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AgustaWestland Products

SERVICE BULLETIN

N° 139-623

DATE: May 27, 2021

REV. : A - February 9, 2022

TITLE

ATA 00 – MISCELLANEOUS RETROFIT

REVISION LOG

Revision A of this Service Bulletin cancels and supersedes the first issue dated May 27, 2021.

Revision A is issued to align the whole modification to the latest design.

1. PLANNING INFORMATION

A. EFFECTIVITY

Part I:

AW139 helicopters from S/N 41801 thru S/N 41804.

Part II:

AW139 helicopters from S/N 41801 thru S/N 41805.

Part III:

AW139 helicopters from S/N 41801 thru S/N 41804.

Part IV:

AW139 helicopters from S/N 41801 thru S/N 41806.

Part V:

AW139 helicopters from S/N 41801 thru S/N 41806.

Part VI:

AW139 helicopters from S/N 41801 thru S/N 41806.

Part VII:

AW139 helicopters from S/N 41801 thru S/N 41806.

Part VIII:

AW139 helicopters from S/N 41801 thru S/N 41806.

Part IX:

AW139 helicopters from S/N 41801 thru S/N 41806.

Part X:

AW139 helicopters S/N 41805 and S/N 41806.

Part XI:

AW139 helicopters from S/N 41801 thru S/N 41805.

B. COMPLIANCE

At Customer's option.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin is issued in order to provide the necessary instructions on how to perform:

- the upgrade of extendable fast rope and rappelling structural provision from P/N 3G5311A32411 to P/N 3G5311A32412 (Part I);

- the structural variant to move a fairing, P/N 3G5320P02311 (Part II);
- the electrical variant for the Aural Warning System, P/N 3G2350P05711 (Part III);
- the electrical provision P/N 3G9340A01611 and structural provision P/N 3G5311A34611 (Part IV);
- the modification of the electrical installation P/N 3G9350A08011, of the structural provision P/N 3G5311A34811 and of the structural provision P/N 3G5311A34611 (Part V).
- the modification of the TA-24 GPS C/A C1A362 (Part VI);
- the modification of the ICS audio customization structural provision P/N 3G5311A35211 (Part VII);
- the modification of the cable cutter installation variant P/N 3G2560P01311 (Part VIII);
- the modification of the provision C/A installation P/N 3G4600A14311 (Part IX);
- the modification of the cockpit door complete provision P/N 3G5311A32512 (Part X);
- the removal and replacement of two cable assemblies (Part XI).

E. DESCRIPTION

The Service Bulletin is divided in 11 Parts and each of these parts provides the instructions for different modifications.

Part I gives instruction to perform the upgrade of extendable fast rope and rappelling (kit P/N 4G2590F00611) structural provision from P/N 3G5311A32411 to P/N 3G5311A32412. This consists in interposing the adhesive between the structure and the two peeling shims P/N 3G2590A05551 and P/N 3G2590A04951, also to be installed on the helicopter.

Part II gives the instruction to perform the structural variant (P/N 3G5320P02311) for the replacement of the central fairing assy P/N 3G5320A02735 with the central fairing assy P/N 3G5320A18831.

Part III gives the instruction for the electrical modification for the installation of the AWG cabin variant (P/N 3G2350P05711). This consists in the replacement of n°4 cable assy.

Part IV gives the instructions for the electrical modification of the IFF BAE AN/DPX7 electrical provision (P/N 3G9340A01611) and structural provision (P/N 3G5311A34611). Mainly it consists in an upgrade to the latest drawing revision of the electrical provision and structural provision for each helicopter affected.

Part V gives the instructions for the electrical modification of the ASE electrical installation (P/N 3G9350A08011), the ASE structural provision (P/N 3G5311A34811) and the structural provision (P/N 3G5311A34611). It mainly consists in an upgrade to

the latest drawing revision of the electrical provision and structural provision for each helicopter affected.

Part VI gives instructions for the electrical modification of the TA-24 GPS military C/A C1A362.

Part VII gives instructions to upgrade the ICS audio customization structural provision P/N 3G5311A35211 to the latest drawing revision according to the S/N.

Part VIII gives instructions to upgrade the cable cutter installation variant P/N 3G2560P01311 to the latest drawing revision according to the S/N.

Part IX gives instructions to upgrade the misc-crypto panel provision C/A installation P/N 3G4600A14311 to the latest drawing revision according to S/N.

Part X gives instructions to upgrade the cockpit door armour complete provision from P/N 3G5311A32511 to P/N 3G5311A32512.

Part XI gives instructions to remove and replace the connectors E184P1 and E185P1 of the C/A C3B298 and C/A D3B246.

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 MMH are deemed necessary:

Part I:approximately eight (8) MMH.

Part II:approximately thirty (30) MMH.

Part III: approximately forty (40) MMH.

Part IV: approximately fifty (50) MMH.

Part V: approximately two-hundred (200) MMH.

Part VI: approximately six (6) MMH.

Part VII: approximately sixteen (16) MMH.

Part VIII: approximately ten (10) MMH.

Part IX: approximately forty (40) MMH.

Part X: approximately twelve (12) MMH.

Part XI: approximately forty (40) MMH.

MMH are based on hands-on time and can change with personnel and facilities available.

H. WEIGHT AND BALANCE

PART I

N.A.

PART II

N.A.

PART III

N.A.

PART IV

WEIGHT (kg)	0.5	
	ARM (mm)	**MOMENT (kgmm)**
LONGITUDINAL BALANCE	4378	2189
LATERAL BALANCE	-83	-41.5

PART V

N.A.

PART VI

N.A.

PART VII

N.A.

PART VIII

WEIGHT (kg)	2.6	
	ARM (mm)	**MOMENT (kgmm)**
LONGITUDINAL BALANCE	4185	10881
LATERAL BALANCE	16	15.6

PART IX

N.A.

PART X

N.A.

PART XI

N.A.

I. REFERENCES

1) PUBLICATIONS

Following Data Modules refer to AMP:

DATA MODULE		DESCRIPTION	PART
DM01	39-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance	All
DM02	39-A-06-41-00-00A-010A-A	Access door panel remove procedure	All
DM03	39-A-20-10-08-00A-622A-A	Electrical contacts - Crimp	III, IV, V, IX
DM04	39-A-20-10-18-00A-691A-A	Electrical wires and cables – Marking	III, IV, V, IX
DM05	39-A-11-00-01-00A-720A-A	Decal - Install procedure	IV, V, VIII
DM06	39-A-31-51-00-00A-320A-A	Aural Warning Function – Operation Test	III

2) ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
AR	As Required
ASE	Aircraft Survivability Equipment
C/A	Cable Assy
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
GPS	Global Positioning System
ICS	Intercommunication System
IFF	Identification Friend or Foe
IPD	Illustrated Parts Data
ITEP	Illustrated Tool and Equipment Publication
LH	Leonardo Helicopters
MMH	Maintenance Man Hours

P/N	Part Number
S/N	Serial Number
TACAN	Tactical Air Navigation

3) ANNEX

Annex A	Misc-Sw Crypto Panel Acceptance Test Procedure
Annex B	Electrical Provision for L3 TACAN+ System Acceptance Test Procedure
Annex C	AW139 - ICS audio customization acceptance test procedure
Annex D	Electrical provision for MH-139 BAE IFF system acceptance test procedure
Annex E	MH139 - Electrical provision for ATK ASE system acceptance test procedure

J. PUBLICATIONS AFFECTED

AW139 IPD

K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

1) PARTS

PART I

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	**3G5311A32412**		**EXT FAST ROPE AND RAPELLING STRUCT PROVISION**	**REF**	**.**		**-**
2	3G2590A04951		Peeling Shim	1	..		-
3	3G2590A05551		Peeling Shim	1	..		-
4	AN525-10R14		Screw	6	..		-
5	AN525-10R12		Screw	2	..		-

PART II

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
6	**3G5320P02311**		**PILOT AND COPILOT FAIRING VARIANT**	**REF**	**.**		**-**
7	3G5320A18831	3G5320A18831M01	Central Fairing Assy	1	..		139-623L1
8	3G5320A19051	3G5320A19051M01	Cover	1	..		139-623L1
9	A407A3C2P		Anchor Nut	1	..		139-623L1
10	A966A080EB		Extrusion Nonmetallic	2 m	..		139-623L1
11	NAS5310V3-2		Screw	2	..		139-623L1

PART III

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
12	**3G2350P05711**		**AWG CABIN VARIANT C/A INSTALLATION**	**REF**	**.**		**-**
13	**3G9A01A71001**		**AWG CABIN VARIANT C/A (A1A710)**	**REF**	**..**		**-**
14	A556A-T22		Wire	4.5 m	…		139-623L2
15	M39029/56-351		Contact	2	…		139-623L2
16	M39029/57-354		Contact	2	…		139-623L2
17	**3G9A01B65101**		**AWG CABIN VARIANT C/A (A1B651)**	**REF**	**..**		**-**
18	A556A-T22		Wire	9 m	….		139-623L2
19	M39029/57-354		Contact	6	….		139-623L2
20	M39029/58-363		Contact	2	….		139-623L2
21	**3G9A02A63801**		**AWG CABIN VARIANT C/A (A2A638)**	**REF**	**..**		**-**
22	A561A-T2-24		Wire	4.5 m	...		139-623L2
23	A583A2418C		Cap, Wire end and Contact	2	…		139-623L2
24	M23053/8-004-C		Insulation sleeve	4 m	…		139-623L2
25	M39029/56-348		Contact	2	…		139-623L2
26	M39029/57-354		Contact	2	…		139-623L2
27	M39029/57-357		Contact	2	…		139-623L2
28	**3G9A02B61701**		**AWG CABIN VARIANT C/A (A2B617)**	**REF**	**..**		**-**
29	A561A-T2-24		Wire	6.5 m	…		139-623L2
30	A583A2418C		Cap, Wire end and Contact	2	…		139-623L2
31	M23053/8-004-C		Insulation sleeve	6 m	…		139-623L2
32	M39029/56-348		Contact	2	...		139-623L2

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
33	M39029/57-354		Contact	2	…		139-623L2
34	M39029/57-357		Contact	2	…		139-623L2

