and with reference to Figure 13 View D, install n°2 inserts P/N NAS1836-3-09 by means of adhesive EA934NA (C054) according to support P/N A815A03A1.

24.23 With reference to Figure 13 View D, install support P/N A815A03A1 by means of n°2 screws P/N MS27039-1-04 and n°2 washers P/N NAS1149D0363K.

24.24 In accordance with AMP DM 89-A-20-10-10-01A-720B-A and with reference to Figure 13 View D, install the socket relay P/N A657A02 on the previously installed support P/N A815A03A1. Identify the socket by means of marker sleeve P/N A579A03.

24.25 In accordance with AMP DM 89-A-11-00-01-00A-720A-A and with reference to Figure 13 View D, install the relay P/N A657A01 on the previously installed socket relay P/N A657A02.

24.26 In accordance with AMP DM 89-A-11-00-01-00A-720A-A and with reference to Figure 13 View D, install decal P/N ED300K297 in an area adjacent to previously installed relay.

24.27 With reference to Figures 11, 13 and Figures 14 and 16 wiring diagrams, cut n°7 wires P/N A556A-T22 of adequate length and lay them down, following the existing route, between the following components:

- terminal boards TB213-3 and TB227;
- socket relays K297P1, K221P1 and K223P1;
- sectioning connector J237.

24.28 In accordance with AMP DM 89-A-20-10-03-00A-010A-A with reference to Figures 14 and 16 wiring diagrams, crimp on wires by means of proper crimping tool the following electrical contacts:

- electrical contact P/N A523A-A05 (TB227 side);
- electrical contact P/N A523A-A07 (TB213-3 side);
- n°8 electrical contacts P/N M39029/101-553 (K297P1, K221P1 and K223P1 sides);
- n°4 electrical contacts P/N M39029/56-351 (J237 side).

24.29 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figures 14 and 16 wiring diagrams, mark wires as 7160-001, 7160-003, 7160-004, 7160-005, 7160-006, 7160-007, and 7160-008 by means of marker sleeve P/N A578A03-9.

24.30 With reference to Figure 13 View D and Figure 16 wiring diagram, reroute the following wires previously disconnected:

- 7160-425N-22G;
- 7160-426-22G;
- 7160-427-22G;
- 7160-428-22G.

24.31 In accordance with AMP DM 89-A-20-10-03-00A-010A-A with reference to Figure 16 wiring diagram, crimp on wires n°4 electrical contacts P/N M39029/101-553 (K297P1 side) by means of proper crimping tool.

24.32 With reference to Figures 14 and 16 wiring diagrams, perform the electrical connections between the following components:

- terminal boards TB213-3 and TB227;
- socket relays K297P1, K221P1 and K223P1;
- sectioning connector J237.

24.33 Perform a pin-to-pin continuity check of all the electrical connections made.

25. In accordance with AMP DM 89-A-06-41-00-00A-010A-A and with reference to Figures 17 and 18, gain access to the area affected by the installation and perform “SGCU pin strapping” P/N 8G2420P00811 as described in the following procedure:

25.1 With reference to Figure 18 wiring diagram, disconnect wire ID 2420-181N-22G from pin H of terminal board TB351 and install cap P/N A583A2418C (CE2420-032).

25.2 With reference to Figure 18 wiring diagram, disconnect wire ID 2420-184N-22G from pin L of terminal board TB310 and install cap P/N A583A2418C (CE2420-033).

25.3 With reference to Figure 17 and Figure 18 wiring diagram, cut n°2 wires P/N A556A-T22 of adequate length and lay them down, following the existing route, between terminal boards TB310, TB351 and SGCU connectors A13P3, A14P3.

25.4 In accordance with AMP DM 89-A-20-10-03-00A-010A-A with reference to Figure 18 wiring diagram, crimp on wires n°2 electrical contacts P/N A523A-A03 (TB310 and TB351 sides) and n°2 electrical contacts P/N M39029/58-360 (A13P3 and A14P3 sides) by means of proper crimping tool.

25.5 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 18 wiring diagram, mark wires as 2420-001 and 2420-002 by means of marker sleeve P/N A578A03-9.

25.6 With reference to Figure 18 wiring diagram, connect wire ID 2420-001 to pin 12 of SGCU 1 connector A13P3 and to pin E of terminal board TB351.

25.7 With reference to Figure 18 wiring diagram, connect wire ID 2420-002 to pin 32 of SGCU 2 connector A14P3 and to pin T of terminal board TB310.

25.8 Perform a pin-to-pin continuity check of all the electrical connections made.

25.9 In accordance with applicable steps of AMP DM 89-A-21-90-00-00A-320A-A, perform the operation test of the cockpit ECS system and the cabin ECS system.

25.10 In accordance with AW 189 RFM procedures, start engine 1 and 2 by APU generator or by external power.

NOTE

Perform the following Step 26 ONLY for helicopters from S/N 49007 to S/N 49071 (S/N's 49024, 49036, 49040 and 49041 excluded), from S/N 89001 to S/N 89013 (S/N's 89005 and 89006 excluded) and from S/N 92001 to S/N 92010.

26. With reference to Figures 19 thru 29, perform the retromod miscellaneous panel update (Extended Range helicopters S/N 890xx or S/N 920xx) P/N 8G3110P01311 or retromod miscellaneous panel update (Standard Cabin helicopters S/N 49xxx) P/N 8G3110P01111 as described in the following procedure:

26.1 In accordance with AMP DM 89-A-33-11-01-00A-520A-A and with reference to Figure 20, remove the existing miscellaneous control panel from helicopter.

26.2 With reference to Figure 27 wiring diagram (WAS), remove the electrical connection between REPU 1 connector Q1PB6 and engine control panel connector PL26P1.

26.3 With reference to Figure 27 wiring diagram (WAS), remove the electrical connection from miscellaneous control panel connector PL27P1 and discard the connector.

26.4 With reference to Figure 29 wiring diagram (WAS), remove the electrical connection from miscellaneous control panel connector PL27P2 and discard the connector.

NOTE

Perform Step 26.5 only if the cable assembly are supplied as productive P/N. Otherwise skip to Step 26.6 to assemble the cable assemblies as required.

26.5 If the cable assemblies have been supplied as productive P/N, perform the following procedure. Otherwise skip to Step 26.6:

26.5.1 With reference to Figures 19 to 26, lay down the following cables following the existing routes unless otherwise indicated on the figures:

- Miscellaneous panel update C/A (A1A482) P/N 8G9A21A48201.
- Miscellaneous panel update C/A (B1A529) P/N 8G9B21A52901 (only for Extended Range helicopters).
- Miscellaneous panel update C/A (B1A529) P/N 8G9B21A52902 (only for Standard Cabin helicopters).
- Miscellaneous panel update C/A (B1B557) P/N 8G9B21B55701 (only for Extended Range helicopters).
- Miscellaneous panel update C/A (B1B557) P/N 8G9B21B55702 (only for Standard Cabin helicopters equipped with offshore configuration).
- Miscellaneous panel update C/A (C1A367) P/N 8G9C21A36701.
- Miscellaneous panel update C/A (C1B344) P/N 8G9C21B34401

26.5.2 With reference to Figures 20, 21 and Figure 28 wiring diagram, perform electrical connection of the C/A A1A482 between sectioning connector P117, miscellaneous control panel connector and PL27P1, engine control panel connector PL26P1, REPU 1 connector Q1PB6 and splice SP1024.

26.5.3 With reference to Figure 21 View B and Figure 29 wiring diagram, perform electrical connection of the C/A A1B455 to the new miscellaneous control panel connector PL27P2 (P/N D38999/26JD35SA).

26.5.4 With reference to Figure 21, 22 or 23 and Figure 28 wiring diagram, perform electrical connection of the C/A B1A529 between sectioning connectors J117 and J295.

26.5.5 With reference to Figure 22 or 23, 24, 25 and Figure 28 wiring diagram, perform electrical connection of the C/A B1B557 between sectioning connectors P295 and J204.

26.5.6 With reference to Figure 25, 26 View H and Figure 28 wiring diagram, perform electrical connection of the C/A C1A367 between sectioning connector J301, IOM 1 connector U1PB and terminal board TB305.

26.5.7 With reference to Figure 25, 26 View G and Figure 28 wiring diagram, perform electrical connection of the C/A C1B344 between sectioning connectors P204 and P301, IOM 2 connector U2PB, terminal board TB312 and splice SP3108.

NOTE

Perform the following Step 26.6 thru 26.12 only if the cable assemblies are not available.

26.6 With reference to Figures 20 and 21, table on Figure 30 and Figure 28 wiring diagram, assemble the miscellaneous panel update C/A (A1A482) P/N 8G9A21A48201 as described in the following procedure:

26.6.1 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between sectioning connector PL26P1 and splice SP1024 (P/N M81824/1-1).

26.6.2 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between sectioning connector PL26P1 and splice SP1024.

26.6.3 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-102-22G by means of marker sleeve.

26.6.4 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between sectioning

connector PL27P1 (connector P/N D38999/26JF32SA, backshell P/N A529A400-1902C) and sectioning connector P117.

26.6.5 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between sectioning connector PL27P1 (connector P/N D38999/26JF32SA, backshell P/N A529A400-1902C) and sectioning connector P117.

26.6.6 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-100-22G by means of marker sleeve.

26.6.7 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between sectioning connector PL27P1 (connector P/N D38999/26JF32SA, backshell P/N A529A400-1902C) and splice SP1024 (P/N M81824/1-1).

26.6.8 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between sectioning connector PL27P1 and splice SP1024.

26.6.9 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-101-22G by means of marker sleeve.

26.6.10 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between splice SP1024 and REPU 1 connector Q1PB6.

26.6.11 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between splice SP1024 and REPU 1 connector Q1PB6.

26.6.12 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-103-22G by means of marker sleeve.

NOTE

Perform the following step 26.7 only for Extended Range helicopters S/N 89XXX and S/N 92XXX (Underbelly configuration).

26.7 With reference to Figures 21 and 22, table on Figure 30 and Figure 28 wiring

diagram, assemble the miscellaneous panel update C/A (B1A529) P/N 8G9B21A52901 as described in the following procedure:

26.7.1 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between sectioning connector J117 and sectioning connector J295.

26.7.2 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between sectioning connector J117 and sectioning connector J295.

26.7.3 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-104-22G by means of marker sleeve.

NOTE

Perform the following step 26.8 only for Standard Cabin helicopters S/N 49XXX (Offshore configuration).

26.8 With reference to Figures 21 and 23, table on Figure 30 and Figure 28 wiring diagram, assemble the miscellaneous panel update C/A (B1A529) P/N 8G9B21A52902 as described in the following procedure:

26.8.1 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between sectioning connector J117 and sectioning connector J295.

26.8.2 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between sectioning connector J117 and sectioning connector J295.

26.8.3 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-104-22G by means of marker sleeve.

NOTE

Perform the following step 26.9 only for Extended Range helicopters S/N 89XXX and S/N 92XXX (Underbelly configuration).

26.9 With reference to Figures 22, 24 and 25, table on Figure 30 and Figure 28 wiring diagram, assemble the miscellaneous panel update C/A (B1B557) P/N 8G9B21B55701 as described in the following procedure:

26.9.1 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between sectioning connector P295 and sectioning connector J204.

26.9.2 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between sectioning connector P295 and sectioning connector J204.

26.9.3 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-105-22G by means of marker sleeve.

NOTE

Perform the following step 26.10 only for Standard Cabin helicopters S/N 49XXX (Offshore configuration).

26.10 With reference to Figures 23, 24 and 25, table on Figure 30 and Figure 28 wiring diagram, assemble the miscellaneous panel update C/A (B1B557) P/N 8G9B21B55702 as described in the following procedure:

26.10.1 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between sectioning connector P295 and sectioning connector J204.

26.10.2 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between sectioning connector P295 and sectioning connector J204.

26.10.3 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-105-22G by means of marker sleeve.

26.11 With reference to Figures 25 and 26 View G, table on Figure 30 and Figure 28 wiring diagram, assemble the miscellaneous panel update C/A (C1A367) P/N 8G9C21A36701 as described in the following procedure:

26.11.1 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between sectioning connector J301 and IOM 1 connector U1PB.

26.11.2 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between sectioning connector J301 and IOM 1 connector U1PB.

26.11.3 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-108-22G by means of marker sleeve.

26.11.4 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between terminal board TB305 and IOM 1 connector U1PB.

26.11.5 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between terminal board TB305 and IOM 1 connector U1PB.

26.11.6 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-111N-22G by means of marker sleeve.

26.12 With reference to Figures 25 and 26 View H, table on Figure 30 and Figure 28 wiring diagram, assemble the miscellaneous panel update C/A (C1B344) P/N 8G9C21B34401 as described in the following procedure:

26.12.1 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between sectioning connector P204 and splice SP3108.

26.12.2 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between sectioning connector P204 and splice SP3108.

26.12.3 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-106-22G by means of marker sleeve.

26.12.4 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between sectioning connector P301 and splice SP3108.

26.12.5 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between sectioning connector P301 and splice SP3108.

26.12.6 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-107-22G by means of marker sleeve.

26.12.7 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between IOM 2 connector U2PB and splice SP3108.

26.12.8 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between IOM 2 connector U2PB and splice SP3108.

26.12.9 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-107-22G by means of marker sleeve.

26.12.10 With reference to Figure 28 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between IOM 2 connector U2PB and terminal board TB312.

26.12.11 In accordance with AMP DM 89-A-20-10-03-00A-010A-A and with reference to table on Figure 30 and Figure 28 wiring diagram, perform electrical connections between IOM 2 connector U2PB and terminal board TB312.

26.12.12 In accordance with AMP DM 89-A-20-10-06-04A-720A-A and with reference to Figure 30 wiring diagram, mark wires as 3110-110N-22G by means of marker sleeve.

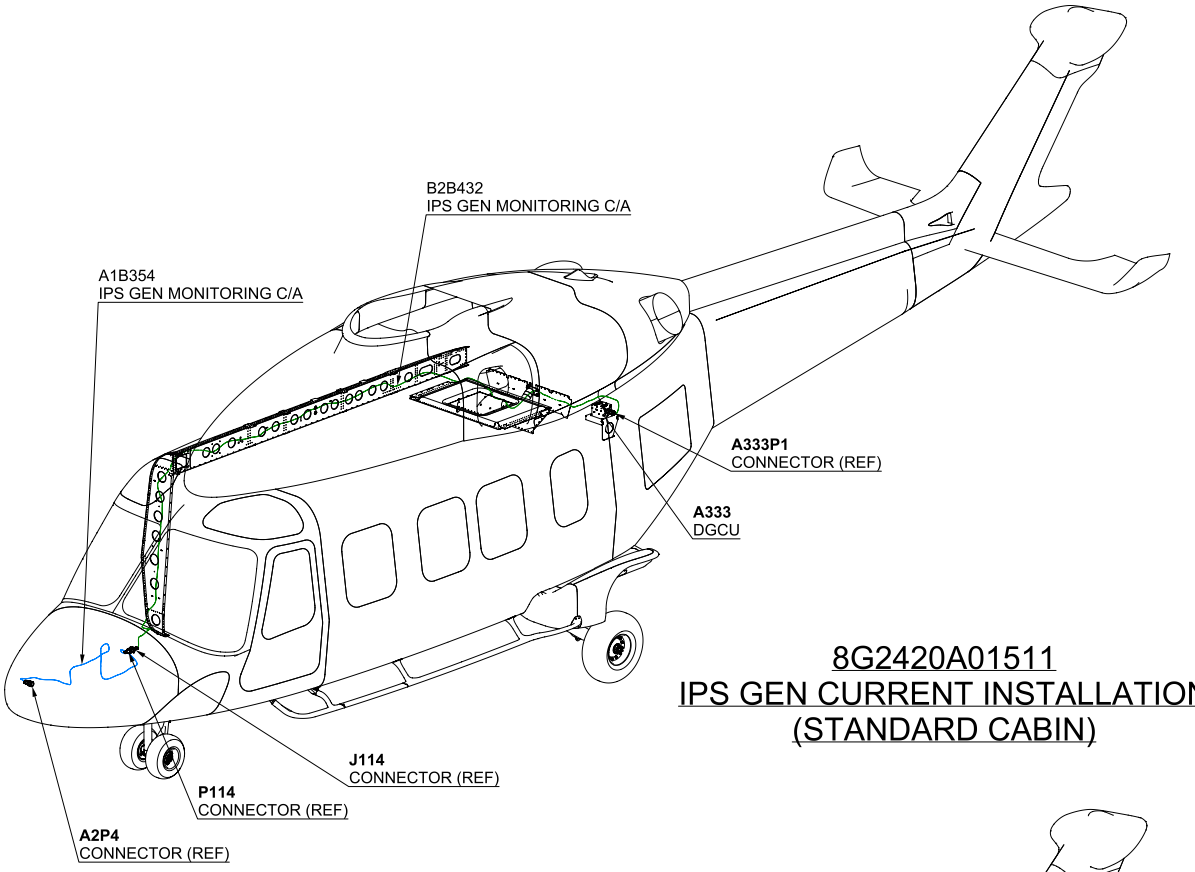
26.12.13 With reference to Figure 21 View B and Figure 29 wiring diagram, perform electrical connection of the C/A A1B455 to the new miscellaneous control panel connector PL27P2 (P/N D38999/26JD35SA).

26.13 In accordance with AMP DM 89-A-33-11-01-00A-720A-A and with reference to Figure 20, install the new miscellaneous control panel P/N 8G3110V00451 (or P/N 8G3110V00551 for helicopters equipped with NVG kit) on the helicopter.

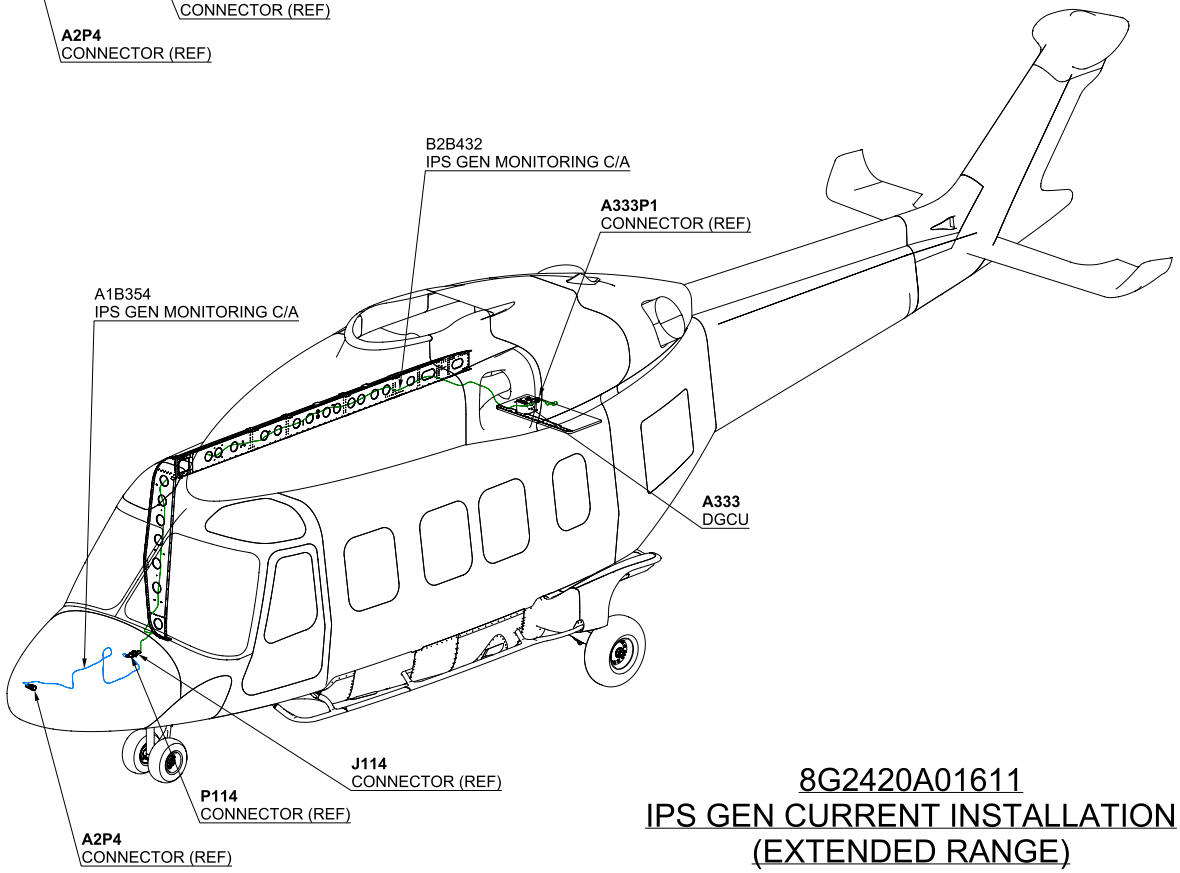
27. Perform a pin-to-pin continuity check of all the electrical connections made
28. Return the helicopter to flight configuration and record for compliance with this Service Bulletin on the helicopter logbook.
29. Send the attached compliance form to the following mail box:

engineering.support.lhd@leonardo.com

As an alternative, gain access to My Communications section on Leonardo WebPortal and compile the “Service Bulletin Application Communication”.