PART IV

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
35	**3G9340A01611**		**IFF BAE AN/DPX7 ELECTRICAL PROVISION**	**REF**	**.**	**(2)**	**-**
36	3G5315A30352		Plate	1	..		139-623L3
37	3G5316A89951		Plate splitter	1	..		139-623L3
38	**3G9A03B26101**		**IFF BAE AN/DPX7 C/A (A3B261)**	**REF**	**..**	**(2)**	**-**
39	S33141		Wire	1.2 m	…		139-623L3
40	190308		Connector	1	…		139-623L3
41	190309		Connector	1	…		139-623L3
42	M23053/8-005-C		Insulation sleeve	2 m	…		139-623L3
43	**3G9A03B26201**		**IFF BAE AN/DPX7 C/A (A3B262)**	**REF**	**..**	**(2)**	**-**
44	S86208		Wire	1.5 m	…		139-623L3
45	190809		Connector	1	…		139-623L3
46	27-1090-2202B		Contact	1	…		139-623L3
47	M23053/8-005-C		Insulation sleeve	2	…		139-623L3
48	P22R1B		Connector	2 m	…		139-623L3
49	**3G9A03B26301**		**IFF BAE AN/DPX7 C/A (A3B263)**	**REF**	**..**		**-**
50	S33141		Wire	1.3 m	…	(2)	139-623L3
51	190309		Connector	2	…	(2)	139-623L3
52	M23053/8-005-C		Insulation sleeve	2 m	…	(2)	139-623L3
53	7-397-3-3		Splitter	1	..	(2)	139-623L3
54	A647A01		Relay	1	..	(1)	-
55	AW001CL001-N6		Support	1	..	(2)	139-623L3
56	ED300CP91		Decal	1	..	(2)	139-623L3
57	MS21043-3		Nut	2	..	(2)	139-623L3
58	MS24693-S4		Screw	4	..	(2)	139-623L3
59	NAS1149D0332J		Washer	2	..	(2)	139-623L3
60	NAS1149DN832J		Washer	2	..	(2)	139-623L3
61	NAS1802-08-6		Screw	2	..	(2)	139-623L3
62	NAS43DD3-12N		Spacer	4	..	(2)	139-623L3
63	NAS5312V3A10		Screw	2	..	(2)	139-623L3
64	A556A-T22		Wire	5 m	.	(2)	139-623L3
65	M81824/1-1		Splice	1	.	(2)	139-623L3
66	**3G9A01B60701**		**IFF BAE AN/DPX7 C/A (A1B607)**	**REF**	**..**		-
67	A825A01A-A1		Bracket	1	..		-
68	**3G5311A34611**		**IFF BAE AN/DPX7 STRUCTURAL PROVISION**	**REF**	**.**		-
69	NAS1832C08-3M		Insert	2	..	(2)	139-623L3
70	NAS1836-3-07		Insert	4	..		-

PART V

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
71	**3G9350A08011**		**ASE ELECTRICAL C/A INSTALLATION**	**REF**	**.**		**-**
72	A537A01AA04-0240		Cable Lightning Conductor assy	2	..		139-623L4 139-623L5 139-623L6
73	A649A01		Relay	2	..		139-623L4

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
							139-623L5 139-623L6
74	ED300K455		Decal	1	..		139-623L4 139-623L5 139-623L6
75	ED300K456		Decal	1	..		139-623L4 139-623L5 139-623L6
76	M83536/2-028M		Relay	1	..		139-623L4 139-623L5 139-623L6
77	ED300K457		Decal	1	..		139-623L4 139-623L5 139-623L6
78	NAS1149D0416J		Washer	2	..		139-623L4 139-623L5 139-623L6
79	NAS1802-4-9		Screw	2	..		139-623L4 139-623L5 139-623L6
80	A601A4B50		Bonding cable assy	2	..	(2)	139-623L4 139-623L5
81	NAS1802-08-10		Screw	2	..	(2)	139-623L4 139-623L5
82	NAS1149DN832H		Washer	4	..	(2)	139-623L4 139-623L5
83	NAS1149D0332J		Washer	1	..	(2)	139-623L4 139-623L5
84	MS21042L08		Nut	2	..	(2)	139-623L4 139-623L5
85	AW001CB06H		Clamp	1	..	(1)	139-623L4 139-623L5
86	AW001CB08H		Clamp	1	..	(1)	139-623L5
87	NAS1190E3P7AK		Screw	1	..	(1)	139-623L5
88	AW001CB04H		Clamp	6	..	(1)	139-623L5
89	NAS1802-3-36		Screw	1	..	(1)	139-623L5
90	NAS43DD3-40N		Spacer	1	..	(1)	139-623L5
91	**3G9C01B33901**		**ASE C/A (C1B339)**	**REF**	**..**		**-**
92	A561A-T1-14		Wire	3 m	…		139-623L4 139-623L5 139-623L6
93	A561A-T1-16		Wire	4 m	…		139-623L4 139-623L5 139-623L6
94	A556A-T16		Wire	8 m	…		139-623L4 139-623L5 139-623L6
95	A556A-T22		Wire	2 m	…		139-623L4 139-623L5 139-623L6
96	A556A-T20		Wire	6 m	…		139-623L4 139-623L5 139-623L6
97	A556A-T14		Wire	1 m	…		139-623L4 139-623L5 139-623L6
98	A561A-T1-20		Wire	5 m	…		139-623L4 139-623L5 139-623L6
99	A561A-T1-22		Wire	6 m	…		139-623L4 139-623L5 139-623L6
100	M81824/1-3		Splice	2	…		139-623L4 139-623L5

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
							139-623L6
101	MS27473T10B35SA		Connector	1	…		139-623L4 139-623L5 139-623L6
102	A532A100-1002T		Backshell	2	…		139-623L4 139-623L5 139-623L6
103	MS27473T10B35S		Connector	1	…		139-623L4 139-623L5 139-623L6
104	M39029/58-364		Contact	1	…		139-623L4 139-623L5 139-623L6
105	A523A-B04		Contact	1	…		139-623L4 139-623L5 139-623L6
106	M81824/1-2		Splice	2	…		139-623L4 139-623L5 139-623L6
107	M81824/1-1		Splice	2	…		139-623L4 139-623L5 139-623L6
108	M23053/8-004-C		Insulation sleeving	6 m	…		139-623L4 139-623L5 139-623L6
109	M39029/57-354		Contact	3	…		139-623L4 139-623L5 139-623L6
110	**3G9A01A65101**		**ASE C/A (A1A651)**	**REF**	**..**		**-**
111	A556A-T22		Wire	20 m	…		139-623L4 139-623L5 139-623L6
112	M81824/1-1		Splice	3	…		139-623L4 139-623L5 139-623L6
113	M39029/56-348		Contact	4	…		139-623L4 139-623L5 139-623L6
114	A523A-A01		Contact	5	…		139-623L4 139-623L5 139-623L6
115	M39029/57-357		Contact	1	…		139-623L4 139-623L5 139-623L6
116	**3G9A01B60401**		**ASE C/A (A1B604)**	**REF**	**..**		**-**
117	A556A-T22		Wire	48 m	…		139-623L4 139-623L5 139-623L6
118	A561A-T1-22		Wire	33 m	…		139-623L4 139-623L5 139-623L6
119	AW001YD03		Diode	5	…		139-623L4 139-623L5 139-623L6
120	A523A-B02		Contact	17	…		139-623L4 139-623L5 139-623L6
121	A523A-A02		Contact	10	…		139-623L4 139-623L5 139-623L6
122	M39029/57-357		Contact	1	…		139-623L4 139-623L5 139-623L6
123	M81824/1-1		Splice	5	…		139-623L4 139-623L5 139-623L6

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
124	M39029/101-553		Contact	4	…		139-623L4 139-623L5 139-623L6
125	M39029/56-348		Contact	4	…		139-623L4 139-623L5 139-623L6
126	M12883/52-001		Connector	2	…		139-623L4 139-623L5 139-623L6
127	A651A02		Connector	2	…		139-623L4 139-623L5 139-623L6
128	MS27473T14B15S		Connector	1	…		139-623L4 139-623L5 139-623L6
129	A532A100-1402T		Backshell	1	…		139-623L4 139-623L5 139-623L6
130	M39029/58-360		Contact	3	…		139-623L4 139-623L5 139-623L6
131	A523A-A01		Contact	1	…		139-623L4 139-623L5 139-623L6
132	M23053/8-004-C		Insulation sleeving	2 m	…		139-623L4 139-623L5 139-623L6
133	**3G5311A34811**		**ASE STRUCTURAL PROVISION**	**REF**	**.**		**-**
134	3G5317A30951		Sequencer support assy	1	..	(5)	139-623L5
135	NAS1802-3-6		Screw	4	..	(5)	139-623L5
136	MS21069L06		Nut plate	2	..	(2)	139-623L4 139-623L5
137	NAS1399C3-3		Rivet	0.1 kg	..	(2)	139-623L4 139-623L5
138	3G5318A13131		Programmer support assy	1	..		139-623L4 139-623L5 139-623L6
139	**3G5311A37611**		**CHAFF AND FLARE STRUCTURAL PROVISION**	**REF**	**.**		**-**
140	A297A04TW02		Rivet	8	..	(2)	139-623L4 139-623L5
141	A604A08CCR01RC		Dummy connector	2	..	(2)	139-623L4 139-623L5
142	M38999/10-16B		Electrical dummy connector	2	..	(1)	139-623L5
143	MS20426T3-5		Rivet	4	..	(2)	139-623L4 139-623L5
144	MS20470AD4-4-5		Rivet	4	..	(1)	139-623L5
145	MS21076L4N		Nut plate	2	..	(2)	139-623L4 139-623L5
146	MS27511B16R		Dust cap cover	2	..	(1)	139-623L5
147	NAS5318E3-4		Bolt	84	..	(1)	139-623L5
148	NAS1836-3-13		Insert	4	.	(2)	139-623L4 139-623L5

PART VI

N.A.