8G2420A01511
IPS GEN CURRENT INSTALLATION
(STANDARD CABIN)



8G2420A01611
IPS GEN CURRENT INSTALLATION
(EXTENDED RANGE)

Figure 1

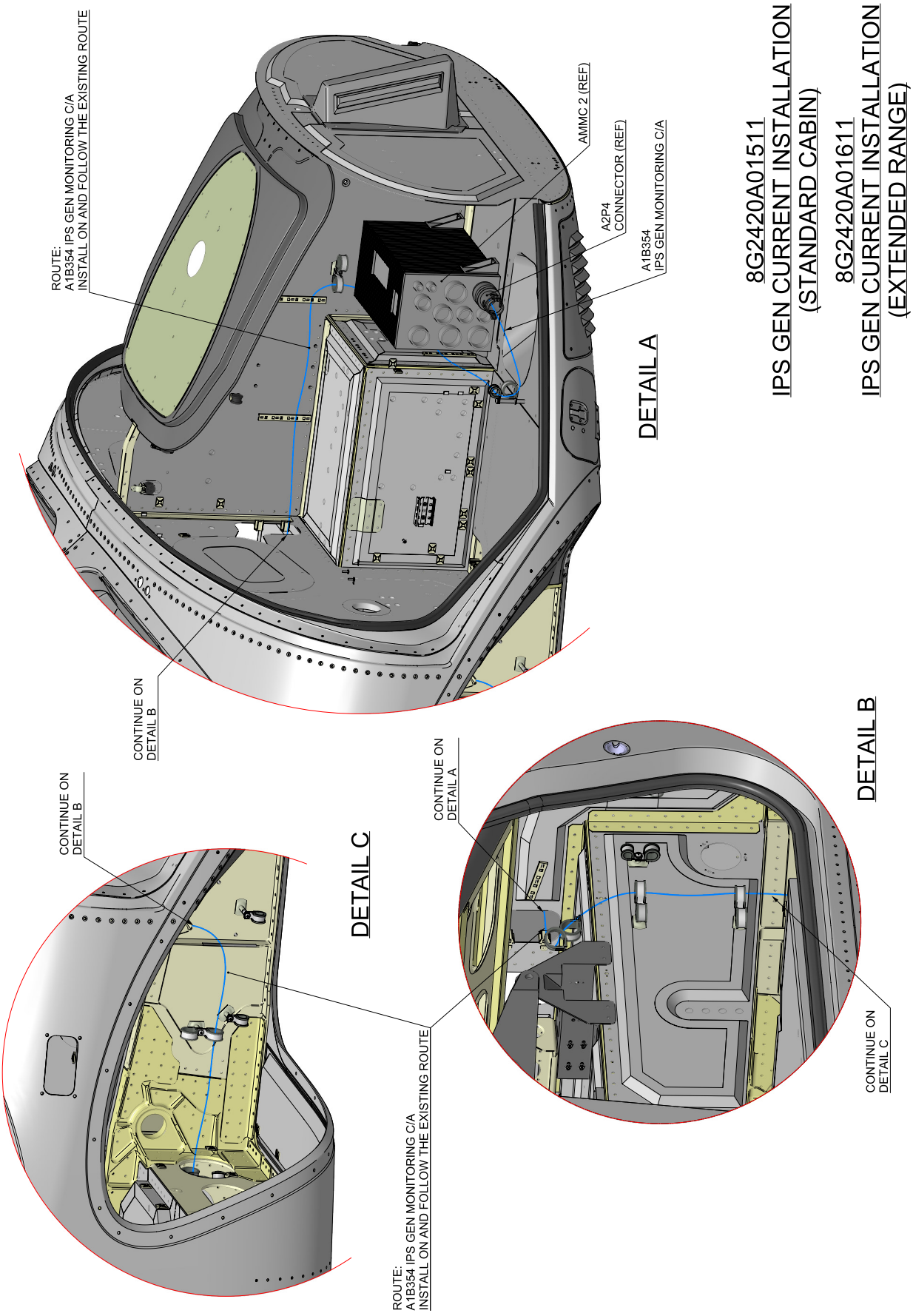

8G2420A01511
IPS GEN CURRENT INSTALLATION
(STANDARD CABIN)
8G2420A01611
IPS GEN CURRENT INSTALLATION
(EXTENDED RANGE)
DETAIL A
ROUTE:
A1B354 IPS GEN MONITORING C/A
INSTALL ON AND FOLLOW THE EXISTING ROUTE
AMMC 2 (REF)
A2P4
CONNECTOR (REF)
A1B354
IPS GEN MONITORING C/A
CONTINUE ON
DETAIL B
DETAIL B
CONTINUE ON
DETAIL A
CONTINUE ON
DETAIL C
DETAIL C
CONTINUE ON
DETAIL B
ROUTE:
A1B354 IPS GEN MONITORING C/A
INSTALL ON AND FOLLOW THE EXISTING ROUTE

Figure 2

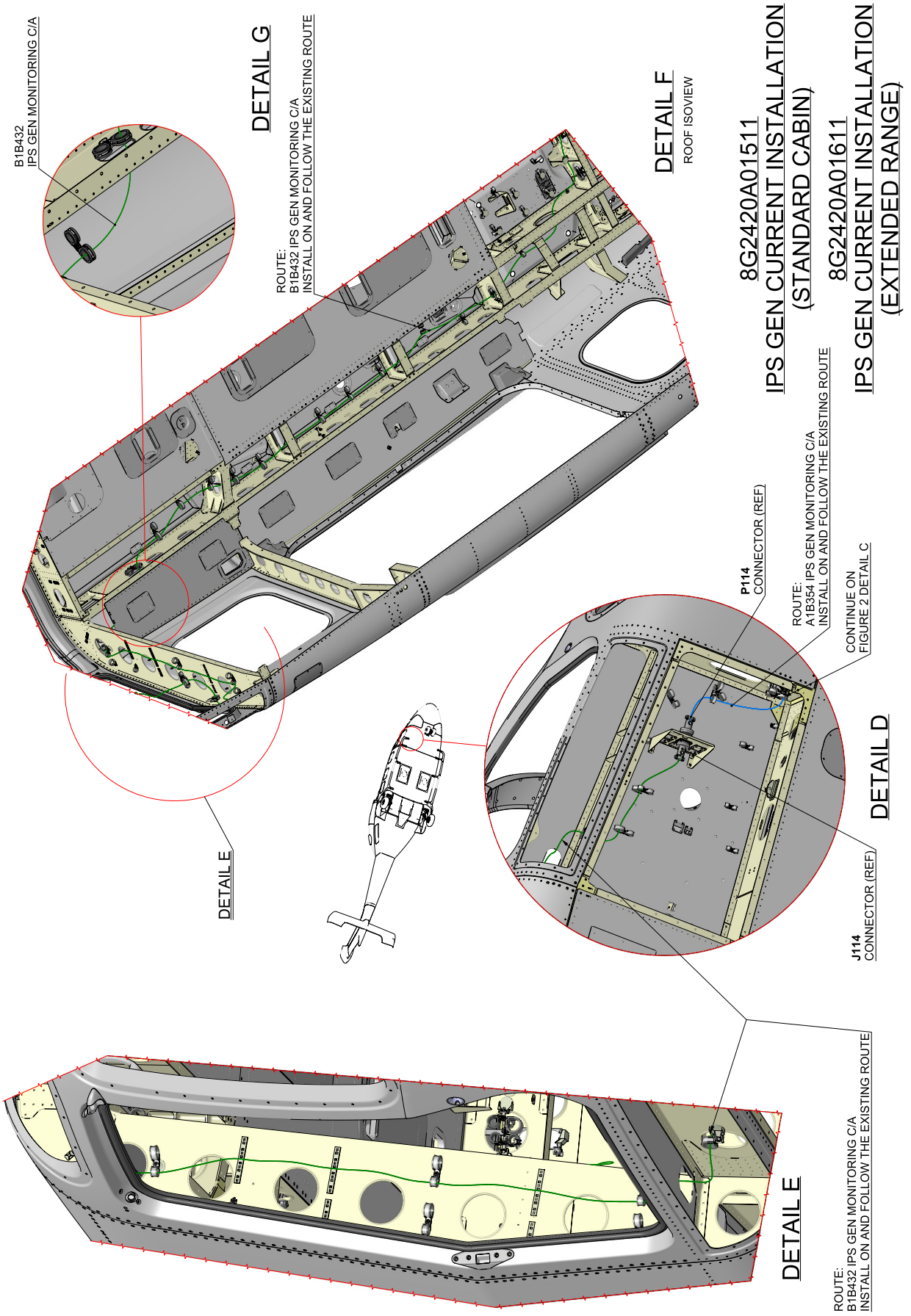

8G2420A01511
IPS GEN CURRENT INSTALLATION
(STANDARD CABIN)
8G2420A01611
IPS GEN CURRENT INSTALLATION
(EXTENDED RANGE)
DETAIL F
ROOF ISOVIEW
DETAIL G
B1B432
IPS GEN MONITORING C/A
ROUTE:
B1B432 IPS GEN MONITORING C/A
INSTALL ON AND FOLLOW THE EXISTING ROUTE
DETAIL E
P114
CONNECTOR (REF)
ROUTE:
A1B354 IPS GEN MONITORING C/A
INSTALL ON AND FOLLOW THE EXISTING ROUTE
CONTINUE ON
FIGURE 2 DETAIL C
DETAIL D
J114
CONNECTOR (REF)
DETAIL E
ROUTE:
B1B432 IPS GEN MONITORING C/A
INSTALL ON AND FOLLOW THE EXISTING ROUTE

Figure 3

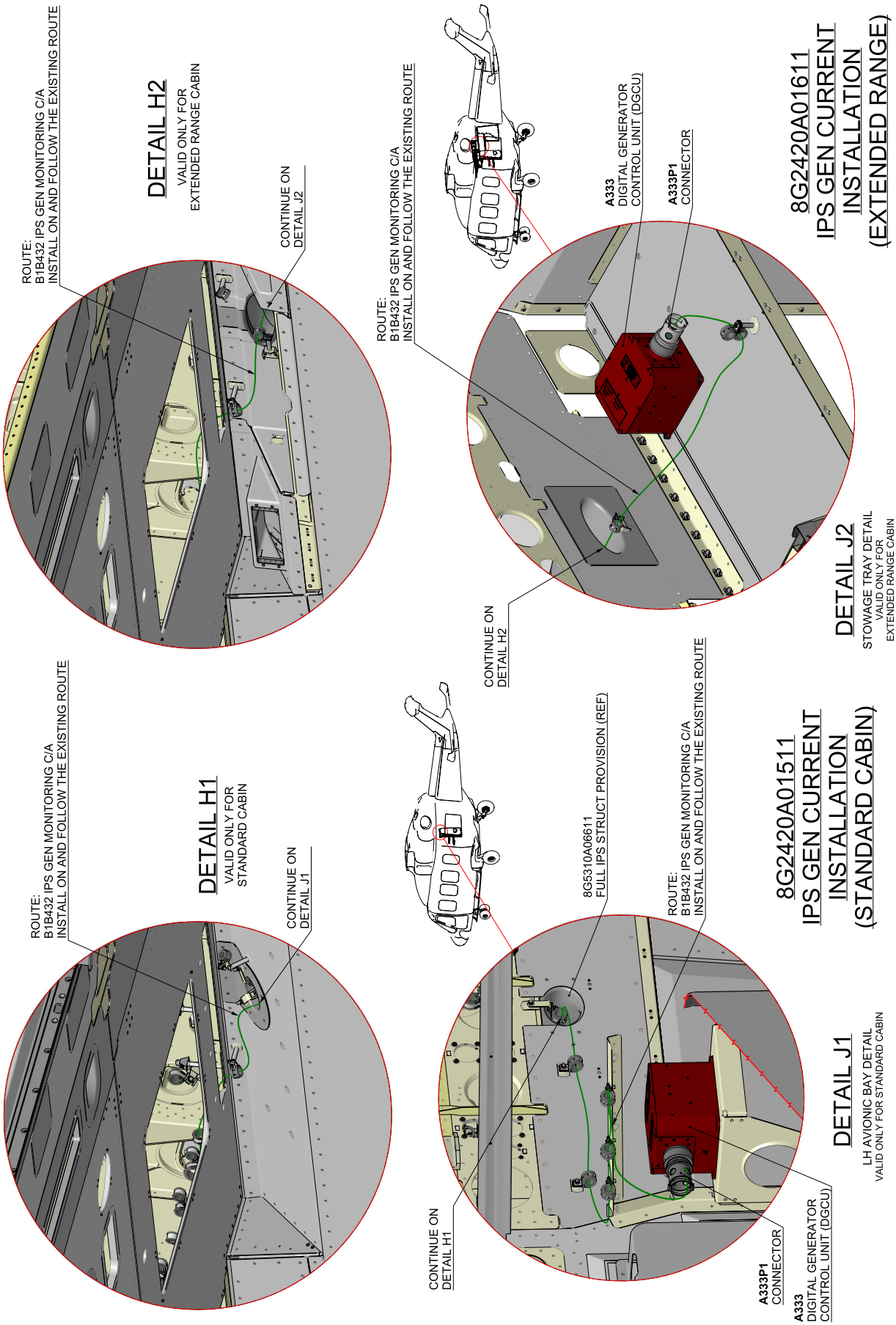

8G2420A01611
IPS GEN CURRENT
INSTALLATION
(EXTENDED RANGE)
DETAIL H2
VALID ONLY FOR
EXTENDED RANGE CABIN
ROUTE:
B1B432 IPS GEN MONITORING C/A
INSTALL ON AND FOLLOW THE EXISTING ROUTE
CONTINUE ON
DETAIL J2
A333
DIGITAL GENERATOR
CONTROL UNIT (DGCU)
A333P1
CONNECTOR
DETAIL J2
STOWAGE TRAY DETAIL
VALID ONLY FOR
EXTENDED RANGE CABIN
CONTINUE ON
DETAIL H2
8G2420A01511
IPS GEN CURRENT
INSTALLATION
(STANDARD CABIN)
DETAIL H1
VALID ONLY FOR
STANDARD CABIN
CONTINUE ON
DETAIL J1
8G5310A06611
FULL IPS STRUCT PROVISION (REF)
DETAIL J1
LH AVIONIC BAY DETAIL
VALID ONLY FOR STANDARD CABIN
CONTINUE ON
DETAIL H1

Figure 4

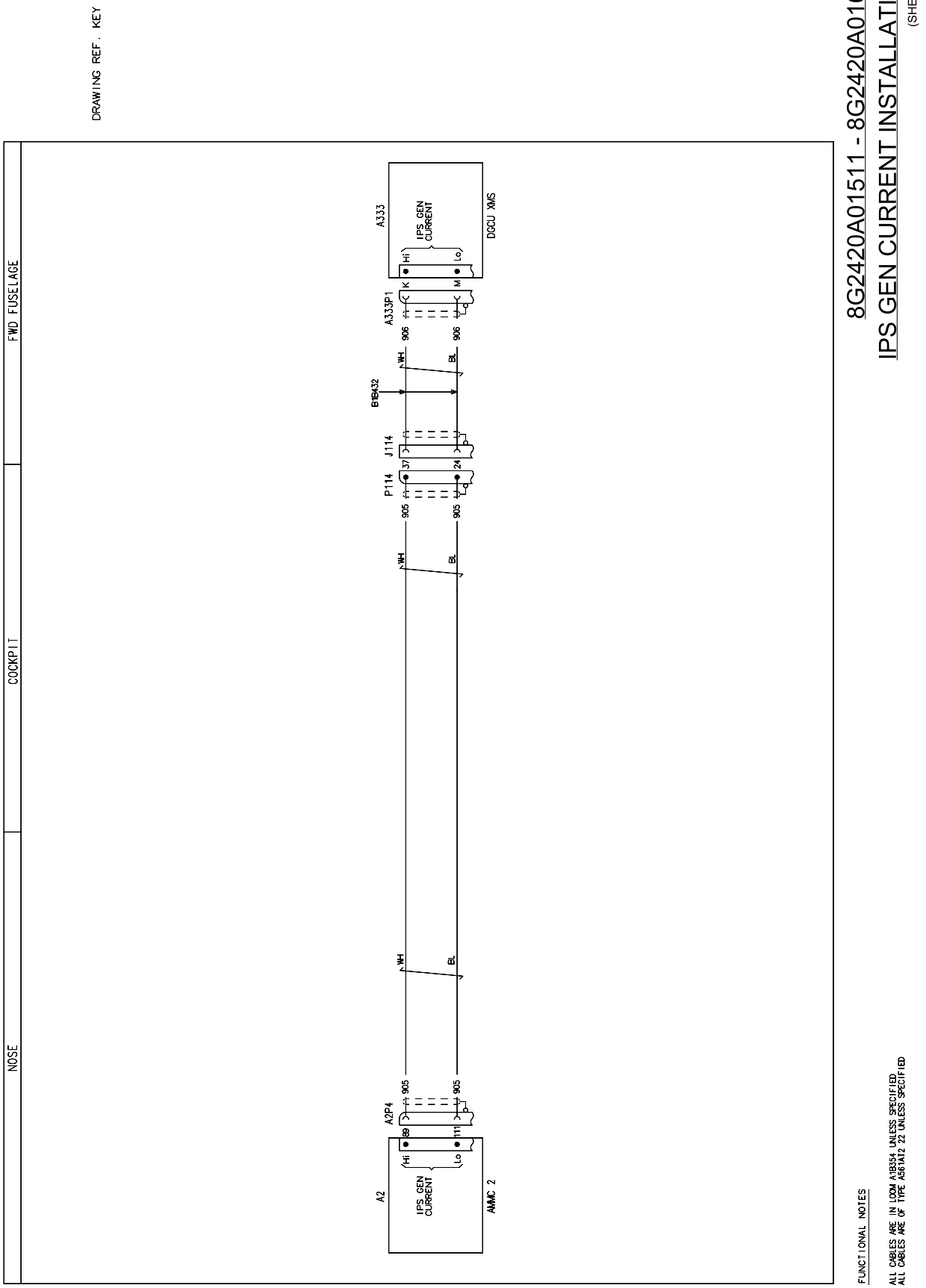

8G2420A01511 - 8G2420A01611
IPS GEN CURRENT INSTALLATION
(SHEET 1)
DRAWING REF. KEY
NOSE
COCKPIT
FWD FUSELAGE
A2
IPS GEN CURRENT
AMMC 2
A2P4
905
89
111
Hi
Lo
WH
BL
P114
J114
37
24
BTB432
A333P1
906
K
M
A333
IPS GEN CURRENT
DGCU XMS
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1B354 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE AS61AT2 22 UNLESS SPECIFIED