PART VII

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
149	**3G5311A35211**		**ICS AUDIO CUSTOMIZATION STRUCT PROVISION**	**REF**	.		-
150	3G2590A06351		Shim rubber	1	..		-
151	MS24694-C2		Screw	1	..		-
152	NAS1169C8		Washer	1	..		-
153	NAS1832-06-3		Insert	2	..	(2)	-

PART VIII

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
154	**3G2560P01311**		**CABLE CUTTER INSTALLATION VARIANT**	**REF**	.		-
155	3G5318A32651	3G5318A32651M01	Omega bracket	1	..		-
156	A244A549E11		Decal	1	..	(1)	139-623L7
157	MS20426AD3-7		Rivet	0.1 kg	..	(4)	139-623L7
158	MS21069L3		Nut plate	4	..	(4)	139-623L7
159	MS27039-1-11		Screw	1	..	(1)	139-623L7
160	MS27039-1-10		Screw	3	..	(4)	139-623L7
161	NAS1149C0332R		Washer	3	..	(4)	139-623L7
162	NAS1832C3-3M		Insert	1	..	(1)	139-623L7

PART IX

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
163	**3G4600A14311**		**MISC-CRYPTO PANEL PROVISION C/A INSTALLATION**	**REF**	.		-
164	**3G9C01A20022**		**HEATING C/A (C1A200)**	**REF**	..		-
165	A529A445-1702		Adapter	1	...	(2)	139-623L8
166	**3G9A01A64901**		**MISC-CRYPTO PANEL PROVISION C/A (A1A649)**	**REF**	..		-
167	A556A-T22		Wire	10 m	...		139-623L8 139-623L9
168	A523A-A01		Electrical contact	1	...		139-623L8 139-623L9
169	A523A-A02		Electrical contact	5	...		139-623L8 139-623L9
170	AW001YD03		Diode assembly	2	...		139-623L8 139-623L9
171	**3G9A02B57201**		**MISC-CRYPTO PANEL PROVISION C/A (A2B572)**	**REF**	..		-
172	GC329		Connector	1	...		139-623L8 139-623L9
173	M23053/8-004-C		Insulation sleeving	2 m	...		139-623L8 139-623L9
174	**3G9A01A69401**		**SYSTEM CUSTOMIZATION MH139 C/A (A1A694)**	**REF**	.		
175	A556A-T22		Wire	2 m	..		139-623L8 139-623L9
176	A523A-A02		Electrical contact	2	..		139-623L8 139-623L9
177	AW001YD03		Diode assembly	1	..		139-623L8 139-623L9
178	A523A-A01		Electrical contact	2	.		139-623L8 139-623L9
179	A556A-T22		Wire	1 m	.		139-623L8 139-623L9
180	A649A01		Relay	2	.		139-623L8

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
							139-623L9
181	A649A02		Socket	2	.		139-623L8 139-623L9

PART X

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
182	**3G5311A32512**		**COCKPIT DOOR ARMOUR COMPLETE PROVISION**	**REF**	**.**		**-**
183	A428A3C05		Screw	4	..		-
184	NAS1836-3-13		Insert	2	..		-

PART XI

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
185	**3G9D03B24601**		**L-3 AS TACAN C/A (D3B246)**	**REF**	**.**		-
186	190411		Coaxial connector	1	..		-

2) CONSUMABLES

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

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
187	199-05-002 TY I, CL 2	Adhesive C231	AR	(6)	I, VII
188	AWMS05-001 TY I, CL A, GR 2	Adhesive	AR	(6)	I
189	199-05-152 TY I, CL 1	Adhesive	AR	(6)	II
190	199-05-0 TY II, CL 1	Adhesive	AR	(6)	II
191	199-05-002 TY II, CL 2	Adhesive C397	AR	(6)	IV, V, VII, VIII, X
192	AWTR033	Fiberglass 20823 1200 (C557)	AR	(6)	V
193	199-05-002 TY II, CL 3	Adhesive EA956NA (C193)	AR	(6)	V
194	EN6049-006-08-5	Nomex	AR	(6)	V
195	EN6049-006-32-5	Nomex	AR	(6)	IV, IX
196	AW001CK03LC	Tie strap	AR	(6)	IV, IX
197	A236A01AB	Edging	AR	(6)	IX
198	900004953	Tie strap	AR	(6)	V
199	AWMS05-001 TY I, CL B, GR 2	Sealant MC-780 B-2 (C465)	AR	(6)	V
200	199-05-107 TY II, CL 5	Adhesive C111	AR	(6)	VII, VIII
201	A305A38B2Y	Velcro pile	AR	(6)	VIII
202	Commercial	Adhesion promoter 86A (C198)	AR	(6)	VIII
203	Commercial	Velcro hook SJ3572	AR	(6)	VIII
204	Commercial	Velcro pile SJ3571	AR	(6)	VIII

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
3G2590A04951	1		I
3G2590A05551	1		
AN525-10R14	2		
AN525-10R12	6		
139-623L1	1		II
139-623L2	1		III
139-623L3	1	(2)	IV
A647A01	1	(1)	
A825A01A-A1	1		
NAS1836-3-07	2		
139-623L4	1	(3)	V
139-623L5	1	(5)	
139-623L6	1	(7)	
3G2590A06351	1		VII
MS24694-C2	1		
NAS1169C8	1		
NAS1832-06-3	2	(2)	
3G5318A32651	1		VIII
139-623L7	1	(4)	
139-623L8	1	(2)	IX
139-623L9	1	(7)	
A428A3C05	4		X
NAS1836-3-13	2		
190411	1		XI

NOTE

(1) Item to be ordered only for helicopter S/N 41801.

(2) Item to be ordered only for helicopters S/N 41801 thru S/N 41804.

(3) Item to be ordered only for helicopters S/N 41803 and S/N 41804

(4) Item to be ordered only for helicopters S/N 41801 thru S/N 41805.

(5) Item to be ordered only for helicopters S/N 41801 and S/N 41802.

(6) Item to be procured as local supply.

(7) Item to be ordered only for helicopters S/N 41805 and S/N 41806.

B. SPECIAL TOOLS

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

C. INDUSTRY SUPPORT INFORMATION

Customization.

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.

b) Shape the cables in order to prevent interference with the structure and the other existing installations, using where necessary suitable lacing cords.

c) Exercise extreme care during drilling operations to prevent instruments, cables and hoses damage.

d) After drilling, remove all swarf and sharp edges. Apply on bare metal a light film of primer unless the hole is used for ground connection.

e) Let the adhesive cure at room temperature for at least 24 hours, unless otherwise specified.

f) All lengths are in mm.

PART I

1. In accordance with AMP DM 39-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.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 1 and 2, gain access to the area affected and perform the upgrade of extendable fast rope and rappelling structural provision from P/N 3G5311A32411 up to P/N 3G5311A32412 as described in the following procedure:

NOTE

Interpose adhesive between the structure and the peeling shim.

2.1 With reference to Figure 1 Section A-A and Figure 2 Section B-B, install the peeling shim P/N 3G2590A04951 in position on the panel by means of adhesive 199-05-002 Type I, Class 2.

2.2 With reference to Figure 1 Section A-A, fill all around the peeling shim P/N 3G2590A04951 by means of adhesive AWMS05-001 Type I, Grade 2, Class A.

2.3 With reference to Figure 1 Section A-A and Figure 2 Section C-C, repeat steps 2.1 and 2.2 for the peeling shim P/N 3G2590A05551.

2.4 With reference to Figure 1, remove n°8 screws P/N AN525-10R18 and install n°6 screws P/N AN525-10R14 and n°2 screws P/N AN525-10R12 in the positions shown.

3. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
4. Return the helicopter to flight configuration and record for compliance with Part I of this Service Bulletin on the helicopter logbook.
5. 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”.

PART II

1. In accordance with AMP DM 39-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.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 3 thru 5, gain access to the area affected by the installation and perform the pilot and copilot fairing variant P/N 3G5320P02311 as described in the following procedure:
   - 2.1 With reference to Figure 3 View A, remove the cover P/N 3G5320A10752 and the existing hardware. Retain the existing hardware for later reuse.
   - 2.2 With reference to Figure 4 View B, remove and retain for later reuse the RH cover P/N 3G5320A02954 and the existing hardware.
   - 2.3 With reference to Figure 3 View A and Figure 4 View B, remove and retain for later reuse the cover P/N 3G5320A16851 and the existing hardware.
   - 2.4 With reference to Figure 3 View A, remove the central fairing assy P/N 3G5320A02735 and the existing hardware. Retain the existing hardware for later reuse.
   - 2.5 With reference to Figure 4 View B, temporarily locate central fairing assy P/N 3G5320A18831 on the floor panel and countermark the hole in accordance with P/N 3G6700A03153.
   - 2.6 With reference to Figure 5 Detail C, drill the hole Ø5.74÷5.87 on the central fairing assy P/N 3G5320A18831 in the previously countermarked hole.
   - 2.7 With reference to Figure 4 Section F-F, counterdrill n°2 holes Ø5.54÷5.64 on the central fairing assy P/N 3G5320A18831.
   - 2.8 With reference to Figure 5 Detail C, install the anchor nut P/N A407A3C2P by means of adhesive 199-05-002 Type II, Class 1.
   - 2.9 With reference to Figure 3 View A, Figure 4 View B and Figure 5 View D and Section E-E, install the central fairing assy P/N 3G5320A18831 by means of the screw P/N NAS5310V3-2 and the existing hardware previously removed.

NOTE

If necessary, it is permitted to cut the rubber extrusion non-metallic P/N A966A080EB to reach the correct dimension.

   - 2.10 With reference to Figure 3 View A, install the silicon rubber P/N A966A080EB on the cover P/N 3G5320A16851 by means of adhesive 199-05-152 Type I, Class 1.
   - 2.11 With reference to Figure 3 View A and Figure 4 View B, reinstall the cover

P/N 3G5320A16851 on the central fairing assy P/N 3G5320A18831 by means of existing hardware.

2.12 With reference to Figure 3 View A and Figure 4 View B, reinstall the RH cover P/N 3G5320A02954 by means of the existing hardware.

2.13 With reference to Figure 3 View A and Figure 4 View B, install the cover P/N 3G5320A19051 by means of the existing hardware.

3. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
4. Return the helicopter to flight configuration and record for compliance with Part II of this Service Bulletin on the helicopter logbook.
5. 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”.

PART III

1. In accordance with AMP DM 39-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.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 6 thru 9, gain access to the area affected by the installation and perform the AWG cabin variant C/A installation P/N 3G2350P05711 as described in the following procedure:

NOTE

With reference to the following step, if necessary, it is allowed to cap and stow the indicated cables instead of removing them.

2.1 With reference to Figure 17 and Figure 18 Wiring diagram, remove the C/A P/N A1P165, C/A P/N A1P166, C/A P/N A2P130 and C/A P/N A2P131.

2.2 With reference to Figure 17 Wiring diagram, assemble the AWG cabin variant C/A (A1A710) P/N 3G9A01A71001 as described in the following procedure:

2.2.1 With reference to Figure 17 Wiring diagram, cut n°2 wires P/N A556A-T22 of adequate length and lay down between connector A7-6P1 and connector J109.

2.2.2 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 17 Wiring diagram, crimp on wire n°2 electrical contacts P/N M39029/57-354 (A7-6P1 side) and n°2 electrical contacts P/N M39029/56-351 (J109 side) by means of proper crimping tool.