Figure 5

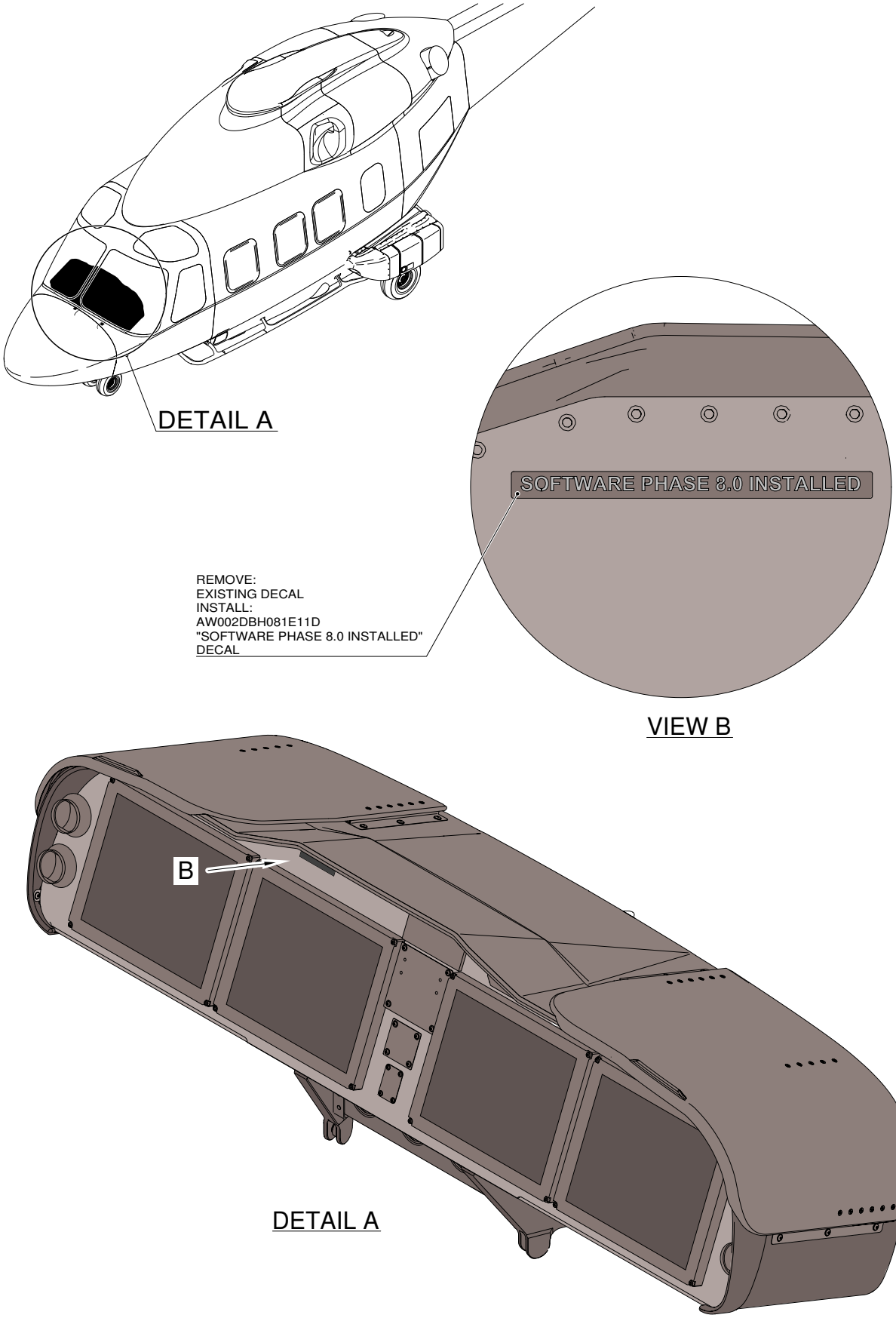

DETAIL A
SOFTWARE PHASE 8.0 INSTALLED
REMOVE:
EXISTING DECAL
INSTALL:
AW002DBH081E11D
"SOFTWARE PHASE 8.0 INSTALLED"
DECAL
VIEW B
B
DETAIL A

Figure 6

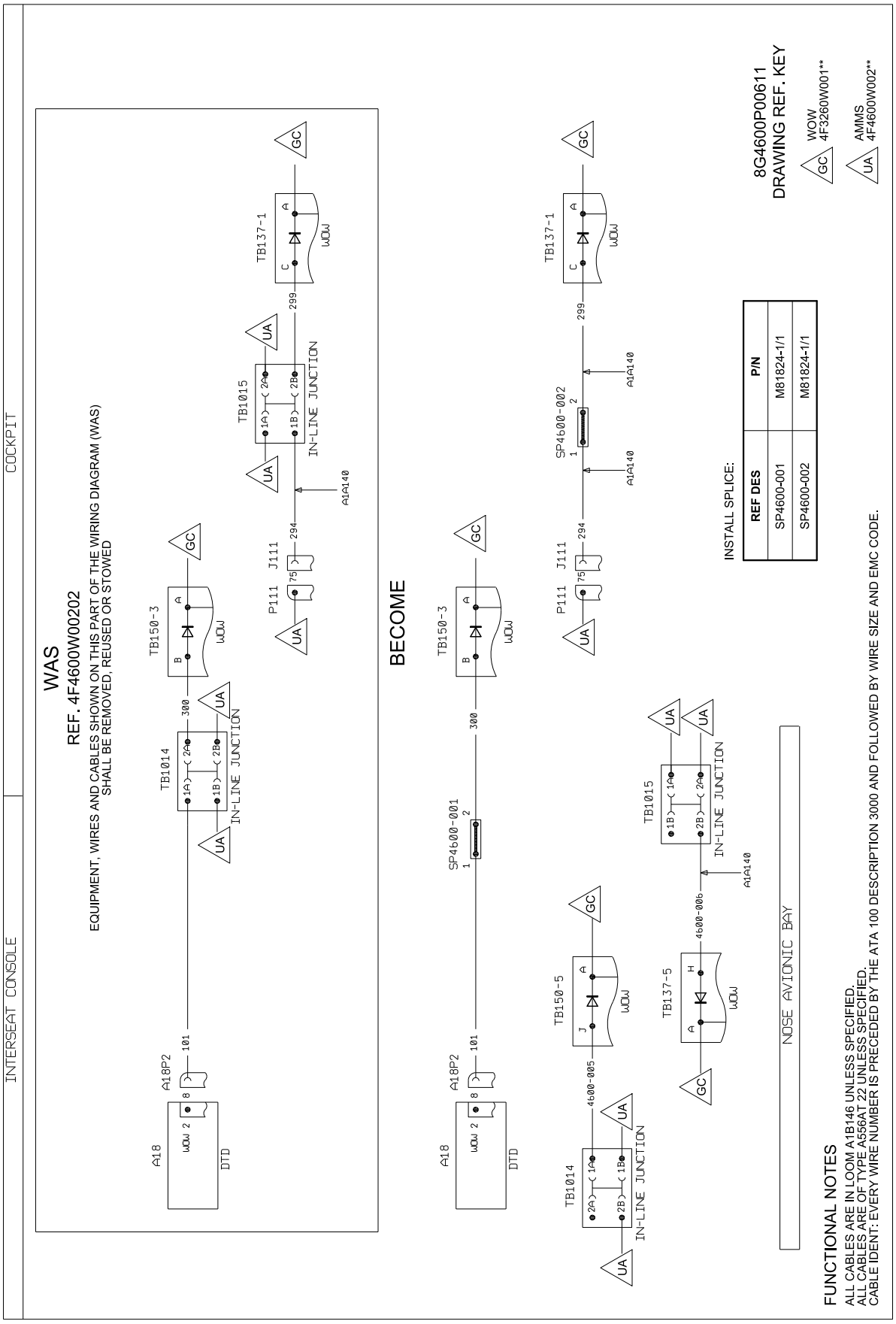

INTERSEAT CONSOLE
COCKPIT
WAS
REF. 4F4600W00202
EQUIPMENT, WIRES AND CABLES SHOWN ON THIS PART OF THE WIRING DIAGRAM (WAS) SHALL BE REMOVED, REUSED OR STOWED
BECOME
A18
A18P2
DTD
WOW 2
101
TB1014
IN-LINE JUNCTION
TB150-3
TB150-5
TB137-1
TB137-5
TB1015
SP4600-001
SP4600-002
P111
J111
GC
UA
WOW
300
294
299
4600-005
4600-006
A1A140
NOSE AVIONIC BAY
INSTALL SPLICE:
REF DES
P/N
SP4600-001
M81824-1/1
SP4600-002
M81824-1/1
8G4600P00611
DRAWING REF. KEY
WOW 4F3260W001**
AMMS 4F4600W002**
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1B146 UNLESS SPECIFIED.
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED.
CABLE IDENT: EVERY WIRE NUMBER IS PRECEDED BY THE ATA 100 DESCRIPTION 3000 AND FOLLOWED BY WIRE SIZE AND EMC CODE.

Figure 7

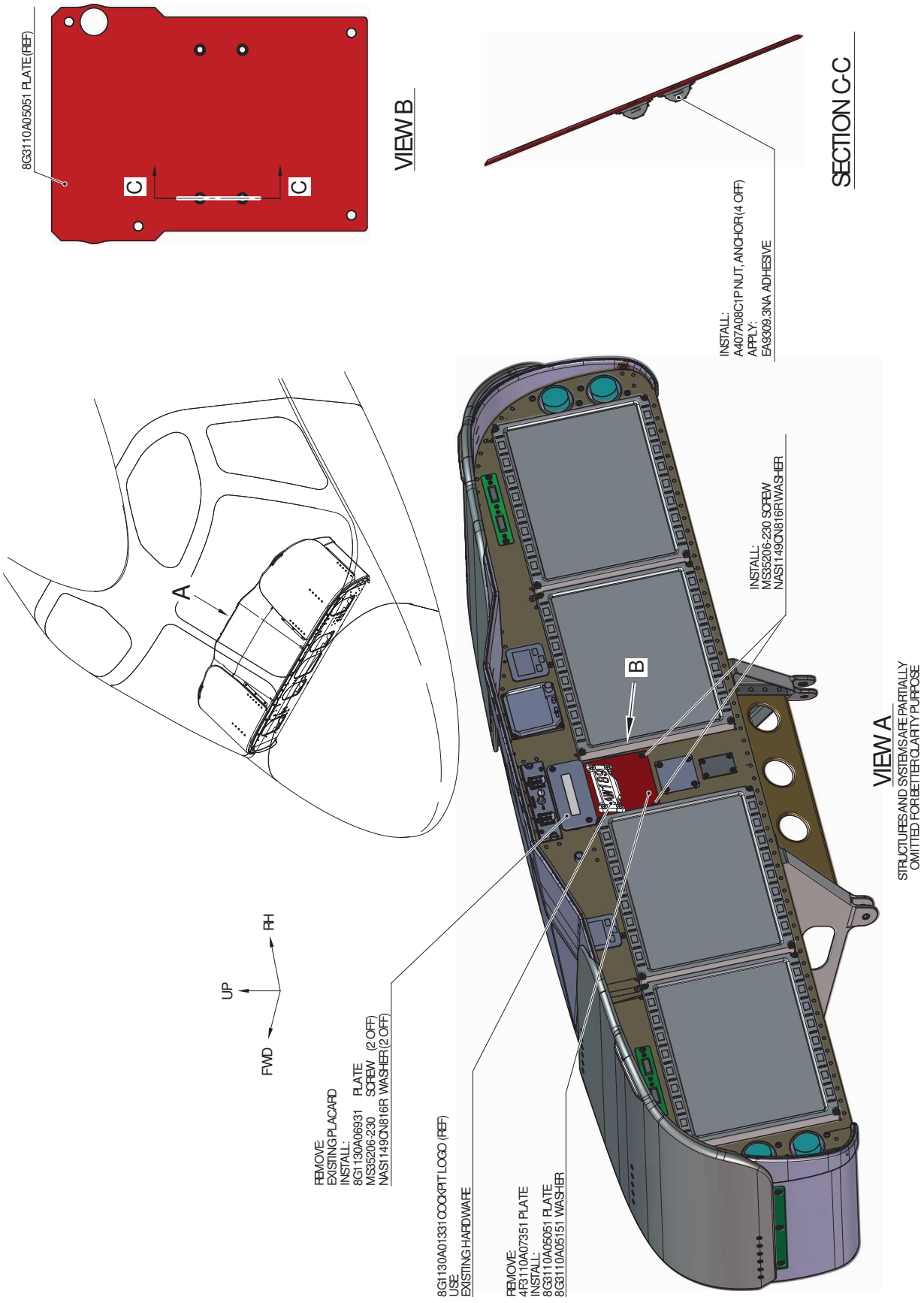

8G3110A05051 PLATE (REF)
C
C
VIEW B
SECTION C-C
INSTALL:
A407A08C1P NUT, ANCHOR (4 OFF)
APPLY:
EA9309.3NA ADHESIVE
A
B
INSTALL:
MS35206-230 SCREW
NAS1149ON816R WASHER
VIEW A
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
UP
RH
FWD
REMOVE:
EXISTING PLACARD
INSTALL:
8G1130A06931 PLATE
MS35206-230 SCREW (2 OFF)
NAS1149ON816R WASHER (2 OFF)
8G1130A01331 COCKPIT LOGO (REF)
USE
EXISTING HARDWARE
REMOVE:
4F3110A07351 PLATE
INSTALL:
8G3110A05051 PLATE
8G3110A05151 WASHER

Figure 8

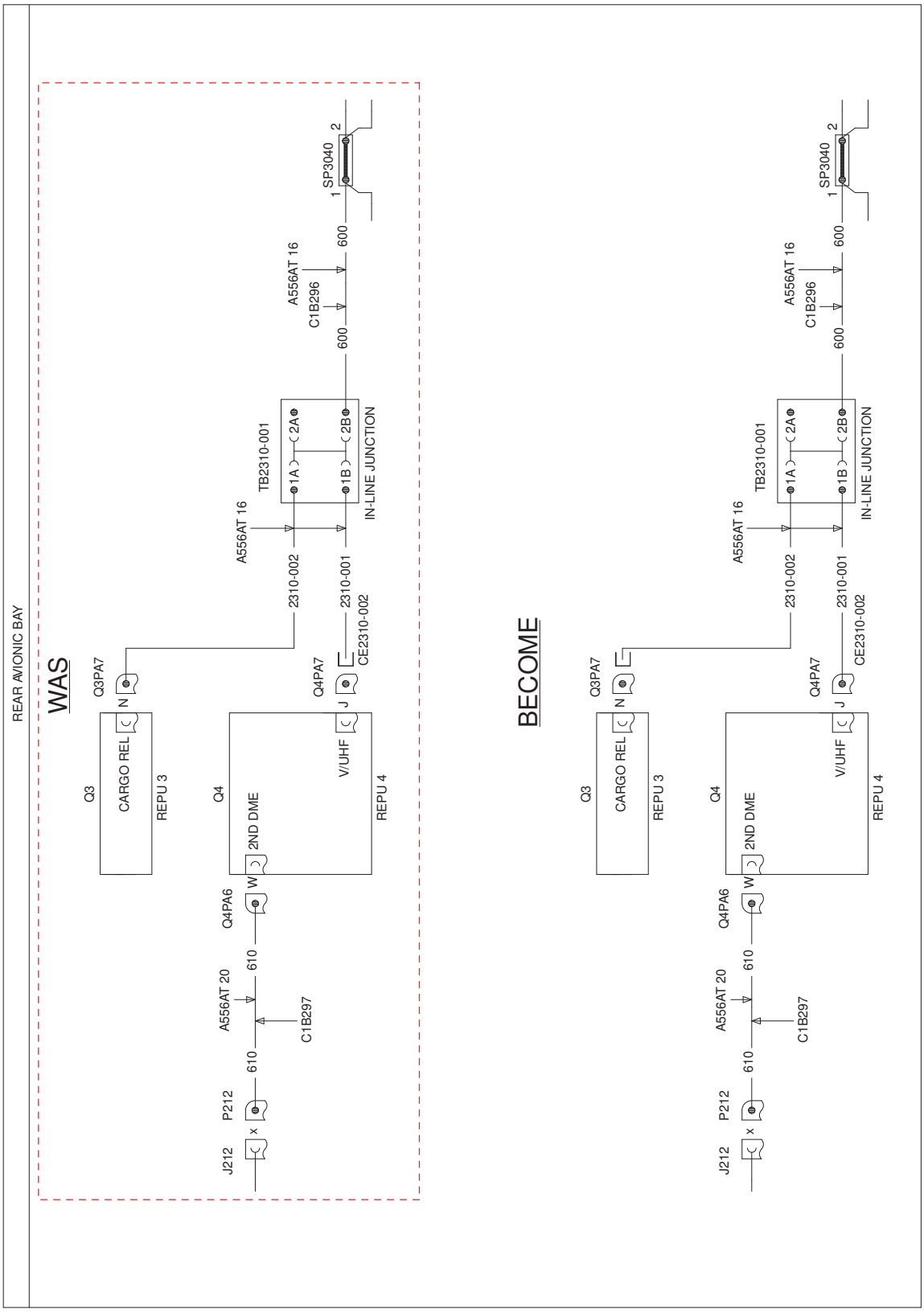

REAR AVIONIC BAY
WAS
Q3PA7
N
Q3
CARGO REL
REPU 3
Q4
2ND DME
Q4PA7
J
V/UHF
REPU 4
Q4PA6
W
A556AT 20
610
C1B297
P212
610
J212
X
A556AT 16
2310-002
2310-001
CE2310-002
TB2310-001
1A
1B
2A
2B
IN-LINE JUNCTION
A556AT 16
C1B296
600
600
SP3040
1
2
BECOME
Q3PA7
N
Q3
CARGO REL
REPU 3
Q4
2ND DME
Q4PA7
J
V/UHF
REPU 4
Q4PA6
W
A556AT 20
610
C1B297
P212
610
J212
X
A556AT 16
2310-002
2310-001
CE2310-002
TB2310-001
1A
1B
2A
2B
IN-LINE JUNCTION
A556AT 16
C1B296
600
600
SP3040
1
2

Figure 9

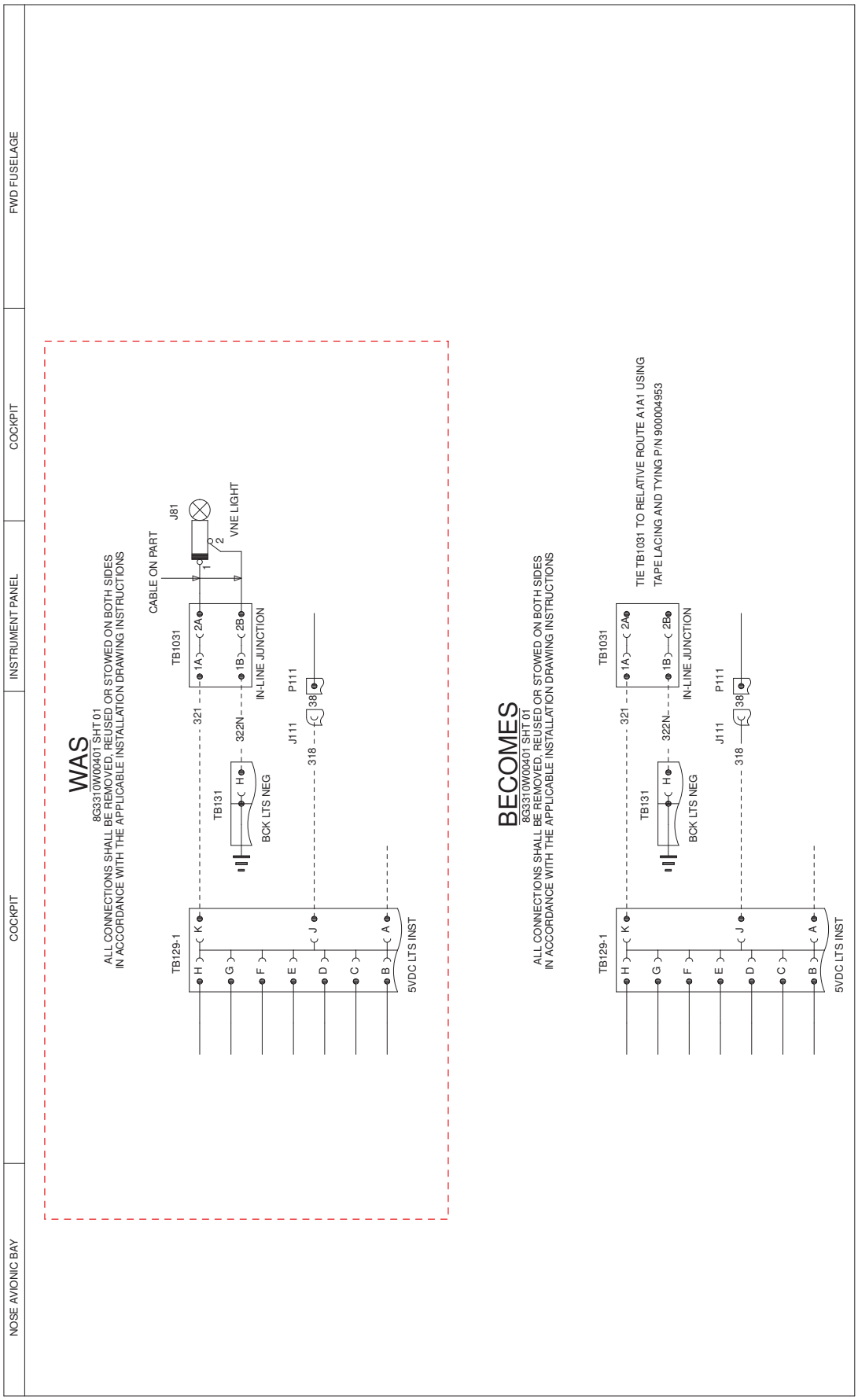

NOSE AVIONIC BAY
COCKPIT
INSTRUMENT PANEL
COCKPIT
FWD FUSELAGE
WAS
8G3310W00401 SHT 01
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES
IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS
CABLE ON PART
J81
VNE LIGHT
TB1031
IN-LINE JUNCTION
TB131
BCK LTS NEG
P111
J111
TB129-1
5VDC LTS INST
321
322N
318
BECOMES
8G3310W00401 SHT 01
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES
IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS
TIE TB1031 TO RELATIVE ROUTE A1A1 USING
TAPE LACING AND TYING P/N 900004953
8G3310P00211
WIRING DIAGRAM VNE W/D AND CABLE STOWAGE RETROMOD
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1A352 UNLESS SPECIFIED

Figure 10

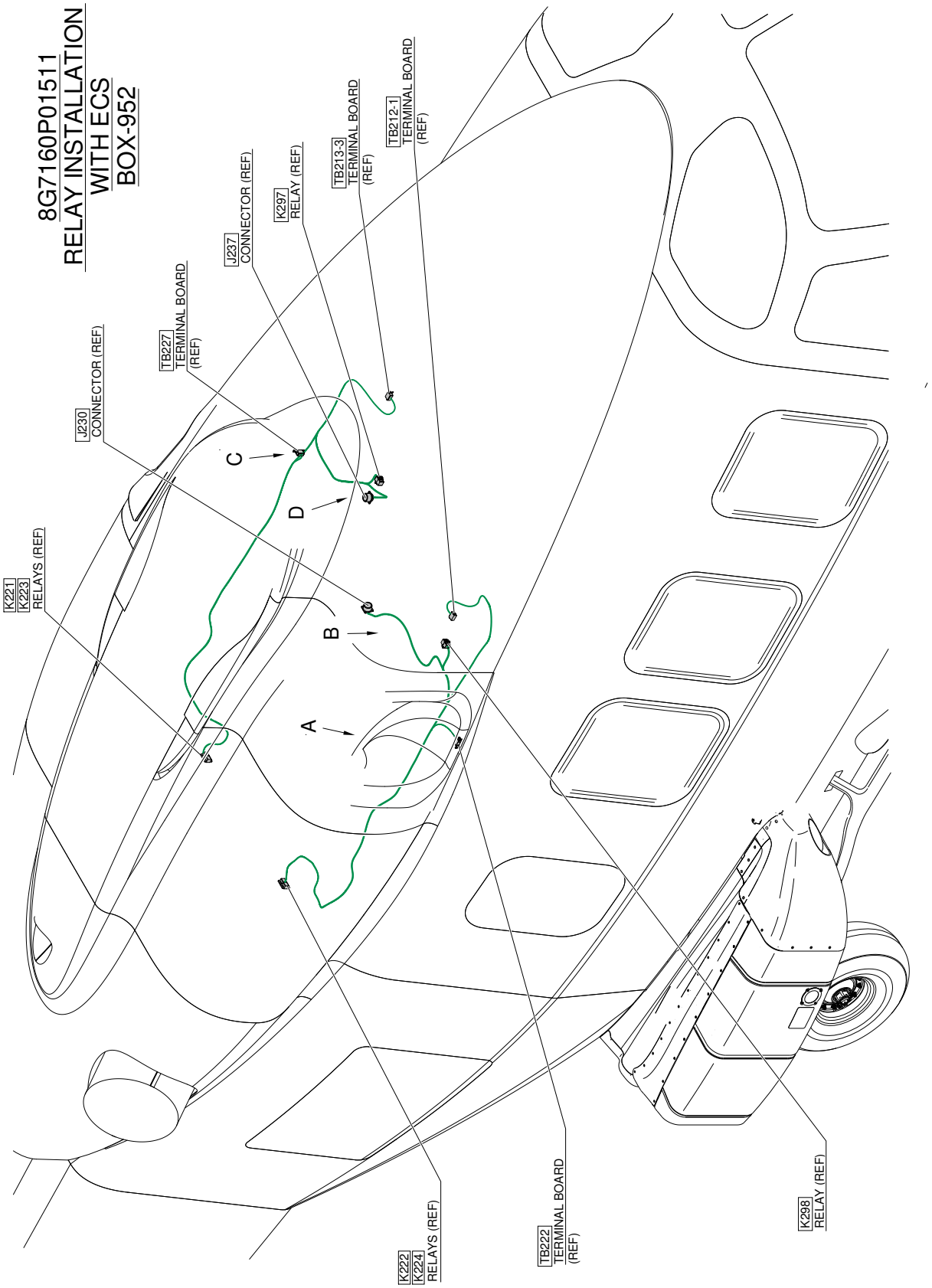
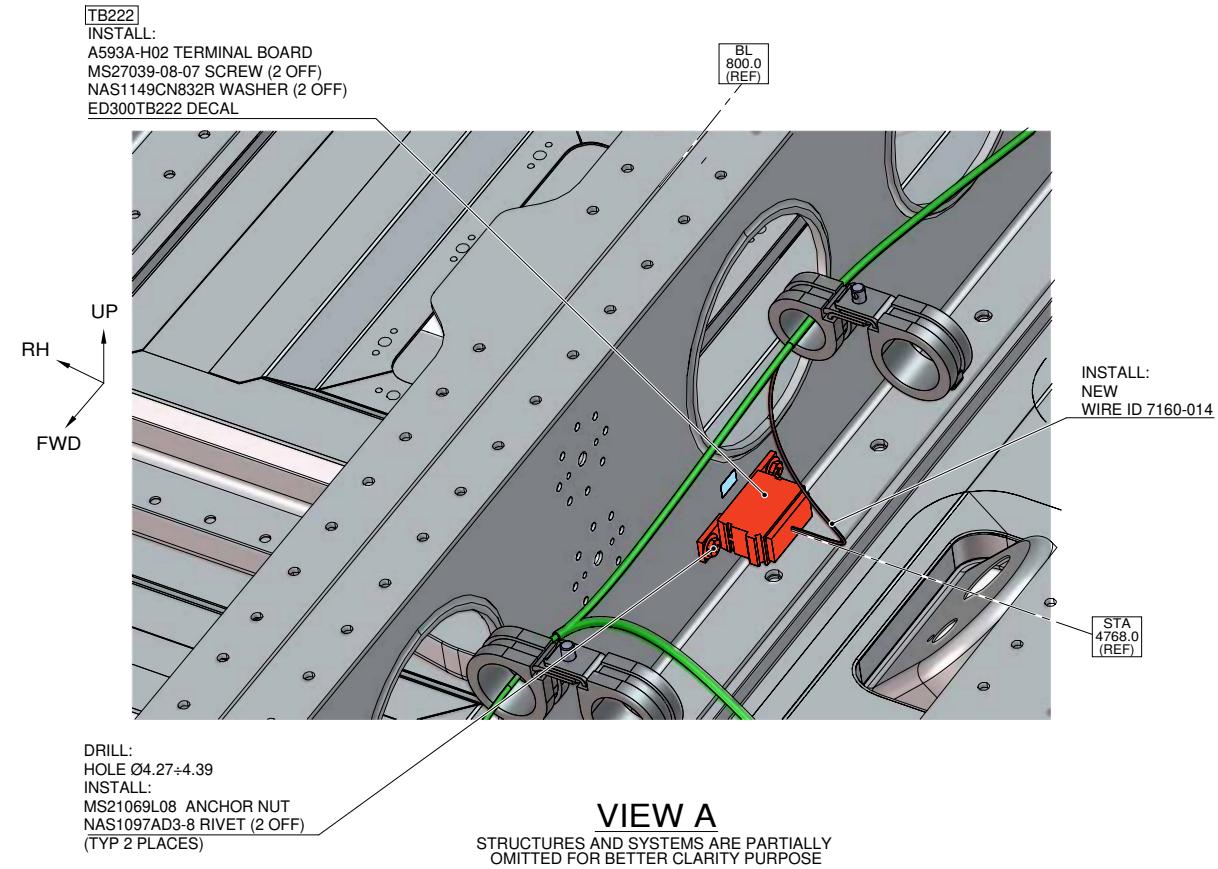
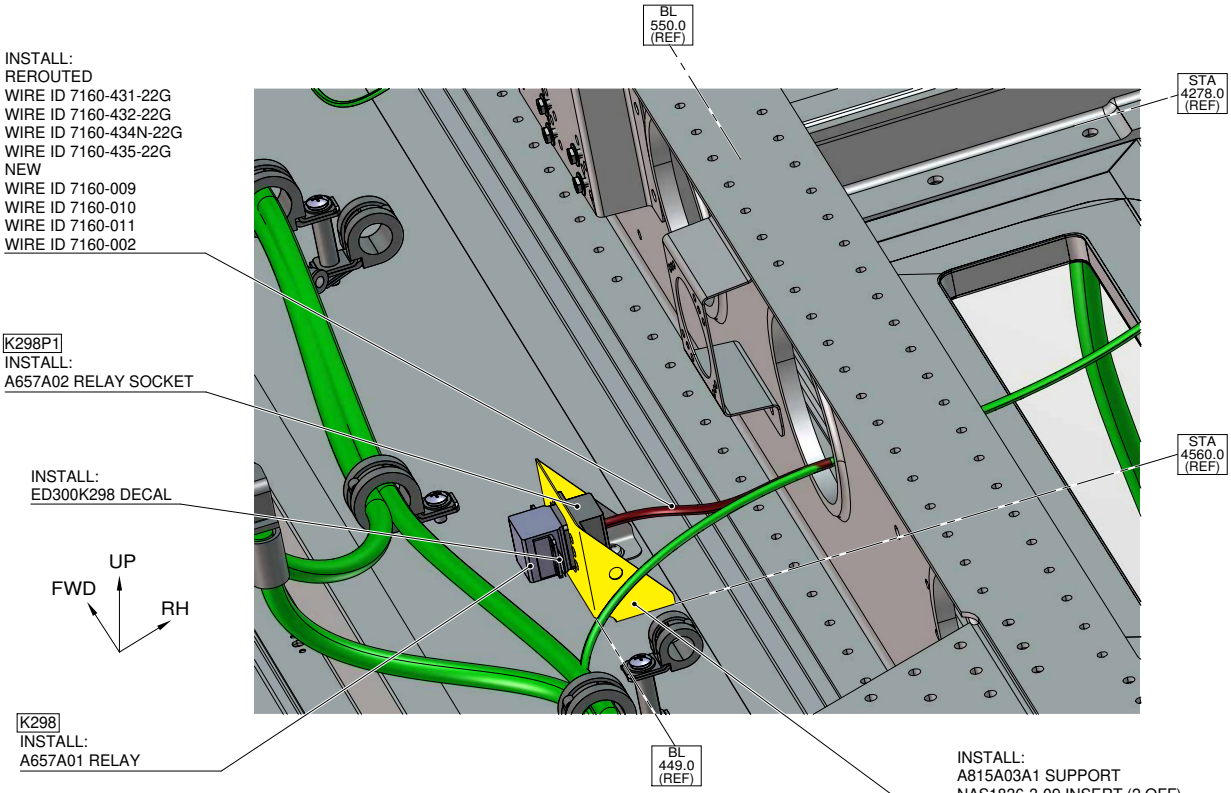

8G7160P01511
RELAY INSTALLATION
WITH ECS
BOX-952
K221
K223
RELAYS (REF)
J230
CONNECTOR (REF)
TB227
TERMINAL BOARD
(REF)
J237
CONNECTOR (REF)
K297
RELAY (REF)
TB213-3
TERMINAL BOARD
(REF)
TB212-1
TERMINAL BOARD
(REF)
A
B
C
D
K222
K224
RELAYS (REF)
TB222
TERMINAL BOARD
(REF)
K298
RELAY (REF)

Figure 11



VIEW A

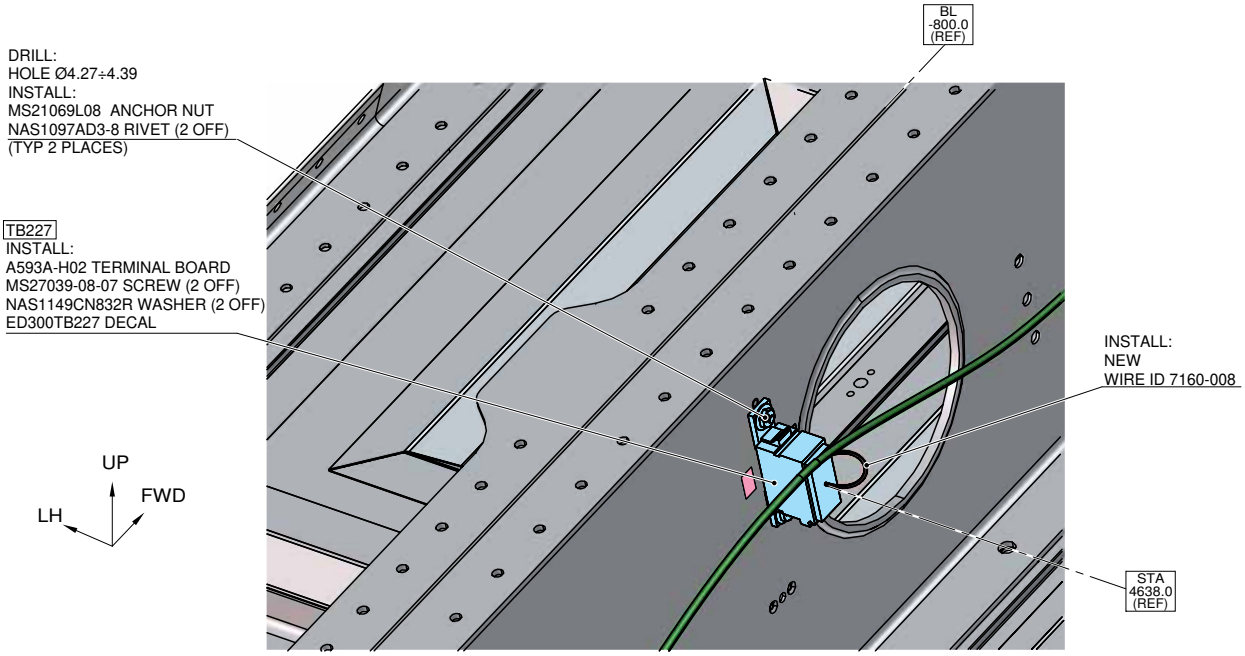
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



VIEW B

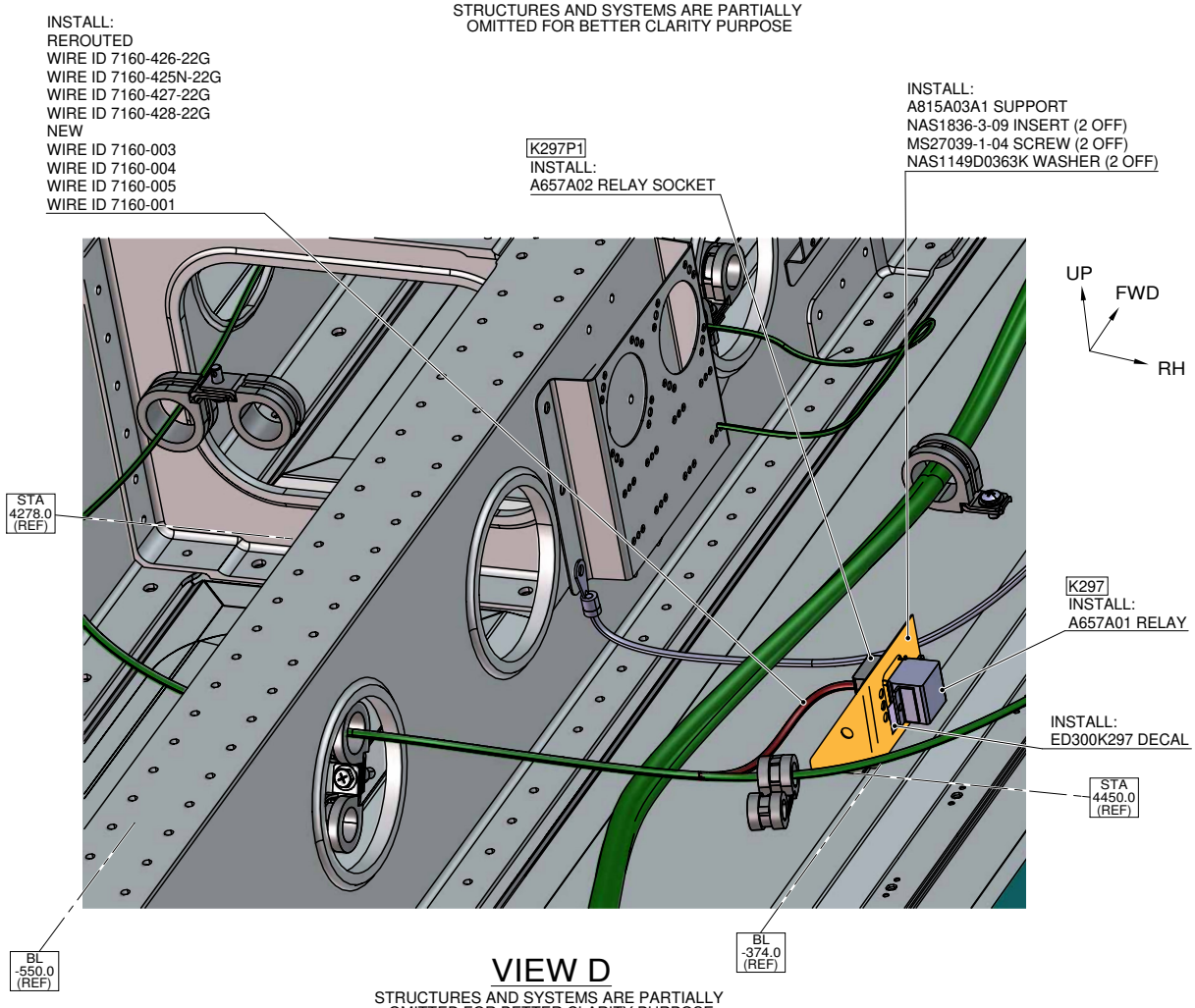
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 12