2.2.3 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 17 Wiring diagram, mark wires as R12748B22-G and R12747B22-G by means of marker sleeve or laser marking.

2.2.4 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 17 Wiring diagram mark the cable assembly so obtained as A1A710 by means of marker sleeve or laser marking.

2.3 With reference to Figure 17 Wiring diagram, assemble the AWG cabin variant C/A (A1B651) P/N 3G9A01B65101 as described in the following procedure:

2.3.1 With reference to Figure 17 Wiring diagram, cut n°2 wire P/N A556A-T22 of adequate length and lay down between connector A2-3P1 and connector P109.

2.3.2 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 17 Wiring diagram, crimp on wire n°2 electrical

contact P/N M39029/57-354 (A2-3P1 side) and n°2 electrical contact P/N M39029/58-363 (P109 side) by means of proper crimping tool.

2.3.3 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 17 Wiring diagram, mark wires as R12747A22-G and R12748A22-G by means of marker sleeve or laser marking.

2.3.4 With reference to Figure 17 Wiring diagram, cut n°2 wire P/N A556A-T22 of adequate length and lay down between connector A2-3P2 and connector A8-6P1.

2.3.5 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 17 Wiring diagram, crimp on wire n°2 electrical contact P/N M39029/57-354 (A2-3P2 side) and n°2 electrical contact P/N M39029/57-354 (A8-6P1 side) by means of proper crimping tool.

2.3.6 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 17 Wiring diagram, mark wires as R12746A22-G and R12745A22-G by means of marker sleeve or laser marking.

2.3.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 17 Wiring diagram mark the cable assembly so obtained as A1B651 by means of marker sleeve or laser marking.

2.4 With reference to Figure 18 Wiring diagram, assemble the AWG cabin variant C/A (A2A638) P/N 3G9A02A63801 as described in the following procedure:

2.4.1 With reference to Figure 18 Wiring diagram, cut n°2 wire P/N A561A-T2-24 of adequate length and lay down between connector PL8P2 and connector J113 and leave wiring cap and stowed.

2.4.2 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 18 Wiring diagram, crimp on wire n°2 electrical contact P/N M39029/57-357 (PL8P2 side) by means of proper crimping tool.

2.4.3 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 18 Wiring diagram, mark wires as S105F24-S (white) and S105F24-S (blue) by means of marker sleeve or laser marking.

2.4.4 With reference to Figure 18 Wiring diagram, cut n°2 wire P/N A561A-T2-24 of adequate length and lay down between connector J113 and connector A7-6P1.

2.4.5 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 18 Wiring diagram, crimp on wire n°2 electrical

contact P/N M39029/56-348 (J113 side) and n°2 electrical contact P/N M39029/57-354 (A7-6P1 side) by means of proper crimping tool.

2.4.6 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 18 Wiring diagram, mark wires as R12750A24-S (white) and R12750A24-S (blue) by means of marker sleeve or laser marking.

2.4.7 With reference to Figure 18 Wiring diagram, install n°4 insulation sleeving P/N M23053/8-004-C on the C/A.

2.4.8 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 18 Wiring diagram mark the cable assembly so obtained as A2A638 by means of marker sleeve or laser marking.

2.5 With reference to Figure 18 Wiring diagram, assemble the AWG cabin variant C/A (A2B617) P/N 3G9A02B61701 as described in the following procedure:

2.5.1 With reference to Figure 18 Wiring diagram, cut n°2 wire P/N A561A-T2-24 of adequate length and lay down between connector TB106P1 and connector A8-6P1.

2.5.2 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 18 Wiring diagram, crimp on wire n°2 electrical contact P/N M39029/56-348 (TB106P1 side)and n°2 electrical contact P/N M39029/57-354 (A8-6P1 side) by means of proper crimping tool.

2.5.3 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 18 Wiring diagram, mark wires as R12749A24-S (white) and R12749A24-S (blue) by means of marker sleeve or laser marking.

2.5.4 With reference to Figure 18 Wiring diagram, cut n°2 wire P/N A561A-T2-24 of adequate length and lay down between connector PL24P2 and connector CE1381 and the connector CE1382.

2.5.5 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 18 Wiring diagram, crimp on wire n°2 electrical contact P/N M39029/57-357 (PL24P2 side) by means of proper crimping tool.

2.5.6 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 18 Wiring diagram, mark wires as S105D24-S (white) and S105D24-S (blue) by means of marker sleeve or laser marking.

2.5.7 With reference to Figure 18 Wiring diagram, install n°4 insulation sleeving P/N M23053/8-004-C on the C/A.

2.5.8 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 18 Wiring diagram mark the cable assembly so obtained as A2B617 by means of marker sleeve or laser marking.

2.6 With reference to Figures 6 thru 9, lay down the following cable assemblies on the existing routes unless otherwise indicated on the figures:

- 3G9A01A71001 AWG cabin variant C/A (A1A710)
- 3G9A01B65101 AWG cabin variant C/A (A1B651)
- 3G9A02A63801 AWG cabin variant C/A (A2A638)
- 3G9A02B61701 AWG cabin variant C/A (A2B617)

2.7 With reference to Figures 6 thru 9, secure the cable assemblies laid down at the previous step by means of existing hardware and lacing cords.

2.8 With reference to Figure 7 View looking nose LH side from STA 725 to STA 1500, to Figure 8 View looking cabin RH side from STA 1500 to STA 3120 and to Figure 17 Wiring diagram, perform the electrical connection of the C/A A1A710 to the connector A7-6P1 and to the connector J109.

2.9 With reference to Figure 7 View looking nose RH side from STA 725 to STA 1500, to Figure 8 View looking cabin RH side from STA 1500 to STA 3120 and to Figure 17 Wiring diagram, perform the electrical connection of the C/A A1B651 to the connector A2-3P1, to the connector A2-3P2, to the connector A8-6P1 and to the connector P109.

2.10 With reference to Figure 7 View looking nose LH side from STA 725 to STA 1500, to Figure 9 View looking cabin LH side and to Figure 18 Wiring diagram, perform the electrical connection of the C/A A2A638 to the connector A7-6P1, to the wire end P/N A583A2418C (CE1383), to the wire end P/N A583A2418C (CE1384), to the connector J113 and to the connector PL8P2.

2.11 With reference to Figure 7 View looking nose RH side from STA 725 to STA 1500, Figure 8 View looking cabin RH side from STA 1500 to STA 3120 and Figure 18 Wiring diagram, perform the electrical connection of the C/A A2B617 to the connector A8-6P1, to the wire end P/N A583A2418C (CE1381), to the wire end P/N A583A2418C (CE1382), to the connector PL24P2 and to the connector TB106P1.

3. Perform a ring-out test in accordance with Figures 17 and 18 Wiring diagram.

4. In accordance with AMP DM 39-A-31-51-00-00A-320A-A perform the Aural Warning Function – Operation Test.

5. Perform the ICS audio customization acceptance test procedure in accordance with Annex C.
6. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
7. Return the helicopter to flight configuration and record for compliance with Part III of this Service Bulletin on the helicopter logbook.
8. 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”.

PART IV

1. In accordance with AMP DM 39-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.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 38, 42, 82 and 83, get access to the area affected by the installation and perform the IFF BAE AN/DPX7 structural provision upgrade P/N 3G5311A34611 as described in the following procedure:

NOTE

The following steps 2.1 and 2.2 are applicable only for the helicopters from S/N 41801 thru S/N 41804.

2.1 With reference to Figure 38 View J and Section K-K, drill n°2 holes Ø14.25÷14.38 on the bonded panel assy (STA 1500) in accordance with the plate of the splitter P/N 7-397-3-3 and with the dimensioning shown.

2.2 With reference to Figure 38 View J and Section K-K, install n° 2 inserts P/N NAS1832C08-3M on the bonded panel assy (STA 1500) by means of Adhesive 199-05-002 Type II, Class 2.

2.3 With reference to Figure 82 Detail C, replace n°2 existing inserts P/N NAS1836-3-07M with n°2 new inserts P/N NAS1836-3-07 on the right vertical panel by means of adhesive C397.

2.4 With reference to Figure 82 Detail C and Section E-E, remove and retain the support relay and the existing fixing hardware from the right vertical panel.

2.5 With reference to Figure 82 Detail C and Section E-E, fill existing n°2 inserts P/N NAS1836-3-07 on the right vertical panel by means of adhesive C397.

2.6 With reference to Figure 82 Detail C and Section E-E, drill n°2 holes Ø11.48÷11.61 on the right vertical panel in accordance with the new dimensions shown.

2.7 With reference to Figure 82 Detail C, clean and prepare the indicated surface to assure ground contact.

2.8 With reference to Figure 82 Detail C and Section E-E, install n°2 inserts P/N NAS1836-3-07 on the right vertical panel by means of adhesive C397.

2.9 With reference to Figure 82 Detail C and Section E-E, re-install the relay support by means of the existing hardware previously removed at step 2.4.

2.10 With reference to Figure 83 View D-D and Section G-G, remove and retain the bracket and the existing fixing hardware.

2.11 With reference to Figure 83 View D-D, clean and prepare the indicated surface to assure ground contact.

2.12 With reference to Figure 83 View D-D and Section G-G, re-install the bracket by means of the existing hardware previously removed at step 2.10.

NOTE

The steps below are to be intended applicable for the helicopters S/N 41801 thru S/N 41806 unless otherwise indicated.

NOTE

With reference to the following step, if necessary, it is allowed to cap and stow the indicated cables instead of removing them.

3. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 10 thru 12 and Figures 19 thru 25 and 45 Wiring Diagram, gain access to the area affected by the installation and perform the IFF BAE AN/DPX7 P/N 3G9340A01611 electrical provision upgrade as described in the following procedure:

NOTE

If needed, to reach the correct length of wires, use wire P/N A556A-T22.

NOTE

The following steps from 3.1 thru 3.14 are applicable only for helicopters S/N 41801 and S/N 41802.

3.1 With reference to Figure 21 and Figure 22 Wiring diagram, remove the wire marked as S1577C22-G from the pin N of the connector P112 and the pin 2 of the splice SP10482.

3.2 With reference to Figure 19 thru Figure 22 Wiring diagram, disconnect the wire marked as S1577A22-G from the pin 1 of the splice SP10482 and connect it to the pin N of the connector P112.

3.3 With reference to Figure 21 and Figure 22 Wiring diagram, disconnect the wire marked as S1580A22-G from the pin P of the connector P112 and connect it to the pin 1 of the splice SP10482.

3.4 With reference to Figure 21 and Figure 22 Wiring diagram, connect the wire to the pin 2 of the splice SP10482 and to the pin P of the connector P112.

3.5 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 21 and Figure 22 Wiring diagram, mark the wire as S1580C22-G by means of the marker sleeve or laser marking.

3.6 With reference to Figure 21 and Figure 22 Wiring diagram, disconnect the wire

marked as S1584D22-G from the pin A2 of the connector K398P1 and connect it to the pin 1 of the splice SP10482.

3.7 With reference to Figure 21 and Figure 22 Wiring diagram, remove the wire marked as S1576B22-G from the pin X1 of the connector K398P1 and from the pin 2 of the splice SP10484.

3.8 With reference to Figure 21 and Figure 22 Wiring diagram, remove wire S1583A22-G at K398P1 pin X2 along with CR1220 and wire S1577B22-G from splice SP10482 pin 1.

3.9 With reference to Figure 21 and Figure 22 Wiring diagram, disconnect the wire marked as S1582A22N-G from the connector TB108P1 and connect it to the pin 2 of the splice SP10482.

3.10 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 21 and Figure 22 Wiring diagram, mark the wire as S1580D22-G by means of the marker sleeve or laser marking.

3.11 With reference to Figure 21 and Figure 22 Wiring diagram, remove the wire marked as S1581B22-G from the pin A3 of the connector K399P1 to the pin i of the connector P112.

3.12 With reference to Figure 21 and Figure 22 Wiring diagram, disconnect the wire marked as S1585A22N-G from the pin A3 of the connector K398P1 and connect it to the pin A3 of the connector K399P1.

3.13 With reference to Figure 21 and Figure 22 Wiring diagram, disconnect the wire marked as S1579A22-G from the pin 76 of the connector A641P1 and connect it to the connector TB108P1.

3.14 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 21 and Figure 22 Wiring diagram, mark the wire as S1582A22N-G by means of the marker sleeve or laser marking.

NOTE

The following steps from 3.15 thru 3.32 are applicable only for helicopters S/N 41801 thru S/N 41804.

3.15 With reference to Figure 23 and Figure 24 Wiring diagram, remove the wire marked as S1598D22-G from the pin 2 of the splice SP10489 and the pin 48 of the connector PL213P1.

3.16 With reference to Figure 23 and Figure 24 Wiring diagram, disconnect the wire marked as S1597B22-G from the pin 75 of the connector A641P1 and connect it to the splice P/N M81824/1-1 (SP10641).

3.17 With reference to Figure 23 and Figure 24 Wiring diagram, cut n°1 wire

P/N A556A-T22 of adequate length and lay down between the pin 48 of the connector A641P1 and the splice SP10641.

3.18 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 23 and Figure 24 Wiring diagram, mark wire as R1597F22-G by means of marker sleeve or laser marking.

3.19 With reference to Figure 11 View looking nose RH side, install the support P/N AW001CL001-N6 at location n°8.

3.20 With reference to Figure 25 Wiring diagram, assemble the IFF BAE AN/DPX-7 C/A (A3B261) P/N 3G9A03B26101 as described in the following procedure:

3.20.1 With reference to Figure 25 Wiring diagram, cut n°1 wire P/N S33141 of adequate length and lay down between connector A727GPS and the connector CP91P2.

3.20.2 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 25 Wiring diagram, mark wire as R13201A-F by means of marker sleeve or laser marking.

3.20.3 With reference to Figure 25 Wiring diagram, install n°2 insulation sleeving P/N M23053/8-005-C on the C/A.

3.20.4 Perform the electrical connection of the wire marked as R13201A-F and the connector P/N 190308 (A727GPS) and the connector P/N 190309 (CP91P2).

3.20.5 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 25 Wiring diagram mark the cable assembly so obtained as A3B261 by means of marker sleeve or laser marking.

3.21 With reference to Figure 25 Wiring diagram, assemble the IFF BAE AN/DPX-7 C/A (A3B262) P/N 3G9A03B26201 as described in the following procedure:

3.21.1 With reference to Figure 25 Wiring diagram, cut n°1 wire P/N S86208 of adequate length and lay down between connector A2-9P2 and connector CP91P3.

3.21.2 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 25 Wiring diagram, crimp on wire n°1 electrical contact P/N 27-1090-2202B (A2-9P2 side) by means of proper crimping tool.

3.21.3 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 25 Wiring diagram, mark wire as R13200A-F by means of marker sleeve or laser marking.

3.21.4 With reference to Figure 25 Wiring diagram, install n°2 insulation sleeving P/N M23053/8-005-C on the C/A.

3.21.5 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 25 Wiring diagram mark the cable assembly so obtained as A3B262 by means of marker sleeve or laser marking.

3.22 With reference to Figure 25 Wiring diagram, assemble the IFF BAE AN/DPX-7 C/A (A3B263) P/N 3G9A03B26301 as described in the following procedure:

3.22.1 With reference to Figure 25 Wiring diagram, cut n°1 wire P/N S33141 of adequate length and lay down between connector CP91P1 and connector P168.

3.22.2 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 25 Wiring diagram, mark wire as R13202A-F by means of marker sleeve or laser marking.

3.22.3 With reference to Figure 25 Wiring diagram, install n°2 insulation sleeving P/N M23053/8-005-C on the C/A.

3.22.4 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 25 Wiring diagram mark the cable assembly so obtained as A3B263 by means of marker sleeve or laser marking.

3.23 With reference to Figure 10, disconnect and remove the IFF BAE AN/DPX-7 (C/A A3P7) P/N 3G9A03P00701.

3.24 With reference to Figures 10 thru 12 lay down the following cable assemblies on the existing routes unless otherwise indicated on the figures:

- 3G9A03B26101 IFF BAE AN/DPX-7 C/A (A3B261)
- 3G9A03B26201 IFF BAE AN/DPX-7 C/A (A3B262)
- 3G9A03B26301 IFF BAE AN/DPX-7 C/A (A3B263)

3.25 With reference to Figures 10 thru 12, secure the cable assemblies laid down at the previous step by means of existing hardware and lacing cords.

NOTE

Clean and prepare the indicated surface to assure ground contact.

3.26 With reference to Figure 11 View looking nose RH side and Figure 12 Detail H, install the plate splitter P/N 3G5316A89951 by means of n°2 screws P/N NAS1802-08-6 and n°2 washers P/N NAS1149DN832J.

3.27 With reference to Figure 11 View looking nose RH side and Figure 12 Detail H, install the splitter (CP91) P/N 7-397-3-3 by means of n°2 screws P/N NAS5312V3A10, n°2 washers P/N NAS1149D0332J and n°2 nut

P/N MS21043-3.

3.28 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 11 View looking nose RH side and Figure 12 Detail H, install the decal P/N ED300CP91 in an adjacent area to the splitter CP91.

3.29 With reference to Figure 12 View C, disconnect the connectors from the coax relay assembly P/N A151A001.

3.30 With reference to Figure 12 View C, remove n°4 screws P/N MS24693-S2 and install the plate P/N 3G5315A30352 by means of n°4 screws MS24693-S4 and n°4 spacers P/N NAS43DD3-12N.

3.31 With reference to Figure 12 View C, relocate all the connectors in the correct positions on the coax relay assembly P/N A151A001.

3.32 With reference to Figure 12 View D, re-locate as shown the click bond P/N A388A3E08C75 on route A2B1 C/A by means of existing hardware.

NOTE

The following steps 3.33 and 3.34 are applicable only to the helicopters S/N 41801 and S/N 41802.

3.33 With reference to Figure 12 View C, remove the relay P/N TDH8070-1001P from the bracket.

3.34 With reference to Figure 12 View C, install the relay P/N A647A01 in the same position on the bracket.

NOTE

The following steps from 3.35 and 3.36 are applicable only for helicopters S/N 41801 thru S/N 41804.

3.35 With reference to Figure 25 Wiring diagram, Figure 11 View looking nose RH side and Figure 12 Detail H, perform the electrical connection of the C/A A3B261 with the connector P/N 190308 (A727GPS) and with the connector P/N 190309 (CP91P2).

NOTE

Perform the following step 3.36 only if the connector A727GPS is not intended to be connected immediately.

3.36 With reference to Figure 11 Detail B, protect and stow the connector A727GPS as described in the following procedure:

3.36.1 Cover with Meta-Aramid Fibre (Nomex) P/N EN6049-006-32-5 the connector.

3.36.2 Use tie straps P/N AW001CK03LC to firmly tie down the Nomex coverage.

3.36.3 Fasten the connector assembly with cable straps.

3.37 With reference to Figure 45 Wiring diagram, disconnect the wire marked as S1597B22-G from the pin 75 of the connector A641P1.

3.38 With reference to Figure 45 Wiring diagram and Figure 11 View looking nose RH side, install the cap CE1410 on the end of the wire marked as S1597B22-G.

3.39 With reference to Figure 11 Detail G, protect and stow the cap CE1410 near the connector A641P1 on A1B1 C/A as described in the following procedure:

3.39.1 Cover with Meta-Aramid Fibre (Nomex) P/N EN6049-006-32-5 the connector.

3.39.2 Use tie straps P/N AW001CK03LC to firmly tie down the Nomex coverage.

3.39.3 Fasten the connector assembly with cable straps.

3.40 With reference to Figure 12 View C, remove the relays K399 and K400 and the socket relays K399P1 and K400P1 from the bracket P/N A824A03A-A1.

3.41 With reference to Figure 12 View C, remove the bracket P/N A824A03A-A1, n°4 screws P/N MS1802-3-4 and n°4 washers P/N NAS1149D0332J. Retain the hardware for later reuse.

3.42 With reference to Figure 12 View C, install the new bracket P/N A825A01A-A1 by means of the hardware removed in the previously step: n°4 screws P/N MS1802-3-4 and n°4 washers P/N NAS1149D0332J.

3.43 With reference to Figure 12 View C, re-install the relays K399 and K400 and the socket relays K399P1 and K400P1 in the same positions on the new bracket P/N A825A01A-A1.

NOTE

The following steps from 3.44 thru 3.49 are applicable only for helicopters S/N 41801 thru S/N 41804.

3.44 With reference to Figure 25 Wiring diagram, connect the connector A727GPS with the GPS applique A727.

3.45 With reference to Figure 25 Wiring diagram, connect the connector CP91P2 to the splitter CP91.

3.46 With reference to Figure 25 Wiring diagram, Figure 11 View looking nose RH side and Figure 12 Detail H, perform the electrical connection of the C/A A3B262 with the connector P/N P22R1B (A2-9P2) and with the connector P/N 190809 (CP91P3).