VIEW C

STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



VIEW D

STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 13

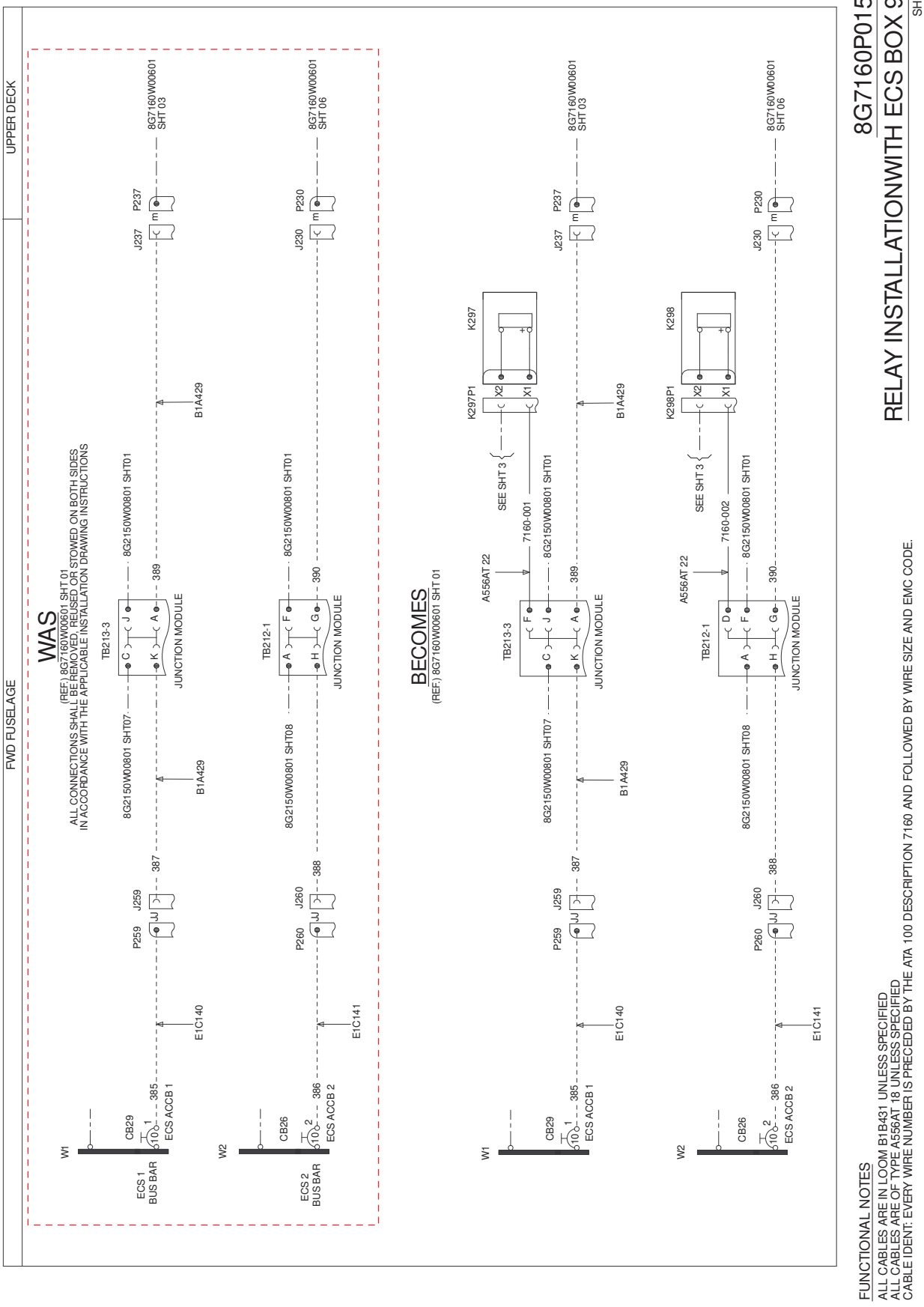
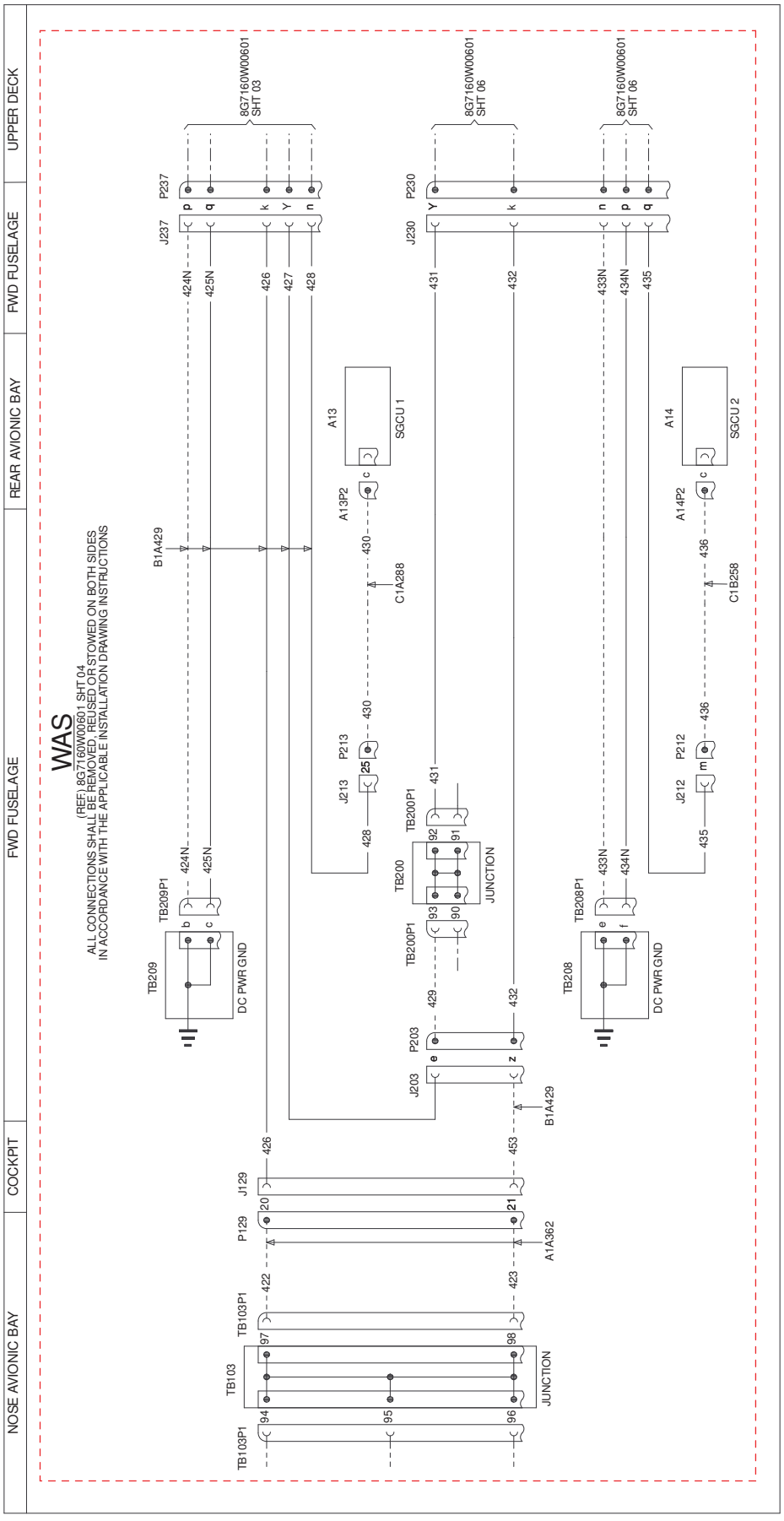

FWD FUSELAGE
UPPER DECK
WAS
(REF.) 8G7160W00601 SHT 01
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES
IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS
BECOMES
(REF.) 8G7160W00601 SHT 01
W1
W2
CB29
CB26
ECS 1 BUS BAR
ECS 2 BUS BAR
ECS ACCB 1
ECS ACCB 2
385
386
387
388
389
390
P259
J259
P260
J260
E1C140
E1C141
B1A429
TB213-3
TB212-1
JUNCTION MODULE
8G2150W00801 SHT07
8G2150W00801 SHT08
8G2150W00801 SHT01
J237
P237
J230
P230
8G7160W00601 SHT 03
8G7160W00601 SHT 06
A556AT 22
7160-001
7160-002
SEE SHT 3
K297
K297P1
K298
K298P1
8G7160P01511
RELAY INSTALLATIONWITH ECS BOX 952
SHEET 1
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM B1B431 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 18 UNLESS SPECIFIED
CABLE IDENT: EVERY WIRE NUMBER IS PRECEDED BY THE ATA 100 DESCRIPTION 7160 AND FOLLOWED BY WIRE SIZE AND EMC CODE.

Figure 14



8G7160P01511

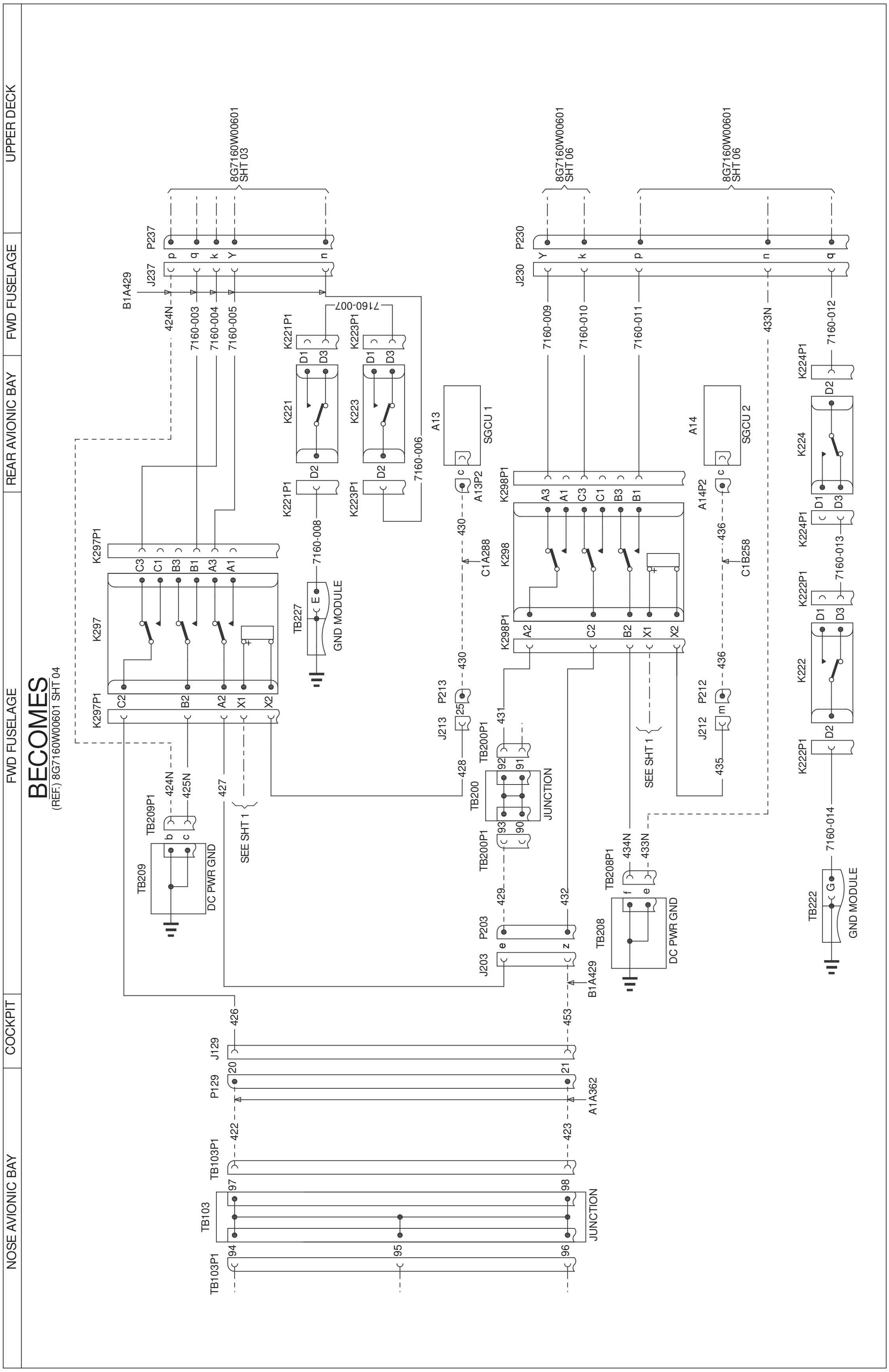
RELAY INSTALLATIONWITH ECS BOX 952

SHEET 2

FUNCTIONAL NOTES

ALL CABLES ARE IN LOOM B1B431 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED
CABLE IDENT: EVERY WIRE NUMBER IS PRECEDED BY THE ATA 100 DESCRIPTION 7160 AND FOLLOWED BY WIRE SIZE AND EMC CODE.

Figure 15



RELAY INSTALLATIONWITH ECS BOX 952

8G7160P01511

SHEET 3

FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM B1B431 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED
CABLE IDENT: EVERY WIRE NUMBER IS PRECEDED BY THE ATA 100 DESCRIPTION 7160 AND FOLLOWED BY WIRE SIZE AND EMC CODE.

Figure 16

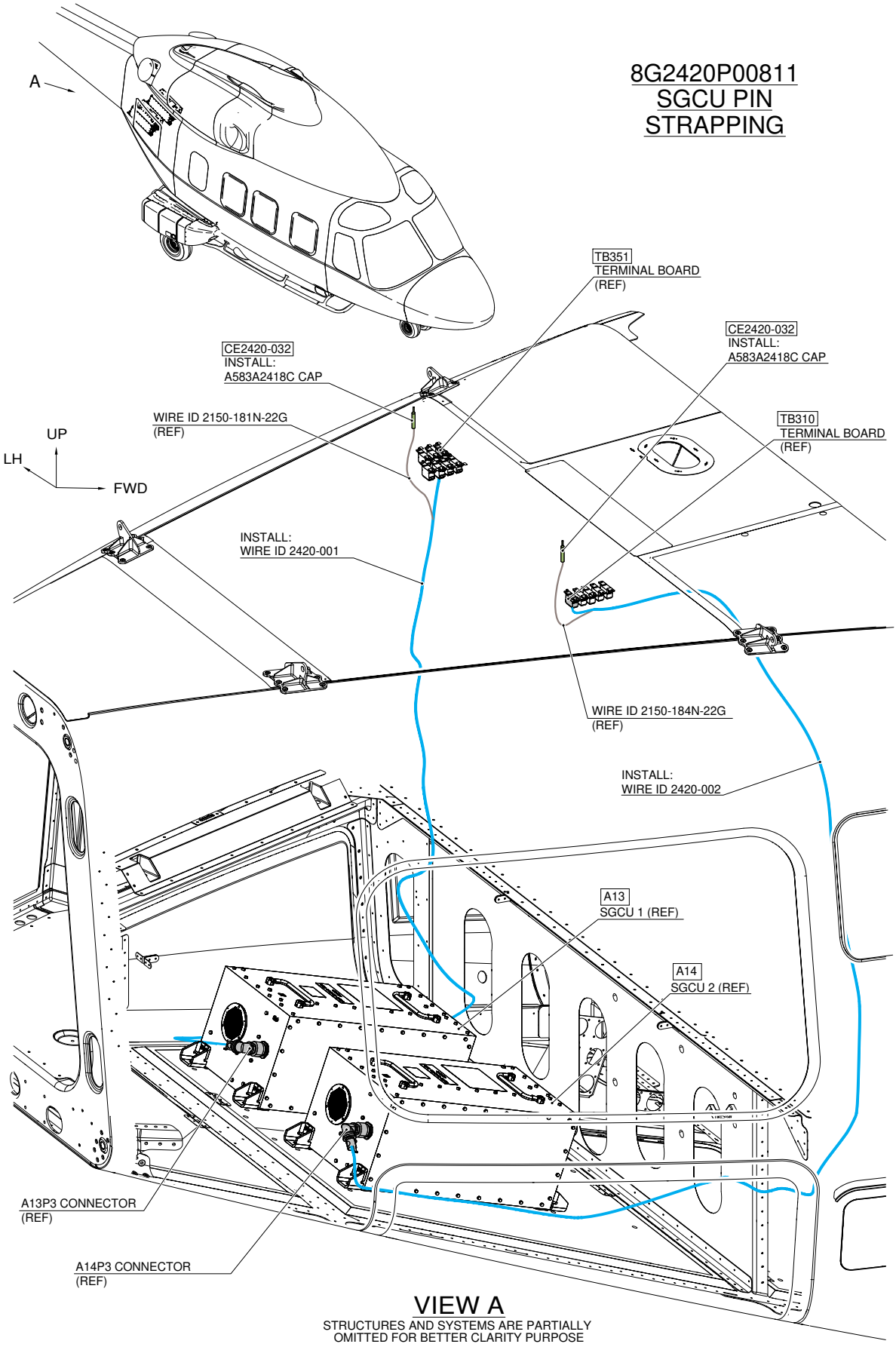
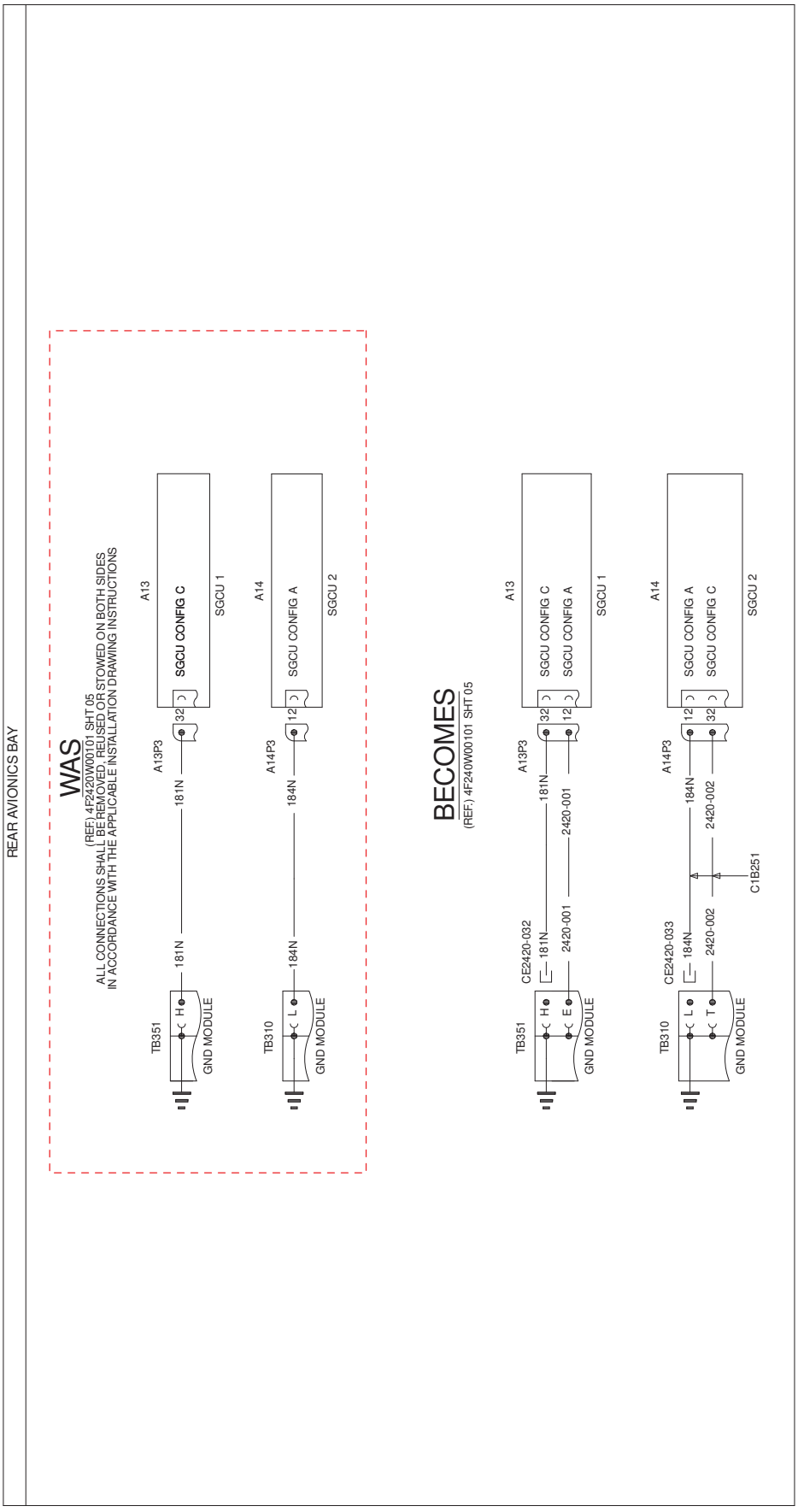

A
8G2420P00811
SGCU PIN
STRAPPING
TB351
TERMINAL BOARD
(REF)
CE2420-032
INSTALL:
A583A2418C CAP
CE2420-032
INSTALL:
A583A2418C CAP
WIRE ID 2150-181N-22G
(REF)
TB310
TERMINAL BOARD
(REF)
UP
LH
FWD
INSTALL:
WIRE ID 2420-001
WIRE ID 2150-184N-22G
(REF)
INSTALL:
WIRE ID 2420-002
A13
SGCU 1 (REF)
A14
SGCU 2 (REF)
A13P3 CONNECTOR
(REF)
A14P3 CONNECTOR
(REF)
VIEW A
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 17

8G2420P00811

SGCU PIN STRAPPING



FUNCTIONAL NOTES

ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

CABLE IDENT: EVERY WIRE NUMBER IS PRECEDED BY THE ATA 100 DESCRIPTION 2420 AND FOLLOWED BY WIRE SIZE AND EMC CODE.