3.47 With reference to Figure 25 Wiring diagram, connect the connector A2-9P2 to the MAU 2 (A2) and the connector CP91P3 to the splitter CP91.

3.48 With reference to Figure 25 Wiring diagram, Figure 11 View looking nose RH side and Figure 12 Detail H, perform the electrical connection of the C/A A3B263 with the connector P/N 190309 (CP91P1) and with the connector P/N 190309 (P168).

3.49 With reference to Figure 25 Wiring diagram, connect the connector CP91P1 to the splitter CP91 and the connector P168 to the connector J168.

4. Perform a ring-out test of the newly added wiring in accordance with Figures 20, 22, 24 and 45 Wiring diagram.
5. Perform the MH-139 Bae IFF system acceptance test procedure in accordance with Annex D.
6. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
7. Return the helicopter to flight configuration and record for compliance with Part IV of this Service Bulletin on the helicopter logbook.
8. 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”.

PART V

1. In accordance with AMP DM 39-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.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 39 thru 41 and Figures 51 thru 54, gain access to the area affected by the installation and perform the structural provision P/N 3G5311A34811 as described in the following procedure:

NOTE

Perform steps 2.1 thru 2.9 only for the helicopters S/N 41801 and S/N 41802.

2.1 With reference to Figure 51 View P and Section R-R, remove n°4 screws P/N MS27039-1-05 and n°4 washers P/N NAS1149D0332J from the sequencer support assy P/N 3G5317A30931. Retain n°4 washers for later reuse.

2.2 With reference to Figure 51 View P and Section R-R, remove the sequencer support assy P/N 3G5317A30931 from the upper panel assy RH.

2.3 With reference to Figure 51 Section R-R, fill existing n°4 inserts P/N NAS1836-3-13 on the upper panel assy RH by means of the adhesive C397.

2.4 With reference to Figure 51 View P and Section R-R, temporarily locate the new sequencer support assy P/N 3G5317A30951 on the upper panel assy RH in accordance with the new dimensions shown and countermark n°4 hole positions.

2.5 With reference to Figure 51 View P and Section R-R, drill n°4 holes Ø11.48÷11.61 on the upper panel assy RH.

2.6 With reference to Figure 51 Section R-R, install n°4 inserts P/N NAS1836-3-13 on the upper panel assy RH by means of the adhesive C397.

2.7 With reference to Figure 51 Section R-R, prepare the shown surface to assure ground contact.

2.8 With reference to Figure 51 View P and Section R-R, drill n°4 holes Ø5.50÷5.65 thru the sequencer support assy P/N 3G5317A30951.

2.9 With reference to Figure 51 View P and Section R-R, install the new sequencer support assy P/N 3G5317A30951 on the upper panel assy RH by means of n°4 screws P/N NAS1802-3-6 and n°4 existing washers P/N NAS1149D0332J previously removed at step 2.1.

NOTE

Perform the steps 2.10 and 2.11 only for the helicopters S/N 41801 thru S/N 41804.

2.10 With reference to Figure 52 View AA and View AB, remove n°10 screws P/N NAS1802-08-8 and n°10 washers P/N NAS1149CN832R from the rectangular support assy P/N 3G5317A79631. Retain the hardware for later reuse.

2.11 With reference to Figure 52 View AA, remove and retain the rectangular support assy P/N 3G5317A79631 from the rear lower panel P/N 3P5340A43931.

NOTE

Perform the following step only for the helicopters S/N 41801 and S/N 41802.

2.12 With reference to Figure 52 View AB and Schematic Section AE-AE, perform the indicated cut-out thru the rear lower panel P/N 3P5340A43931 in accordance with the dimensions shown. Seal all around the cut-out edges by means of the adhesive C397.

NOTE

Perform the following step only for the helicopters S/N 41803 and S/N 41804.

2.13 With reference to Figure 52 Schematic Section AE-AE, remove n°3 plies of fiberglass C932 from the cut-out edges.

NOTE

Perform the steps 2.14 and 2.15 only for the helicopters S/N 41801 thru S/N 41804.

2.14 With reference to Figure 52 Schematic Section AE-AE, apply n°3 plies of fiberglass C557 on the cut-out edges in accordance with the dimensions shown. Bond the plies by means of the adhesive C193.

2.15 With reference to Figure 52 View AA and View AB, re-install the rectangular support assy P/N 3G5317A79631 on the rear lower panel P/N 3P5340A43931 by means of n°10 existing screws P/N NAS1802-08-8 and n°10 existing washers P/N NAS1149CN832R previously removed at step 2.10.

NOTE

Perform steps 2.16 thru 2.23 only for the helicopters S/N 41803 and S/N 41804.

2.16 With reference to Figure 51 View P and Section R-R, remove n°4 screws P/N NAS1802-3-6 and n°4 washers P/N NAS1149D0332J from the sequencer

support assy P/N 3G5317A30951. Retain the hardware for later reuse.

2.17 With reference to Figure 51 View P and Section R-R, remove and retain the sequencer support assy P/N 3G5317A30951 from the upper panel assy RH.

2.18 With reference to Figure 51 Section R-R, fill existing n°4 inserts P/N NAS1836-3-13 on the upper panel assy RH by means of the adhesive C397.

2.19 With reference to Figure 51 View P and Section R-R, temporarily locate the sequencer support assy P/N 3G5317A30951 on the upper panel assy RH in accordance with the new dimensions shown and countermark n°4 hole positions.

2.20 With reference to Figure 51 View P and Section R-R, drill n°4 holes Ø11.48÷11.61 on the upper panel assy RH.

2.21 With reference to Figure 51 Section R-R, install n°4 inserts P/N NAS1836-3-13 on the upper panel assy RH by means of the adhesive C397.

2.22 With reference to Figure 51 Section R-R, prepare the shown surface to assure ground contact.

2.23 With reference to Figure 51 View P and Section R-R, re-install the sequencer support assy P/N 3G5317A30951 on the upper panel assy RH by means of existing n°4 screws P/N NAS1802-3-6 and n°4 existing washers P/N NAS1149D0332J previously removed at step 2.16.

NOTE

Perform steps 2.24 thru 2.34 only for the helicopters S/N 41801 thru S/N 41804.

2.24 With reference to Figure 53 View G, View H and Section J-J, remove and retain n°2 connector bracket assemblies P/N 3G5317A37331, n°4 screws P/N MS27039-08-06 and n°4 washers P/N NAS1149DN832K from the LH and RH upper sheet metal plate.

2.25 With reference to Figure 53 View G and View H, prepare the indicated surface to assure ground contact.

2.26 With reference to Figure 53 View G, View H and Section J-J, re-install n°2 connector bracket assemblies P/N 3G5317A37331, n°4 screws P/N MS27039-08-06 and n°4 washers P/N NAS1149DN832K in the same position on the LH and RH upper sheet metal plate.

2.27 With reference to Figure 54 View K and Section N-N, remove n°4 screws P/N MS27039-1-05 and n°4 washers P/N NAS1149D0332J from the controller support assy P/N 3G5315A21736. Retain hardware for later reuse.

2.28 With reference to Figure 54 View K, remove the controller support assy P/N 3G5315A21736 from the RH panel assy P/N 3G5315A49131.

2.29 With reference to Figure 54 View K, temporarily locate the programmer support assy P/N 3G5318A13131 on the RH panel assy P/N 3G5315A49131 and countermark n°4 hole positions in accordance with the dimensions shown.

2.30 With reference to Figure 54 View K and Section N-N, drill n°4 holes Ø4.90÷5.05 thru the programmer support assy P/N 3G5318A13131. Prepare the indicated surface to assure ground contact

2.31 With reference to Figure 54 View K and Section N-N, install the programmer support assy P/N 3G5318A13131 on the RH panel assy P/N 3G5315A49131 by means of n°4 screws P/N MS27039-1-05 and n°4 washers P/N NAS1149D0332J previously removed at step 2.27.

2.32 With reference to Figure 41 View AN, drill n°2 holes Ø5.74÷5.86 thru the structure in accordance with the dimensions shown.

2.33 With reference to Figure 41 View AN, install n°2 nut plates P/N MS21069L06 by means of n°4 rivets P/N NAS1399C3-3 in accordance with the dimensions shown.

2.34 With reference to Figure 41 View AS, rework the existing hole. Protect the reworked surface and prepare to assure a ground contact in accordance with the dimensions shown.

NOTE

Perform the steps 2.35 only for the helicopters S/N 41801 and S/N 41802.

2.35 With reference to Figure 41 View S and Section T-T, fill the existing insert by means of the adhesive C397.

NOTE

Perform the step 2.36 only for the helicopters S/N 41805 and S/N 41806.

2.36 With reference to Figure 39 Detail AL and Section AM-AM, fill n°4 existing inserts P/N NAS1836-3-07 by means of adhesive C397.

NOTE

With reference to the following step and to Figure 34, AWG14 cable must be used for the most of the route, being sure that junctions are as closest as possible to the extremity (less than 250 mm). In particular:

- SP3656, SP3770, SP3649 should be as close as possible to S389P1;
- SP3755, SP3771, SP3756 should be as close as possible to S389P2;
- SP3757 and SP3758 should be as close as possible to A651P3.

NOTE

With reference to the following step and to Figure 36, AWG16 cable must be used for the most of the route between P210 and the safety switch, being sure that junctions are as closest as possible to the extremity (less than 250 mm).

NOTE

With reference to the following step, if necessary, it is allowed to cap and stow the indicated cables instead of removing them.

3. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 13 thru 16, Figures 26 thru 36 and Figure 43 Wiring diagrams, gain access to the area affected by the installation and perform the electrical installation P/N 3G9350A08011 as described in the following procedure:

   3.1 With reference to Figure 26, Figure 27, Figure 30, Figure 31 and Figure 34 Wiring diagrams, modify the C/A C1B339 as described in the following procedure:

      3.1.1 With reference to Figure 14 “View Looking Down Cabin Roof RH Side”, replace the splice SP21369 and the splice SP21372 in the correct positions on the C/A B1L83.

      3.1.2 With reference to Figure 15 “View Inside LH Rear Zone”, and Figure 27 Wiring Diagram, replace the splice SP3656 in the correct position on the C/A C1B339.

3.1.3 With reference to Figure 34 Wiring diagram, assemble the connectors S389P1 by means of the electrical connector P/N MS27473T10B35SA and the backshell P/N A532A100-1002T.