Figure 18

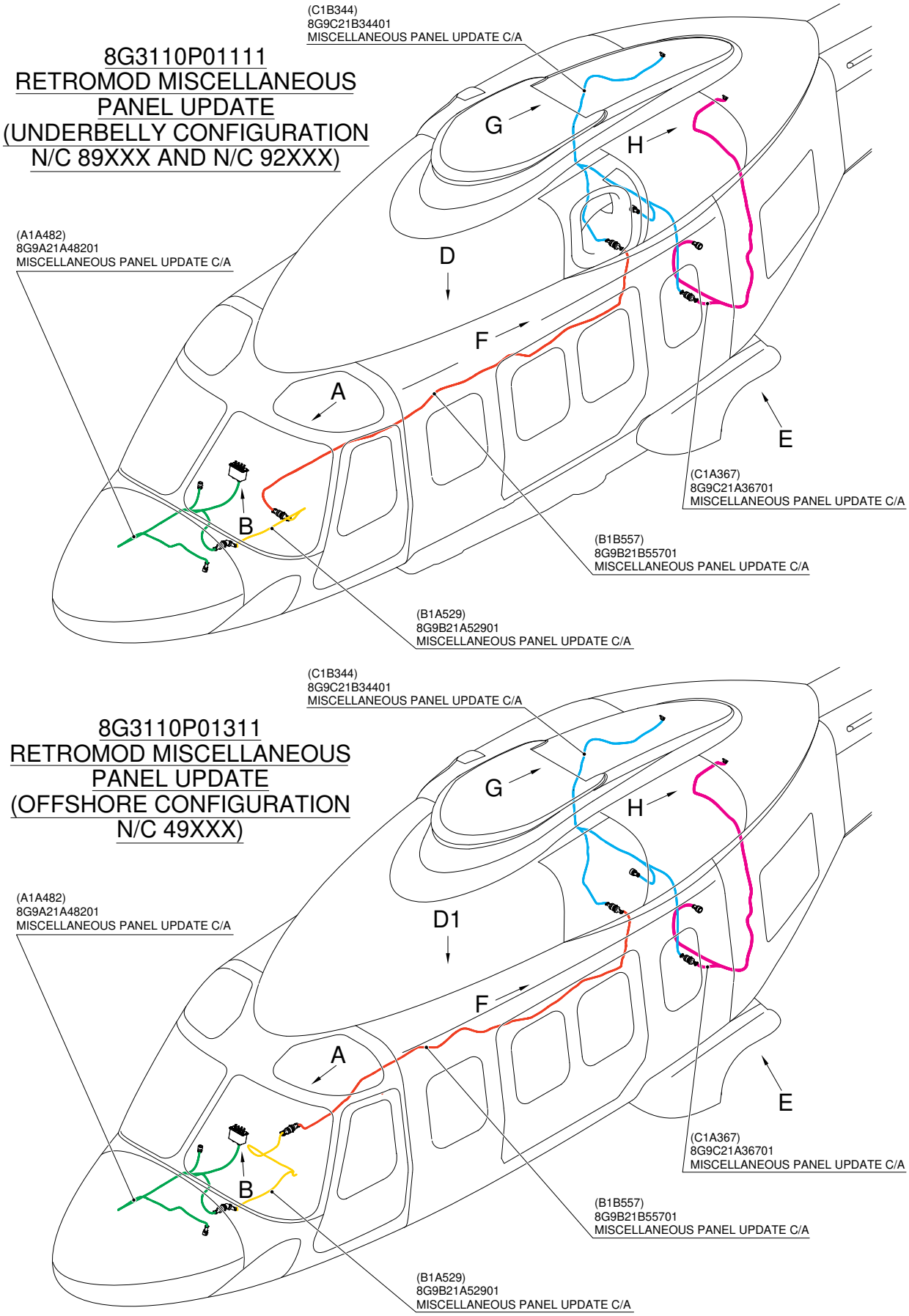

8G3110P01111
RETROMOD MISCELLANEOUS PANEL UPDATE (UNDERBELLY CONFIGURATION N/C 89XXX AND N/C 92XXX)
(C1B344)
8G9C21B34401
MISCELLANEOUS PANEL UPDATE C/A
(A1A482)
8G9A21A48201
MISCELLANEOUS PANEL UPDATE C/A
G
H
D
F
A
B
E
(C1A367)
8G9C21A36701
MISCELLANEOUS PANEL UPDATE C/A
(B1B557)
8G9B21B55701
MISCELLANEOUS PANEL UPDATE C/A
(B1A529)
8G9B21A52901
MISCELLANEOUS PANEL UPDATE C/A
8G3110P01311
RETROMOD MISCELLANEOUS PANEL UPDATE (OFFSHORE CONFIGURATION N/C 49XXX)
(C1B344)
8G9C21B34401
MISCELLANEOUS PANEL UPDATE C/A
(A1A482)
8G9A21A48201
MISCELLANEOUS PANEL UPDATE C/A
G
H
D1
F
A
B
E
(C1A367)
8G9C21A36701
MISCELLANEOUS PANEL UPDATE C/A
(B1B557)
8G9B21B55701
MISCELLANEOUS PANEL UPDATE C/A
(B1A529)
8G9B21A52901
MISCELLANEOUS PANEL UPDATE C/A

Figure 19

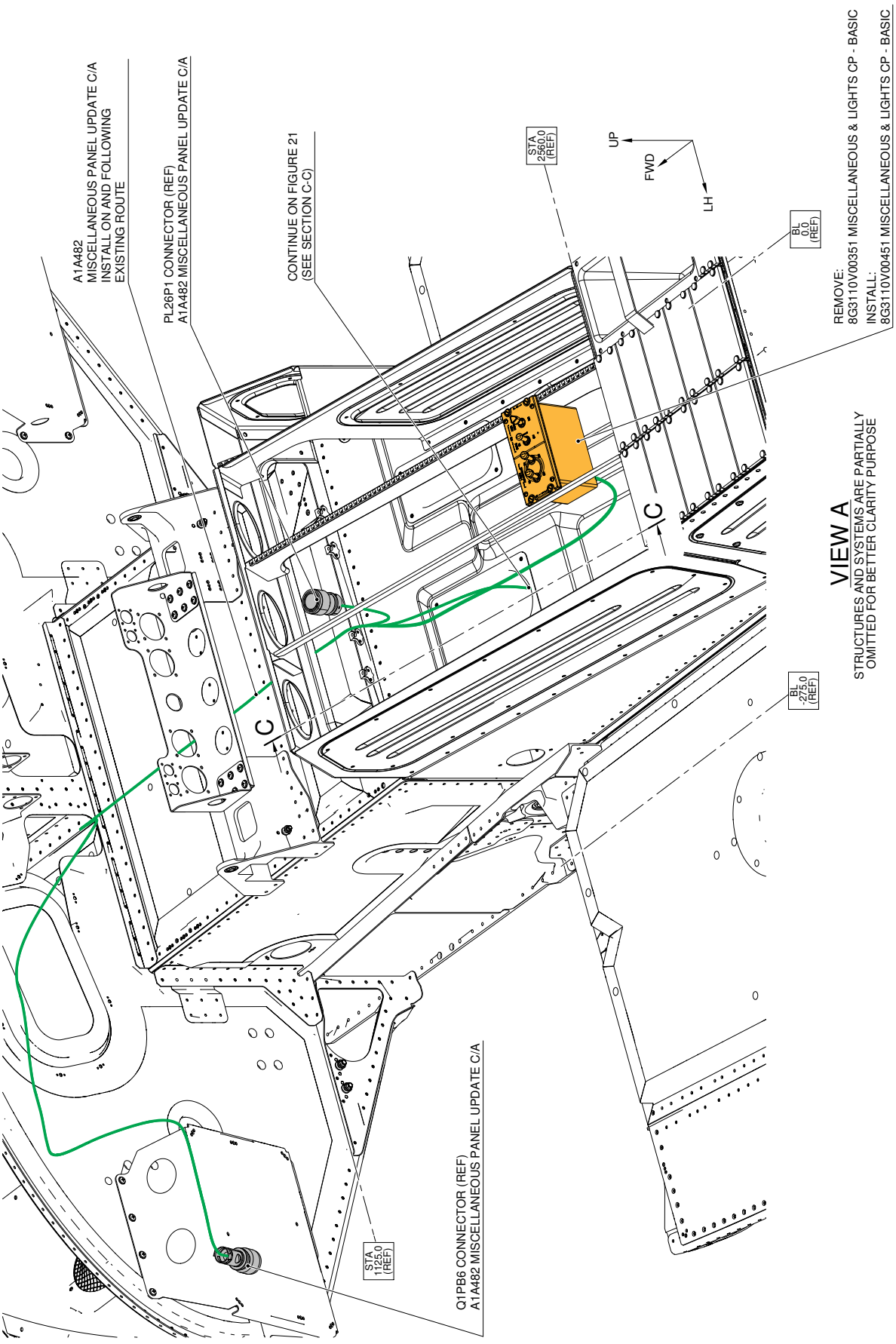
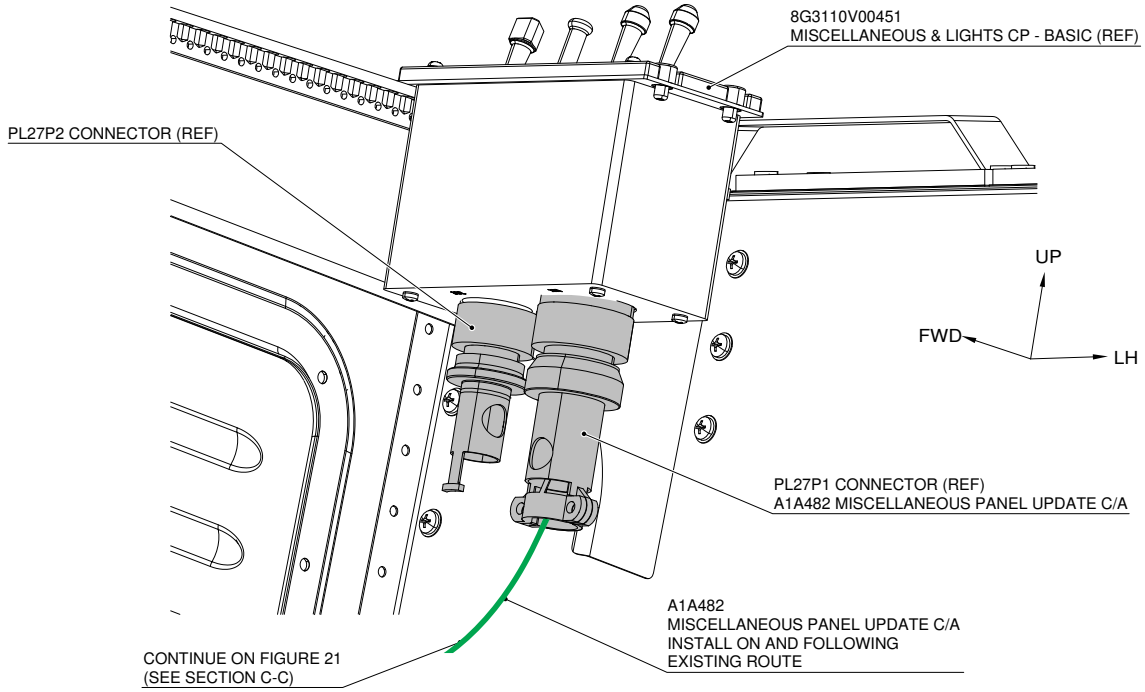
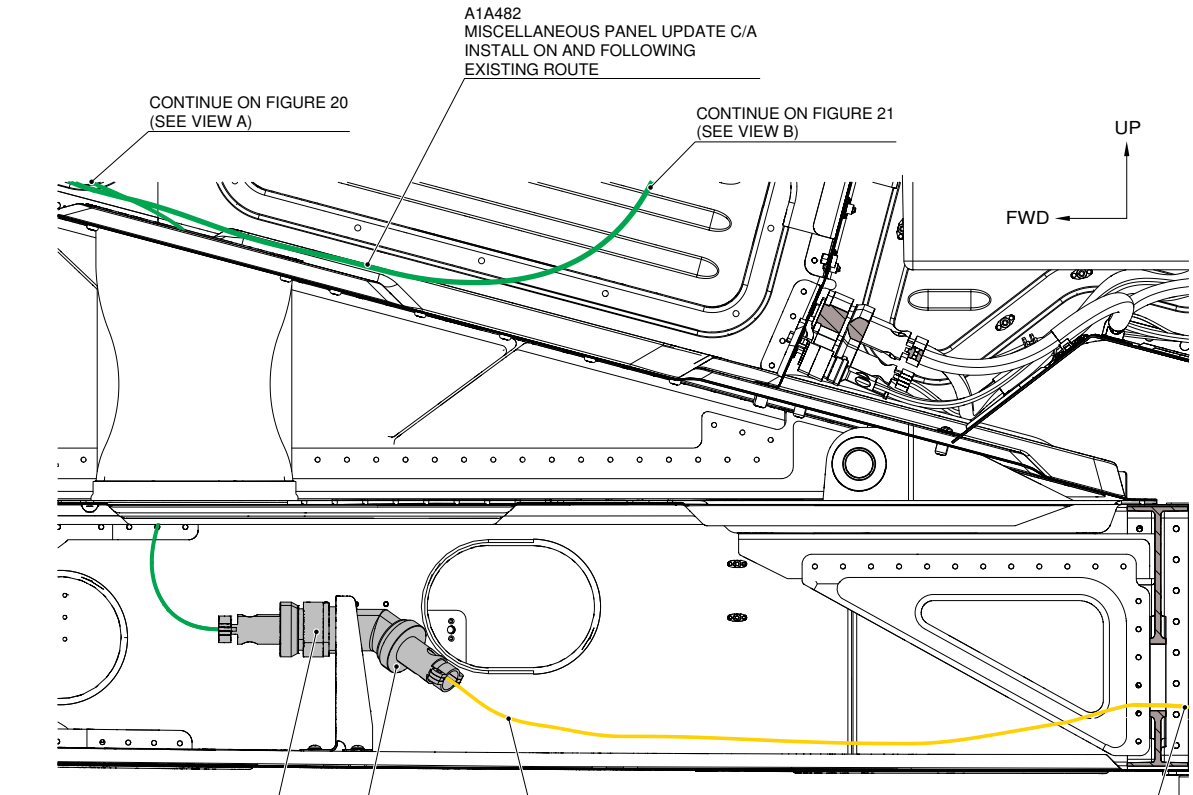

A1A482
MISCELLANEOUS PANEL UPDATE C/A
INSTALL ON AND FOLLOWING
EXISTING ROUTE
PL26P1 CONNECTOR (REF)
A1A482 MISCELLANEOUS PANEL UPDATE C/A
CONTINUE ON FIGURE 21
(SEE SECTION C-C)
STA
2500,0
(REF)
UP
FWD
LH
BL
0,0
(REF)
REMOVE:
8G3110V00351 MISCELLANEOUS & LIGHTS CP - BASIC
INSTALL:
8G3110V00451 MISCELLANEOUS & LIGHTS CP - BASIC
VIEW A
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
C
C
BL
-275,0
(REF)
STA
1125,0
(REF)
Q1PB6 CONNECTOR (REF)
A1A482 MISCELLANEOUS PANEL UPDATE C/A

Figure 20



VIEW B

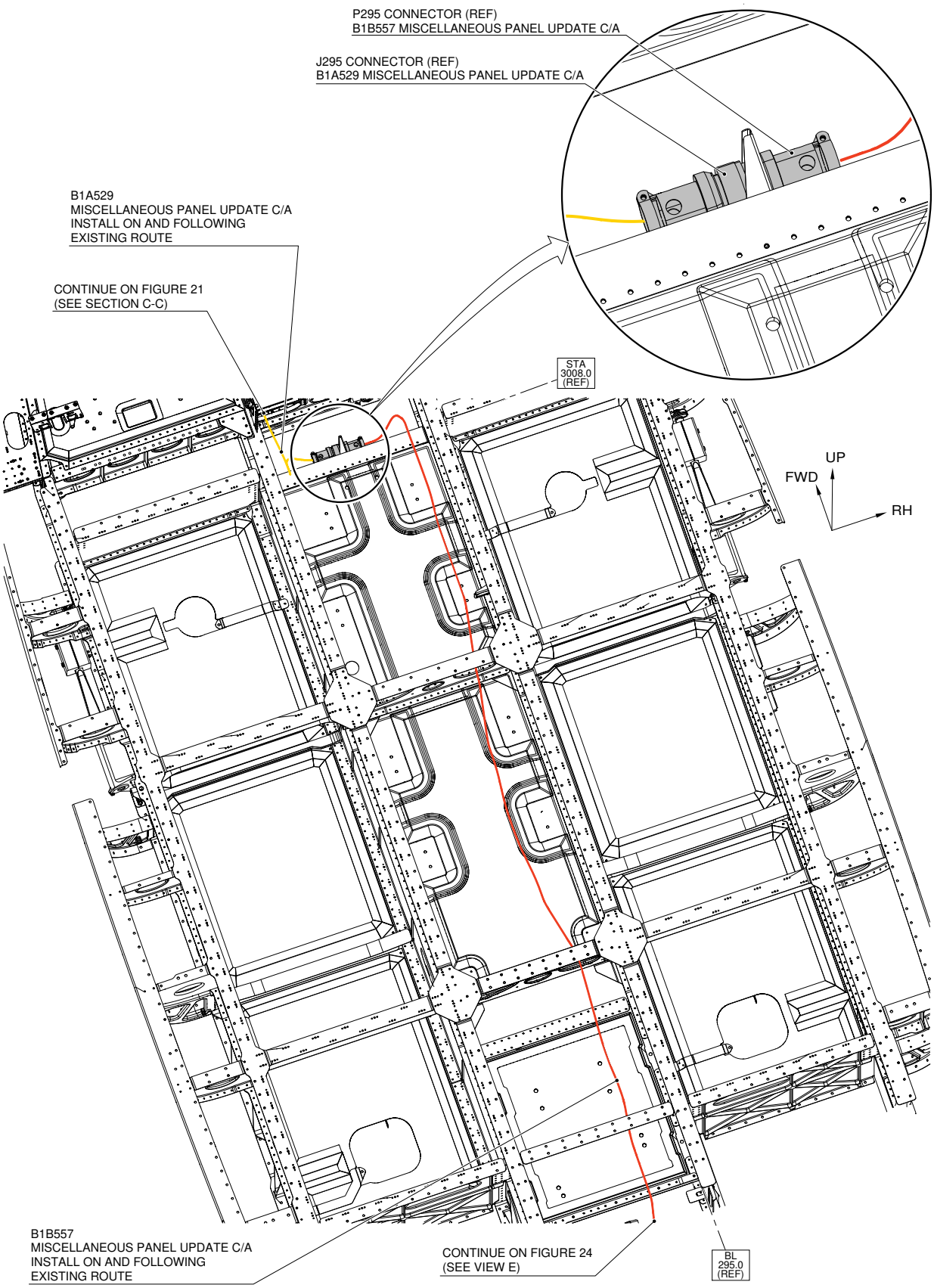
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE



SECTION C-C

STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

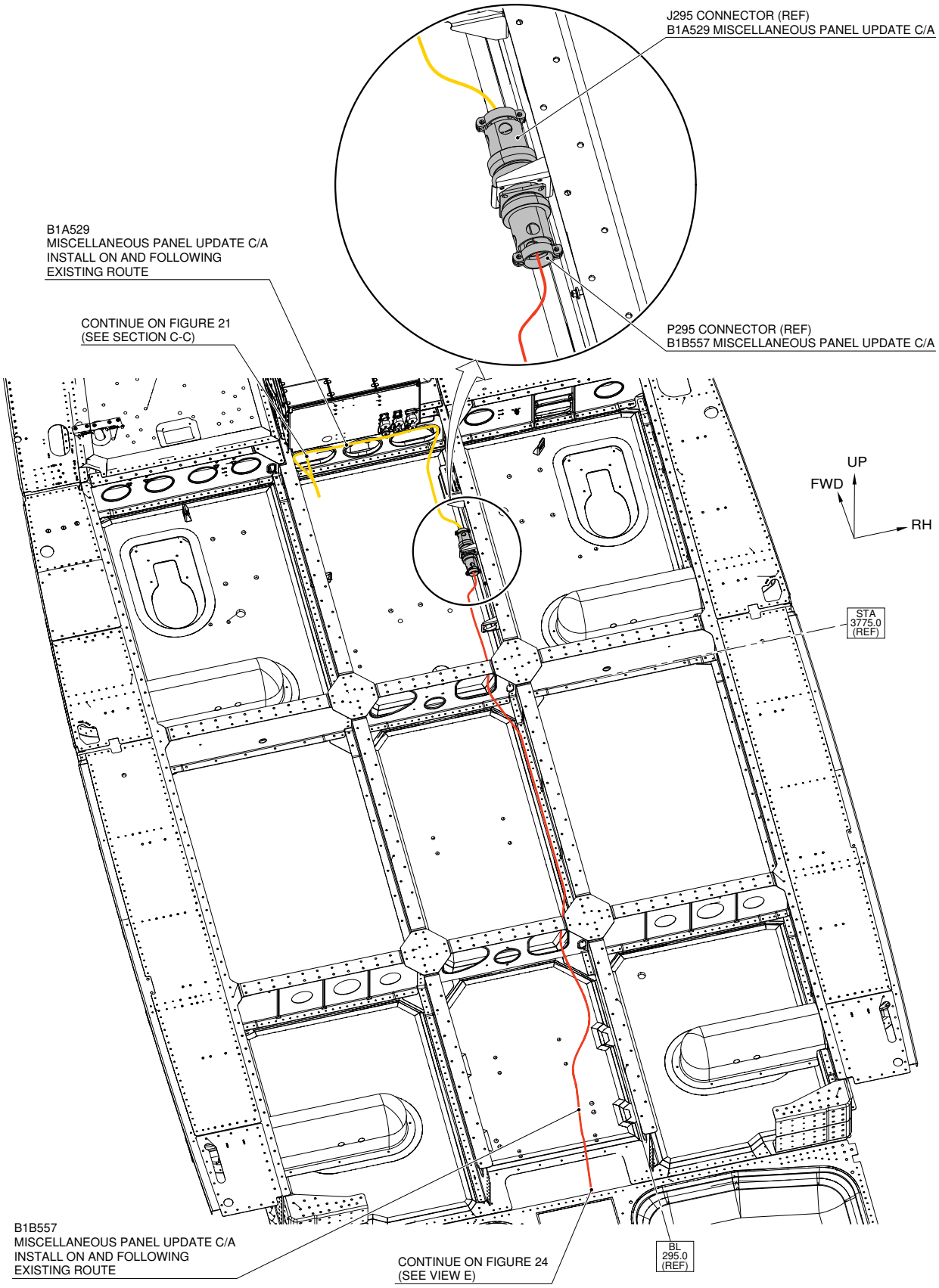
Figure 21



VIEW D

STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
(APPLICABLE ONLY TO HELICOPTER EQUIPPED WITH UNDERBELLY CONFIGURATION
N/C 89XXX AND N/C 92XXX)

Figure 22



VIEW D1

STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
(APPLICABLE ONLY TO HELICOPTER EQUIPPED WITH OFFSHORE CONFIGURATION N/C 49XXX)

Figure 23

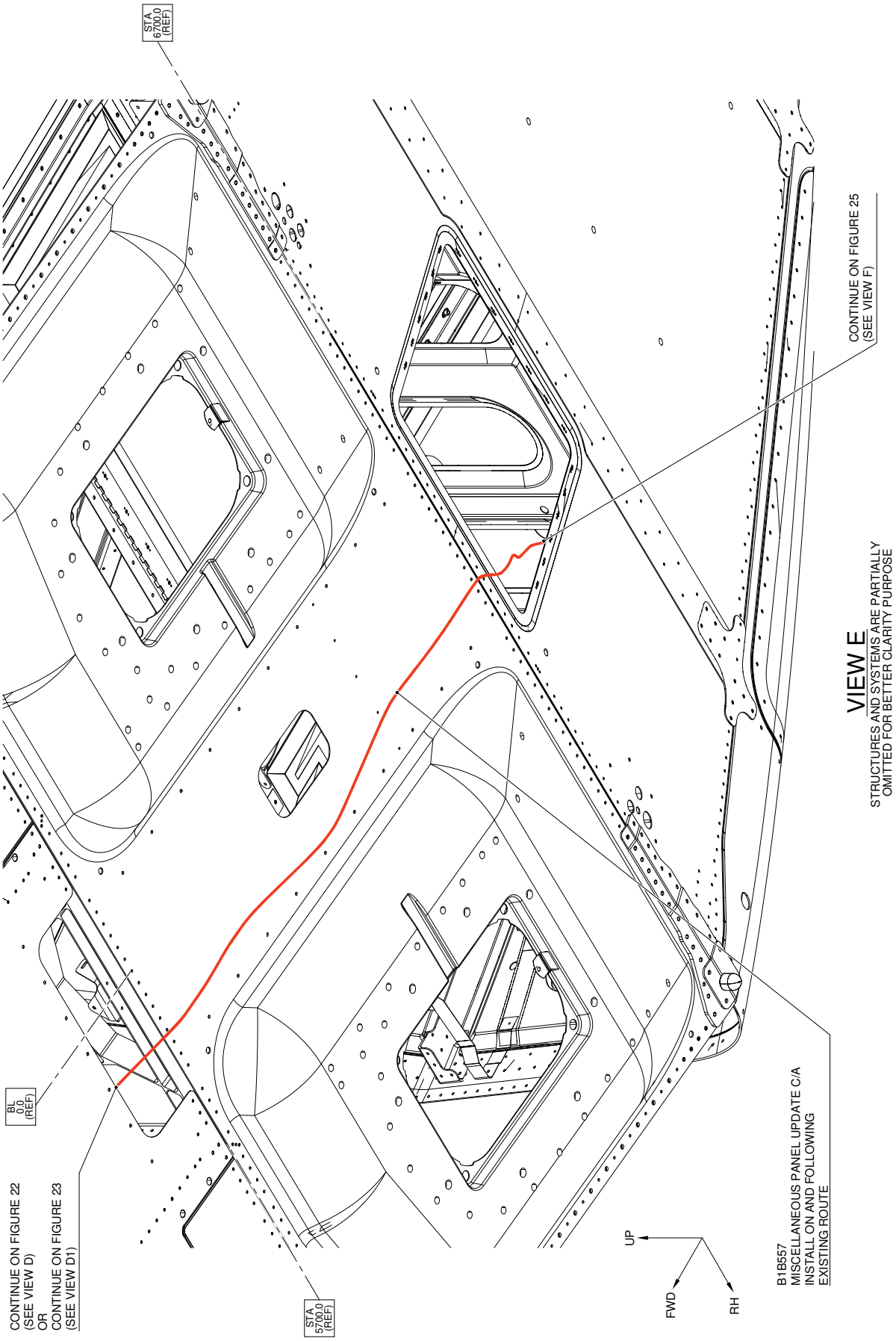

STA 6700.0 (REF)
CONTINUE ON FIGURE 25 (SEE VIEW F)
VIEW E
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
BL 0.0 (REF)
CONTINUE ON FIGURE 22 (SEE VIEW D) OR CONTINUE ON FIGURE 23 (SEE VIEW D1)
STA 5700.0 (REF)
UP
FWD
RH
B1B557
MISCELLANEOUS PANEL UPDATE C/A
INSTALL ON AND FOLLOWING
EXISTING ROUTE

Figure 24

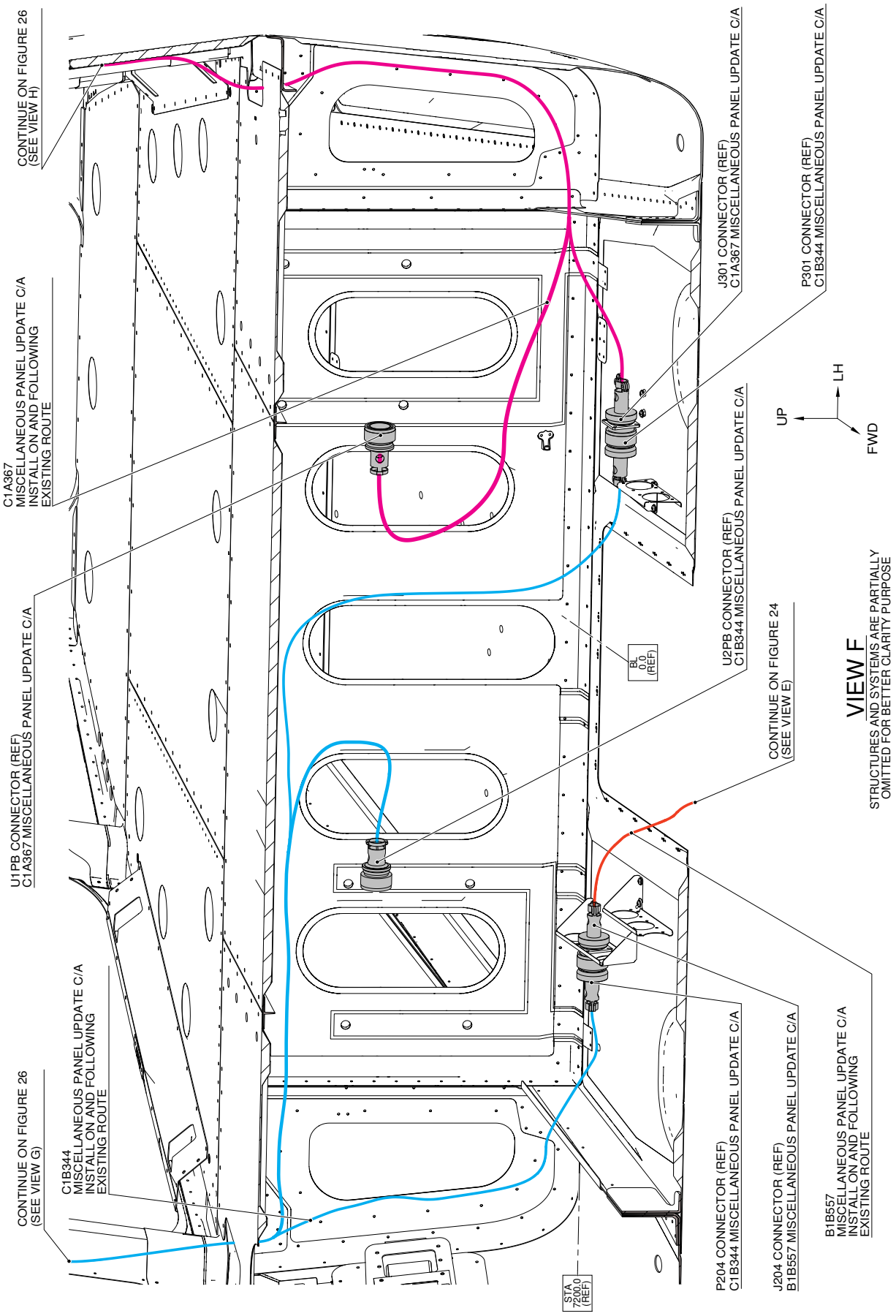
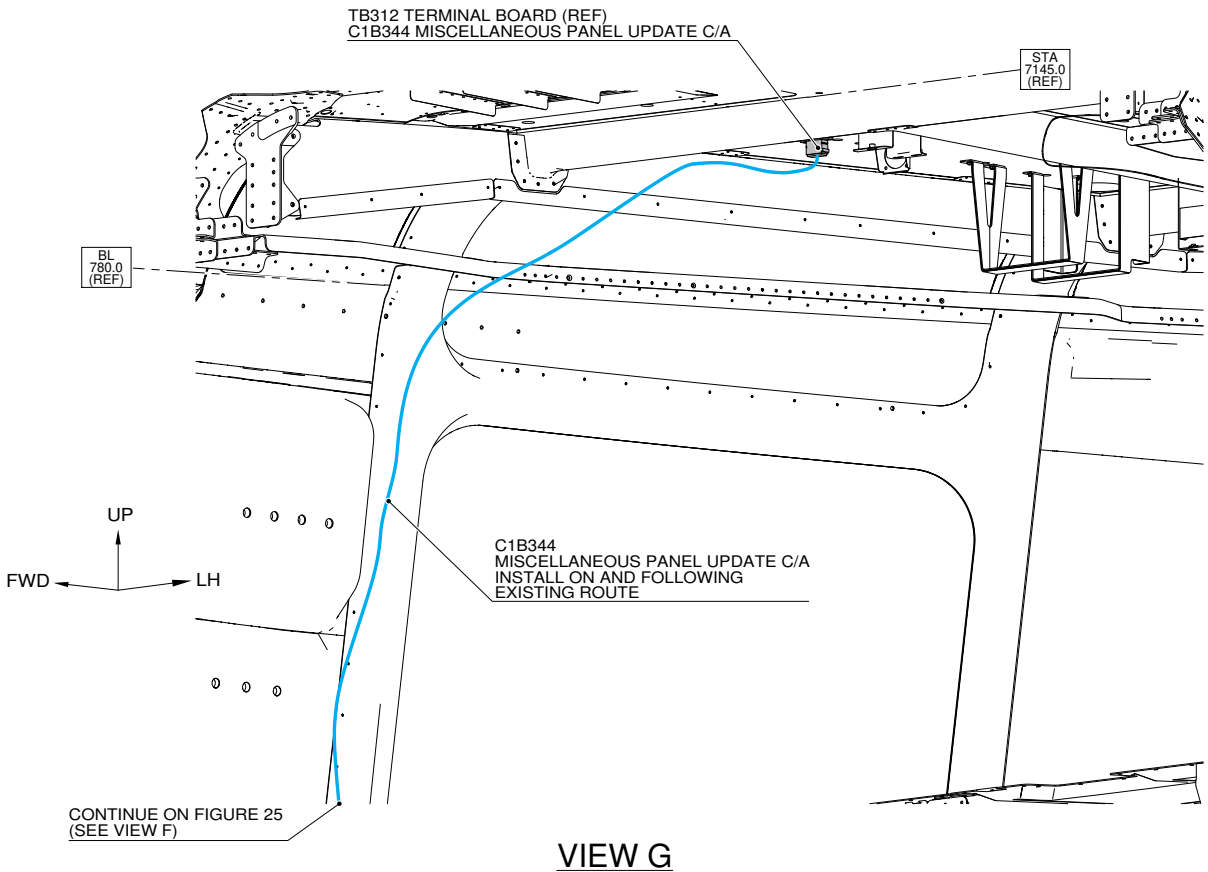
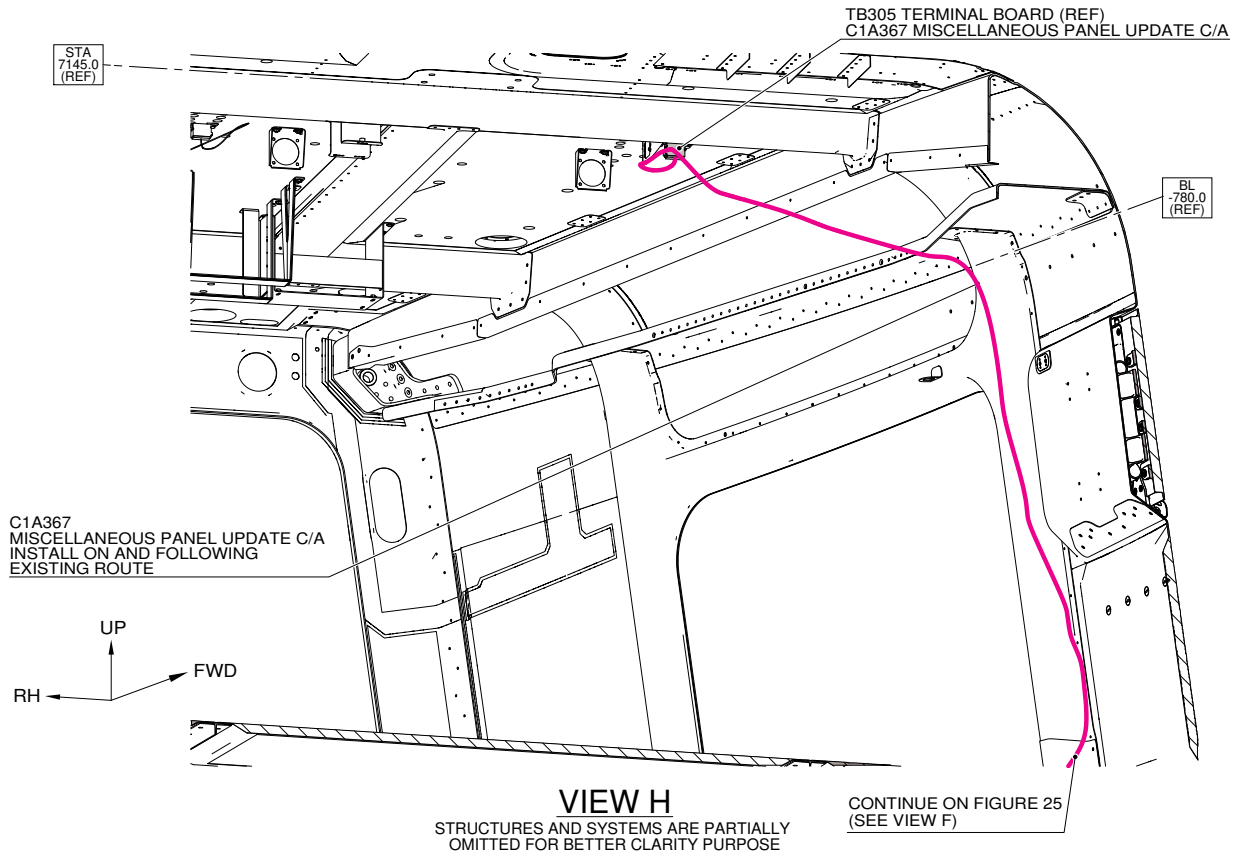

CONTINUE ON FIGURE 26
(SEE VIEW H)
C1A367
MISCELLANEOUS PANEL UPDATE C/A
INSTALL ON AND FOLLOWING
EXISTING ROUTE
U1PB CONNECTOR (REF)
C1A367 MISCELLANEOUS PANEL UPDATE C/A
CONTINUE ON FIGURE 26
(SEE VIEW G)
C1B344
MISCELLANEOUS PANEL UPDATE C/A
INSTALL ON AND FOLLOWING
EXISTING ROUTE
J301 CONNECTOR (REF)
C1A367 MISCELLANEOUS PANEL UPDATE C/A
P301 CONNECTOR (REF)
C1B344 MISCELLANEOUS PANEL UPDATE C/A
U2PB CONNECTOR (REF)
C1B344 MISCELLANEOUS PANEL UPDATE C/A
CONTINUE ON FIGURE 24
(SEE VIEW E)
P204 CONNECTOR (REF)
C1B344 MISCELLANEOUS PANEL UPDATE C/A
J204 CONNECTOR (REF)
B1B557 MISCELLANEOUS PANEL UPDATE C/A
B1B557
MISCELLANEOUS PANEL UPDATE C/A
INSTALL ON AND FOLLOWING
EXISTING ROUTE
BL
0.0
(REF)
STA
7200
(REF)
UP
LH
FWD
VIEW F
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 25



VIEW G

STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



VIEW H

STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 26

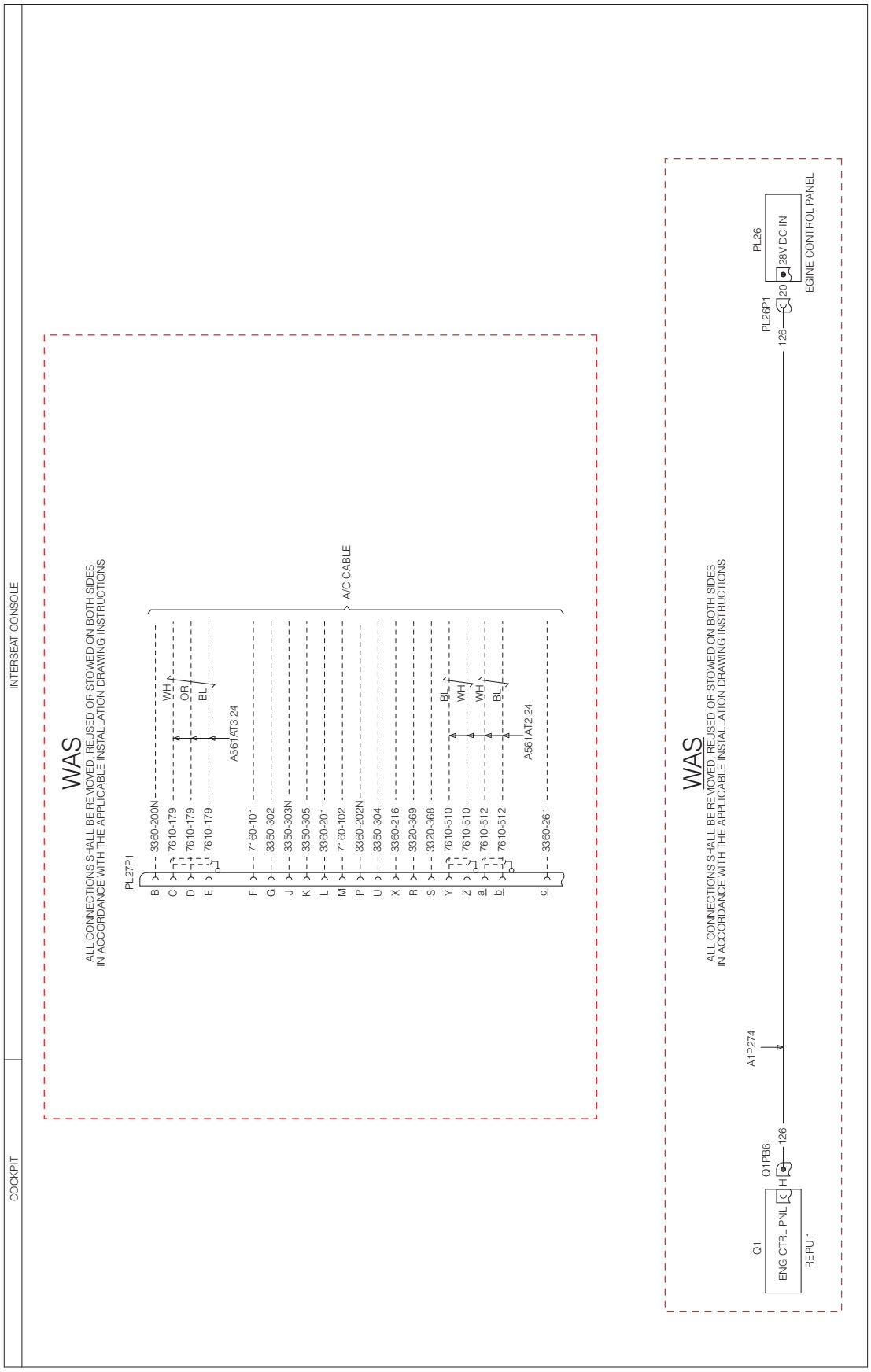

COCKPIT
INTERSEAT CONSOLE
WAS
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES
IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS
PL27P1
B 3360-200N
C 7610-179 WH
D 7610-179 OR
E 7610-179 BL
A561AT3 24
F 7160-101
G 3350-302
J 3350-303N
K 3350-305
L 3360-201
M 7160-102
P 3360-202N
U 3350-304
X 3360-216
R 3320-369
S 3320-368
Y 7610-510 BL
Z 7610-510 WH
a 7610-512 WH
b 7610-512 BL
A561AT2 24
c 3360-261
A/C CABLE
WAS
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES
IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS
PL26
28V DC IN
20
PL26P1
126
EGINE CONTROL PANEL
A1P274
Q1PB6
126
Q1
ENG CTRL PNL
REPU 1
FUNCTIONAL NOTES
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED
CABLE IDENT: EVERY WIRE NUMBER IS PRECEDED BY THE ATA 100 DESCRIPTION 3110 AND FOLLOWED BY WIRE SIZE AND EMC CODE.
8G3110W00101
WIRING DIAGRAM MISCELLANEOUS PANEL UPDATE
SHEET 1

Figure 27

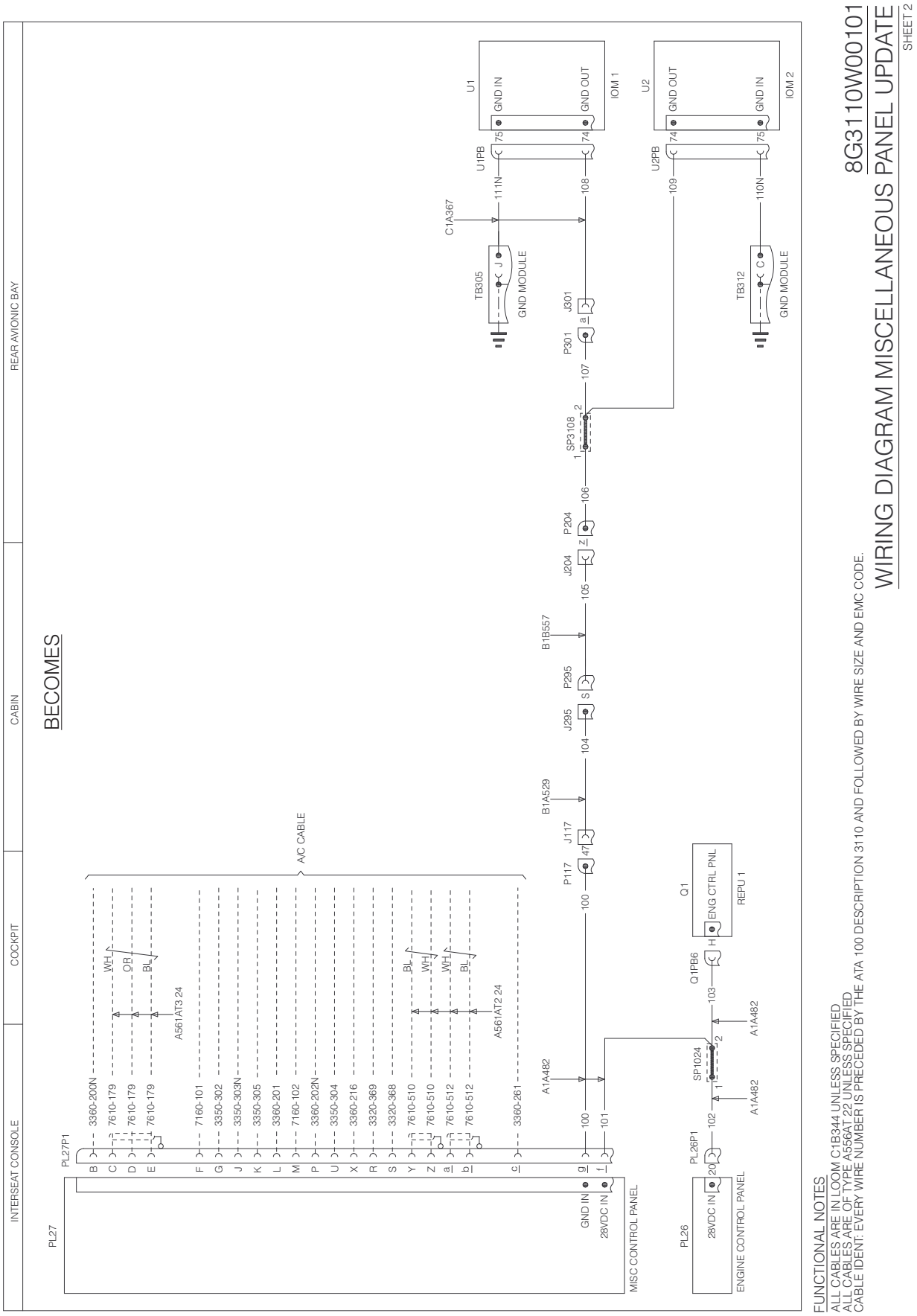

8G3110W00101
WIRING DIAGRAM MISCELLANEOUS PANEL UPDATE
SHEET 2
INTERSEAT CONSOLE
COCKPIT
CABIN
REAR AVIONIC BAY
BECOMES
A/C CABLE
PL27
PL27P1
MISC CONTROL PANEL
GND IN
28VDC IN
PL26
PL26P1
ENGINE CONTROL PANEL
28VDC IN
A561AT3 24
A561AT2 24
A1A482
SP1024
Q1PB6
Q1
ENG CTRL PNL
REPU 1
P117
J117
B1A529
J295
P295
B1B557
J204
P204
SP3108
P301
J301
TB305
GND MODULE
C1A367
U1PB
U1
GND IN
GND OUT
IOM 1
U2PB
U2
GND OUT
GND IN
IOM 2
TB312
GND MODULE
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM C1B344 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED
CABLE IDENT: EVERY WIRE NUMBER IS PRECEDED BY THE ATA 100 DESCRIPTION 3110 AND FOLLOWED BY WIRE SIZE AND EMC CODE.

Figure 28

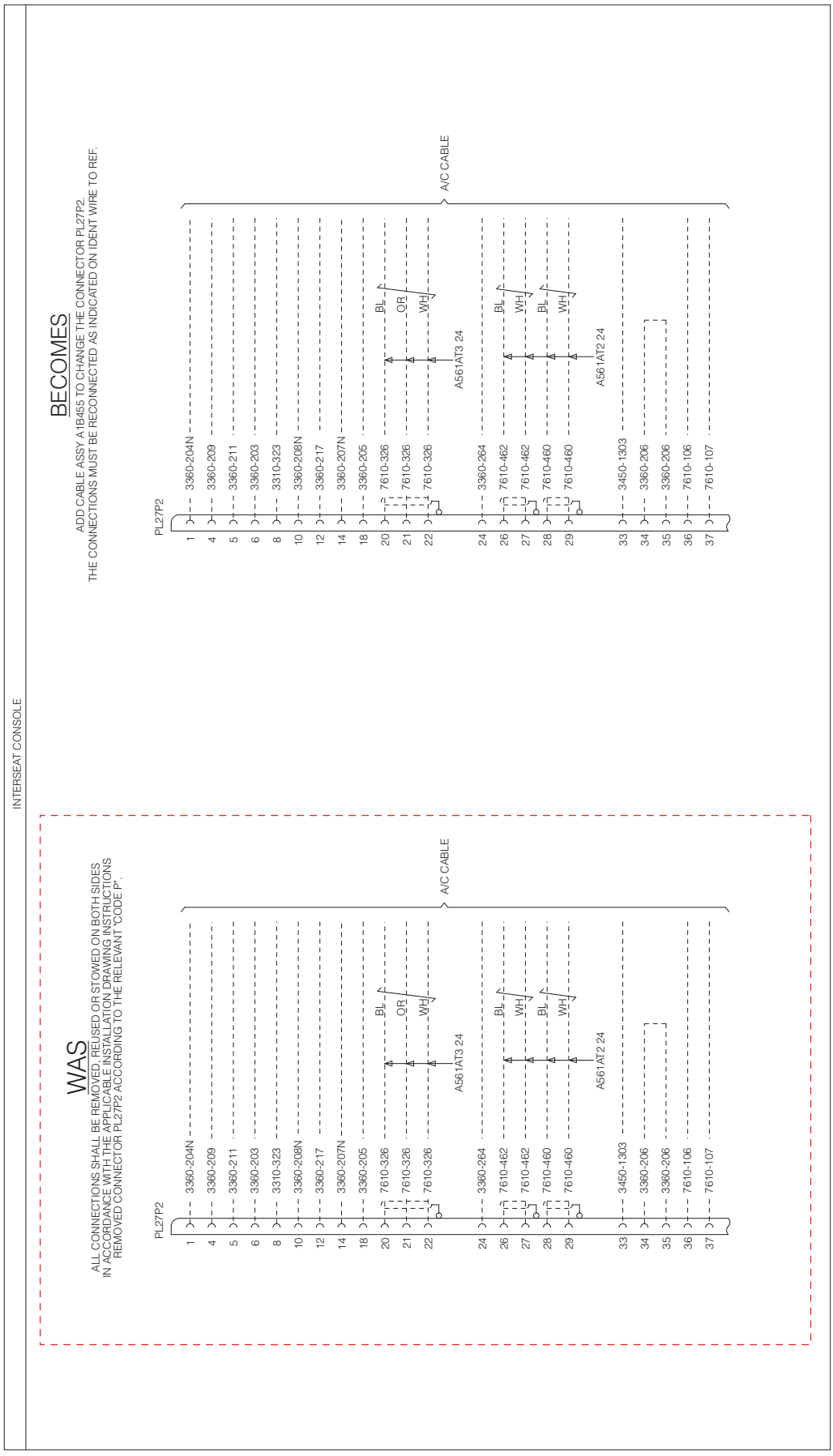

INTERSEAT CONSOLE
WAS
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS REMOVED CONNECTOR PL27P2 ACCORDING TO THE RELEVANT "CODE P".
PL27P2
1 3360-204N
4 3360-209
5 3360-211
6 3360-203
8 3310-323
10 3360-208N
12 3360-217
14 3360-207N
18 3360-205
20 7610-326 BL
21 7610-326 OR
22 7610-326 WH
A561AT3 24
A/C CABLE
24 3360-264
26 7610-462 BL
27 7610-462 WH
28 7610-460 BL
29 7610-460 WH
A561AT2 24
33 3450-1303
34 3360-206
35 3360-206
36 7610-106
37 7610-107
BECOMES
ADD CABLE ASSY A1B455 TO CHANGE THE CONNECTOR PL27P2.
THE CONNECTIONS MUST BE RECONNECTED AS INDICATED ON IDENT WIRE TO REF.
PL27P2
1 3360-204N
4 3360-209
5 3360-211
6 3360-203
8 3310-323
10 3360-208N
12 3360-217
14 3360-207N
18 3360-205
20 7610-326 BL
21 7610-326 OR
22 7610-326 WH
A561AT3 24
A/C CABLE
24 3360-264
26 7610-462 BL
27 7610-462 WH
28 7610-460 BL
29 7610-460 WH
A561AT2 24
33 3450-1303
34 3360-206
35 3360-206
36 7610-106
37 7610-107
FUNCTIONAL NOTES
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED
CABLE IDENT: EVERY WIRE NUMBER IS PRECEDED BY THE ATA 100 DESCRIPTION 3110 AND FOLLOWED BY WIRE SIZE AND EMC CODE.
8G3110W00101
WIRING DIAGRAM MISCELLANEOUS PANEL UPDATE
SHEET 3

Figure 29

8G3110P01111 RETROMOD MISCELLANEOUS PANEL UPDATE									
Cable Assy	Wire			From Ref Des	Pin From	Electrical Contact	To Ref Des	Pin To	Electrical Contact
	P/N	ID	Col.						
8G9A21A48201 (A1A482)	A556A-T22	3110-102-22G		PL26P1	20	M39029/56-348	SP1024	1	
	A556A-T22	3110-100-22G		PL27P1	g	M39029/56-351	P117	47	M39029/58-360
	A556A-T22	3110-101-22G		PL27P1	f	M39029/56-351	SP1024	2	
	A556A-T22	3110-103-22G		SP1024	2		Q1PB6	H	M39029/58-363
8G9B21A52901 (B1A529)	A556A-T22	3110-104-22G		J117	47	M39029/56-348	J295	S	M39029/58-363
8G9B21B55701 (B1B557)	A556A-T22	3110-105-22G		P295	S	M39029/56-351	J204	z	M39029/56-352
8G9C21A36701 (C1A367)	A556A-T22	3110-108-22G		J301	a	M39029/56-351	U1PB	74	M39029/56-348
	A556A-T22	3110-111N-22G		TB305	J	A523A-A03	U1PB	75	M39029/56-348
8G9A21A48201 (A1A482)	A556A-T22	3110-106-22G		P204	z	M39029/58-364	SP3108	1	
	A556A-T22	3110-107-22G		SP3108	2		P301	a	M39029/58-363
	A556A-T22	3110-109-22G		SP3108	2		U2PB	74	M39029/56-348
	A556A-T22	3110-110N-22G		TB312	C	A523A-A03	U2PB	75	M39029/56-348

8G3110P01311 RETROMOD MISCELLANEOUS PANEL UPDATE									
Cable Assy	Wire			From Ref Des	Pin From	Electrical Contact	To Ref Des	Pin To	Electrical Contact
	P/N	ID	Col.						
8G9A21A48201 (A1A482)	A556A-T22	3110-102-22G		PL26P1	20	M39029/56-348	SP1024	1	
	A556A-T22	3110-100-22G		PL27P1	g	M39029/56-351	P117	47	M39029/58-360
	A556A-T22	3110-101-22G		PL27P1	f	M39029/56-351	SP1024	2	
	A556A-T22	3110-103-22G		SP1024	2		Q1PB6	H	M39029/58-363
8G9B21A52902 (B1A529)	A556A-T22	3110-104-22G		J117	47	M39029/56-348	J295	S	M39029/58-363
8G9B21B55702 (B1B557)	A556A-T22	3110-105-22G		P295	S	M39029/56-351	J204	z	M39029/56-352
8G9C21A36701 (C1A367)	A556A-T22	3110-108-22G		J301	a	M39029/56-351	U1PB	74	M39029/56-348
	A556A-T22	3110-111N-22G		TB305	J	A523A-A03	U1PB	75	M39029/56-348
8G9A21A48201 (A1A482)	A556A-T22	3110-106-22G		P204	z	M39029/58-364	SP3108	1	
	A556A-T22	3110-107-22G		SP3108	2		P301	a	M39029/58-363
	A556A-T22	3110-109-22G		SP3108	2		U2PB	74	M39029/56-348
	A556A-T22	3110-110N-22G		TB312	C	A523A-A03	U2PB	75	M39029/56-348

Figure 30

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AgustaWestland Products

Please send to the following address: **LEONARDO S.p.A.** **CUSTOMER SUPPORT & SERVICES - ITALY** **PRODUCT SUPPORT ENGINEERING & LICENSES DEPT.** Via Giovanni Agusta, 520 21017 Cascina Costa di Samarate (VA) - ITALY Tel.: +39 0331 225036 Fax: +39 0331 225988	**SERVICE BULLETIN COMPLIANCE FORM**	Date:
	Number:	
	Revision:	

Customer Name and Address:	Telephone:
	Fax:
	B.T. Compliance Date:

Helicopter Model	S/N	Total Number	Total Hours	T.S.O.

Remarks:

Information:

We request your cooperation in filling this form, in order to keep out statistical data relevant to aircraft configuration up-to-date. The form should be filled in all its parts and sent to the above address or you can communicate the application also via Technical Bulletin Application Communication Section placed in Leonardo AW Customer Portal - MyCommunications Area. We thank you beforehand for the information given.