3.1.4 With reference to Figure 34 Wiring diagram, assemble the connectors S389P2 by means of the electrical connector P/N MS27473T10B35S and the backshell P/N A532A100-1002T.

3.1.5 With reference to Figure 30 Wiring diagram, remove the wires marked as A212D16-G, A212E20-G, A212F22-G, A216A22-G, A216B20-G and A216C16-G between the pin AA of the connector P212 and the pin B2 of the connector K396P1.

3.1.6 With reference to Figure 31 Wiring diagram, cut n°1 wire P/N A556A-T16 of adequate length and lay down between the pin AA of the connector P212 and the pin B2 of the connector K396P1.

3.1.7 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 31 Wiring diagram, crimp on wire the electrical contact P/N M39029/58-364 (P212 side) and the electrical contact P/N A523A-B04 (K396P1 side) by means of proper crimping tool.

3.1.8 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 31 Wiring diagram, mark the wire as A212D16-G by means of marker sleeve or laser marking.

3.1.9 With reference to Figure 31 Wiring diagram, perform the electrical connection of the wire marked as A212D16-G to connector P212 and to connector K396P1.

3.1.10 With reference to Figure 30 Wiring diagram, remove the wire marked as A211J14-G between the pin 2 of the splice SP3658 and the pin A1 of the connector K395P1.

3.1.11 With reference to Figure 31 Wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between the pin 4 of the connector S389P2 and the pin 1 of the splice SP3766.

3.1.12 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 31 Wiring diagram, crimp on wire the electrical contact P/N M39029/57-354 by means of proper crimping tool.

3.1.13 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 31 Wiring diagram, mark the wire as A373A22-G by means of marker sleeve or laser marking.

3.1.14 With reference to Figure 31 Wiring diagram, perform the electrical connection of the wire marked as A373A22-G to connector S389P2 and to splice SP3766 P/N M81824/1-1.

3.1.15 With reference to Figure 31 Wiring diagram, cut n°1 wire P/N A556A-T20 of adequate length and lay down between the pin 2 of the splice SP3766 and the pin 1 of the splice SP3767.

3.1.16 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 31 Wiring diagram, mark the wire as A373B20-G by means of marker sleeve or laser marking.

3.1.17 With reference to Figure 31 Wiring diagram, perform the electrical connection of the wire marked as A373B20-G to splice SP3766 and to splice SP3767 P/N M81824/1-2.

3.1.18 With reference to Figure 31 Wiring diagram, cut n°1 wire P/N A556A-T16 of adequate length and lay down between the pin 2 of the splice SP3767 and the pin 1 of the splice SP3768.

3.1.19 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 31 Wiring diagram, mark the wire as A373C16-G by means of marker sleeve or laser marking.

3.1.20 With reference to Figure 31 Wiring diagram, perform the electrical connection of the wire marked as A373C16-G to splice SP3767 and to splice SP3768 P/N M81824/1-3.

3.1.21 With reference to Figure 31 Wiring diagram, cut n°1 wire P/N A556A-T14 of adequate length and lay down between the pin 2 of the splice SP3768 and the pin A1 of the connector K395P1.

3.1.22 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 31 Wiring diagram, mark the wire as A373D14-G by means of marker sleeve or laser marking.

3.1.23 With reference to Figure 31 Wiring diagram, perform the electrical connection of the wire marked as A373D14-G to splice SP3768 and to connector K395P1.

3.1.24 With reference to Figure 31 Wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between the pin 7 of the connector S389P1 and the pin 2 of the splice SP3769.

3.1.25 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 31 Wiring diagram, crimp on wire the electrical contact P/N M39029/57-354 by means of proper crimping tool.

3.1.26 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 31 Wiring diagram, mark the wire as A211K22-G by means of marker sleeve or laser marking.

3.1.27 With reference to Figure 31 Wiring diagram, perform the electrical connection of the wire marked as A211K22-G to connector S389P1 and to splice SP3769 P/N M81824/1-1.

3.1.28 With reference to Figure 31 Wiring diagram, cut n°1 wire P/N A556A-T20 of adequate length and lay down between the pin 1 of the splice SP3769 and the pin 2 of the splice SP3658.

3.1.29 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 31 Wiring diagram, mark the wire as A211J20-G by means of marker sleeve or laser marking.

3.1.30 With reference to Figure 31 Wiring diagram, perform the electrical connection of the wire marked as A211J20-G to splice SP3769 and to splice SP3658 P/N M81824/1-2.

3.1.31 With reference to Figure 26 and Figure 27 Wiring diagrams disconnect the wire marked as A204B16-G from the pin 1 of the splice SP3649 and connect to the pin 1 of the splice SP3770 P/N M81824/1-2.

3.1.32 With reference to Figure 27 Wiring diagram, cut n°1 wire P/N A561A-T1-20 of adequate length and lay down between splice SP3770 and splice SP3649.

3.1.33 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 27 Wiring diagram, mark the wire as A204D20-G by means of marker sleeve or laser marking.

3.1.34 With reference to Figure 27 Wiring diagram, perform the electrical connection of the wire marked as A204D20-G to splice SP3770 and splice SP3649 P/N M81824/1-1.

3.1.35 With reference to Figures 26 and 27 Wiring diagram, disconnect the wires marked as A204C22-G from the pin 35 and A204D22-G from the pin 54 of the connector A651P3.

3.1.36 With reference to Figure 34 Wiring diagram, perform the electrical connection of the wire marked as A204C22-G to the pin 5 of the connector S389P1.

3.1.37 With reference to Figure 34 Wiring diagram, cut n°1 wire P/N A561A-T1-22 of adequate length and lay down between connector S389P2 and splice SP3755 P/N M81824/1-2.

3.1.38 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring diagram, crimp on the wire the electrical contacts P/N M39029/57-354 by means of proper crimping tool.

3.1.39 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring diagram, mark the wire as A350A22-G by means of marker sleeve or laser marking.

3.1.40 With reference to Figure 34 Wiring diagram, perform the electrical connection of the wire as A350A22-G to connector S389P2 and to splice SP3755.

3.1.41 With reference to Figure 34 Wiring diagram, cut n°1 wire P/N A561A-T1-20 of adequate length and lay down between splice SP3755 and splice SP3771 P/N M81824/1-2.

3.1.42 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring diagram, mark the wire as A350H20-G by means of marker sleeve or laser marking.

3.1.43 With reference to Figure 34 Wiring diagram, perform the electrical connection of wire marked as A350H20-G to splice SP3755 and to splice SP3771.

3.1.44 With reference to Figure 34 Wiring diagram, cut n°1 wire P/N A561A-T1-16 of adequate length and lay down between splice SP3771 and splice SP3756 P/N M81824/1-3.

3.1.45 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring diagram, mark the wire as A350C16-G by means of marker sleeve or laser marking.

3.1.46 With reference to Figure 34 Wiring diagram, perform the electrical connection of the wire marked as A350C16-G to splice SP3771 and to splice SP3756.

3.1.47 With reference to Figure 34 Wiring diagram, cut n°1 wire P/N A561A-T1-14 of adequate length and lay down between splice SP3756 and splice SP3757 P/N M81824/1-3.

3.1.48 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring diagram, mark the wire as A350D14-G by means of marker sleeve or laser marking.

3.1.49 With reference to Figure 34 Wiring diagram, perform the electrical connection of wire marked as A350D14-G to splice SP3756 and to splice SP3757.

3.1.50 With reference to Figure 34 Wiring diagram, cut n°1 wire P/N A561A-T1-16 of adequate length and lay down between splice SP3757 and splice SP3758 P/N M81824/1-2.

3.1.51 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring diagram, mark the wire as A350E16-G by means of marker sleeve or laser marking.

3.1.52 With reference to Figure 34 Wiring diagram, perform the electrical connection of wires marked as A350E16-G to splice SP3757 and splice SP3758.

3.1.53 With reference to Figure 34 Wiring diagram, cut n°2 wire P/N A561A-T1-22 of adequate length and lay down between splice SP3758 and pin 35 and pin 54 of connector A651P3.

3.1.54 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring diagram, crimp on the wires the electrical contacts P/N M39029/57-354 (A651P3 side) by means of proper crimping tool.

3.1.55 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring diagram, mark the wires as A350F22-G and A350G22- G by means of marker sleeve or laser marking.

3.1.56 With reference to Figure 34 Wiring diagram perform the electrical connection of the wires marked as A350F22-G and A350G22-G to splice SP3758 and connector A651P3.

3.1.57 With reference to Figure 27, Figure 31 and Figure 34 Wiring diagram, install n°8 insulation sleeving P/N M23053/8-004-C on the wires A204D20-G, A350A22-G, A350H20-G, A350C16-G, A350D14-G, A350E16-G, A350F22-G, and A350G22-G.

3.2 With reference to Figure 32 and Figure 33 Wiring diagrams, modify the C/A A1B604 and the C/A A1A651 as described in the following procedure:

NOTE

The following steps from 3.2.1 thru 3.2.7 are applicable only for helicopters S/N 41805 and S/N 41806.

3.2.1 With reference to Figure 32 Wiring diagram, remove the wire marked as A311B22-G between the pin 49 of the connector PL215P1 and the pin 1 of the splice SP10656.

3.2.2 With reference to Figure 32 Wiring diagram, remove the wire marked as A311A22-G between the pin K of the connector TB136-4 and the pin 2 of the splice SP10656.

3.2.3 With reference to Figure 32 Wiring diagram, remove the wire marked as A311C22-G between the connector PL214P1 and the splice SP10656.

3.2.4 With reference to Figure 32 Wiring diagram, remove the wire marked as A312A22N-G between the pin 64 of the connector PL215P1 and the pin G of the connector TB183.

3.2.5 With reference to Figure 32 Wiring diagram, remove the wires marked as A313A22-G and the wire marked as A313B22-G between the pin 43 and the pin 50 of the connector PL215P1 and the pin 1 of the splice SP10502.

3.2.6 With reference to Figure 32 Wiring diagram, remove the wire marked as A314A22-G between the pin 51 of the connector PL215P1 and the pin 2 of the splice SP10502.

3.2.7 With reference to Figure 32 Wiring diagram, remove the wire marked as A313C22N-G between the pin F of the connector TB183 and the pin 2 of the splice SP10502.

NOTE

The following steps from 3.2.8 thru 3.2.12 are applicable only for helicopters from S/N 41801 thru S/N 41804.

3.2.8 With reference to Figure 46 Wiring diagram, remove the wire marked as A311A22-G between the pin K of the connector TB136-4 and the pin 49 of the connector PL215P1.

3.2.9 With reference to Figure 46 Wiring diagram, remove the wire marked as A312A22N-G between the pin 64 of the connector PL215P1 and the pin G of the connector TB183.

3.2.10 With reference to Figure 46 Wiring diagram, remove the wires marked as A313A22-G and the wire marked as A313B22-G between the pin 43 and the pin 50 of the connector PL215P1 and the pin 1 of the splice SP10502.

3.2.11 With reference to Figure 46 Wiring diagram, remove the wire marked as A314A22-G between the pin 51 of the connector PL215P1 and the pin 2 of the splice SP10502.

3.2.12 With reference to Figure 46 Wiring diagram, remove the wire marked as A313C22N-G between the pin F of the connector TB183 and the pin 2 of the splice SP10502.

3.2.13 With reference to Figure 33 wiring diagram, cut n°2 wire P/N A556A-T22 of adequate length and lay down between connector PL215P1 and splice SP10693 P/N M81824/1-1.

3.2.14 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring diagram, crimp on the wires the electrical contacts P/N M39029/56-348 (PL215P1 side) by means of proper crimping tool.

3.2.15 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring diagram, mark the wire as A351A22-G and A351B22-G by means of marker sleeve or laser marking.

3.2.16 With reference to Figure 33 Wiring diagram perform the electrical connection of the wires marked as A351A22-G and A351B22-G to splice SP10693 and connector PL215P1.

3.2.17 With reference to Figure 33 Wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin G of the connector TB183 and the splice SP10693.

3.2.18 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring diagram, crimp on the wire the electrical contact P/N A523A-A01 (TB183 side) by means of proper crimping tool.

3.2.19 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring diagram, mark the wire as A351C22N-G by means of marker sleeve or laser marking.

3.2.20 With reference to Figure 33 Wiring diagram, perform the electrical connection of the wires marked as A351C22N-G to the splice SP10693 and pin “G” of the connector TB183.

3.3 With reference to Figure 28, Figure 29 and Figure 35 Wiring diagrams, modify the C/A A1B604 and the C/A A1A651 as described in the following procedure:

3.3.1 With reference to Figure 35 Wiring diagram, assemble the connector K455P1 by means of the socket P/N A649A02.

3.3.2 With reference to Figure 35 Wiring diagram, assemble the connector K456P1 by means of the socket P/N A649A02.

3.3.3 With reference to Figure 35 Wiring diagram, assemble the connector PL214P1 by means of the connector P/N MS27473T14B15S and backshell P/N A532A100-1402T.

3.3.4 With reference to Figure 14 “View Looking Cockpit and Interseat Console Zone”, replace the splice SP10513 in the correct position on the C/A A1B604.

3.3.5 With reference to Figure 28 and Figure 29 Wiring diagram, disconnect the wire marked as A209C22-G from the pin F of the connector PL214P1 and connect it to the pin 2 of the splice SP10692 P/N M81824/1-1.

3.3.6 With reference to Figure 29 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between connector PL214P1 and the pin 1 of splice SP10692.

3.3.7 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 29 Wiring diagram, crimp on the wire the electrical contact P/N M39029/57-357 (PL214P1 side) by means of proper crimping tool.

3.3.8 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 29 Wiring diagram, mark the wire as A209D22-G by means of marker sleeve or laser marking.

3.3.9 With reference to Figure 29 Wiring diagram, perform the electrical connection of the wire marked as A209D22-G to the splice SP10692 and the connector PL214P1.

3.3.10 With reference to Figure 35 Wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin 2 of splice SP10692 and pin 2 of splice SP10694 P/N M81824/1-1.

3.3.11 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A209F22-G by means of marker sleeve or laser marking.

3.3.12 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A209F22-G to splice SP10692 and splice SP10694.

3.3.13 With reference to Figure 35 Wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin X1 of connector K455P1 and pin 2 of splice SP10692.

3.3.14 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°1 electrical

contact P/N A523A-B02 (K455P1 side) by means of proper crimping tool.

3.3.15 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A209E22-G by means of marker sleeve or laser marking.

3.3.16 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A209E22-G to the splice SP10692 and the connector K455P1.

3.3.17 With reference to Figure 35 Wiring diagram, cut n°2 wire P/N A556A-T22 of adequate length and lay down between pin A3 and pin X1 of connector K456P1 and pin 2 of splice SP10694.

3.3.18 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contact P/N A523A-B02 (K456P1 side) by means of proper crimping tool.

3.3.19 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wires as A209H22-G and A209G22-G by means of marker sleeve or laser marking.

3.3.20 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wires marked as A209H22-G and A209G22-G to the splice SP10694 and the connector K456P1.

3.3.21 With reference to Figure 35 Wiring diagram, cut n°1 wire P/N A561A-T1-22 of adequate length and lay down between pin A3 of connector K455P1 and pin C2 of connector K456P1.

3.3.22 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contact P/N A523A-B02 by means of proper crimping tool.

3.3.23 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A353A22-G by means of marker sleeve or laser marking.

3.3.24 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A353A22-G to the connector K455P1 and the connector K456P1.

3.3.25 With reference to Figure 35 Wiring diagram, cut n°1 wires P/N A556A-T22 of adequate length and lay down between pin B3 of connector K455P1 and pin B2 of connector K456P1.

3.3.26 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contact P/N A523A-B02 by means of proper crimping tool.

3.3.27 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A354A22-G by means of marker sleeve or laser marking.

3.3.28 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A354A22-G to the connector K455P1 and the connector K456P1.

3.3.29 With reference to Figure 35 Wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin C3 of connector K455P1 and pin T of connector PL19P1.

3.3.30 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contacts P/N A523A-B02 (K455P1 side) and P/N M39029/56-351 (PL19P1 side) by means of proper crimping tool.

3.3.31 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A355A22-G by means of marker sleeve or laser marking.

3.3.32 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A355A22-G to the connector K455P1 and the connector PL19P1.

3.3.33 With reference to Figure 35 Wiring diagram, cut n°1 wire P/N A561A-T1-22 of adequate length and lay down between pin A2 of connector K456P1 and pin C of connector PL214P1.

3.3.34 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°1 electrical contact P/N A523A-B02 (K456P1 side) and n°1 electrical contact P/N M39029/57-357 (PL214P1 side) by means of proper crimping tool.

3.3.35 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A352A22-G by means of marker sleeve or laser marking.

3.3.36 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A352A22-G to the connector K456P1 and the connector PL214P1.

3.3.37 With reference to Figure 35 Wiring diagram, cut n°1 wire P/N A561A-T1-22 of adequate length and lay down between pin A2 of connector K455P1 and pin 49 of connector PL215P1.

3.3.38 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contacts P/N A523A-B02 (K455P1 side) and P/N M39029/56-348 (PL215P1 side) by means of proper crimping tool.

3.3.39 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A364A22-G by means of marker sleeve or laser marking.

3.3.40 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A364A22-G to the connector K455P1 and the connector PL215P1.

3.3.41 With reference to Figure 35 Wiring diagram, cut n°2 wire P/N A556A-T22 of adequate length and lay down between pin B2 and pin C2 of connector K455P1 and pin 50 pin 43 of connector PL215P1.

3.3.42 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contacts P/N A523A-B02 (K455P1 side) and n°2 electrical contacts P/N M39029/56-348 (PL215P1 side) by means of proper crimping tool.

3.3.43 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A363A22-G and A362A22-G by means of marker sleeve or laser marking.

3.3.44 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A363A22-G and A362A22-G to the connector K455P1 and the connector PL215P1.

3.3.45 With reference to Figure 35 Wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin X2 of connector K455P1 and diode CR1302 P/N AW001YD03.

3.3.46 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contacts P/N A523A-B02 (A360A22-G side) and P/N A523A-A02 (CR1302 side) by means of proper crimping tool.

3.3.47 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A360A22-G by means of marker sleeve or laser marking.

3.3.48 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A360A22-G to the connector K455P1 and diode CR1302.

3.3.49 With reference to Figure 35 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin k of diode CR1302 and pin 42 of connector P111.

3.3.50 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contacts P/N M39029/58-360 (P111 side) and P/N A523A-A02 (CR1302 side) by means of proper crimping tool.

3.3.51 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A361A22-G by means of marker sleeve or laser marking.

3.3.52 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A361A22-G to diode CR1302 and connector P111.

3.3.53 With reference to Figure 35 Wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin 42 of connector J111 and pin A of connector TB143-2.

3.3.54 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contacts P/N M39029/56-348 (J111 side) and P/N A523A-A01 (TB143-2 side) by means of proper crimping tool.

3.3.55 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A361B22-G by means of marker sleeve or laser marking.

3.3.56 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A361B22-G to connector J111 connector TB143-2.

3.3.57 With reference to Figure 35 Wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin B1 of connector K456P1 and pin 43 of connector P111.

3.3.58 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contacts P/N A523A-B02 (K456P1 side) and P/N M39029/58-360 (P111 side) by means of proper crimping tool.

3.3.59 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A359A22-G by means of marker sleeve or laser marking.

3.3.60 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A359A22-G to connector K456P1 and connector P111.

3.3.61 With reference to Figure 35 Wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin 43 of connector J111 and pin H of connector TB183.

3.3.62 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contacts P/N M39029/56-348 (J111 side) and P/N A523A-A01 (TB183 side) by means of proper crimping tool.

3.3.63 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A359B22N-G by means of marker sleeve or laser marking.

3.3.64 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A359B22N-G to connector J111 and connector TB183.

3.3.65 With reference to Figure 35 wiring diagram, cut n°2 wire P/N A561A-T1-22 of adequate length and lay down between pin C1 and A1 of connector K456P1 and pin 1 of splice SP10656 P/N M81824/1-1.

3.3.66 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contact P/N A523A-B02 (K456P1 side) by means of proper crimping tool.

3.3.67 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wires as A358B22-G and A358C22-G by means of marker sleeve or laser marking.

3.3.68 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wires marked as A358B22-G and A358C22-G to connector K456P1 and splice SP10656.

3.3.69 With reference to Figure 35 wiring diagram, cut n°1 wire P/N A561AT1-22 of adequate length and lay down between pin K of connector TB136-4 and pin 2 of splice SP10656.

3.3.70 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire the electrical contact P/N A523A-A01 (TB136-4 side) by means of proper crimping tool.

3.3.71 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A358A22-G by means of marker sleeve or laser marking.

3.3.72 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A358A22-G to connector TB136-4 and splice SP10656.

3.3.73 With reference to Figure 35 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin X2 of connector K456P1 and pin a of diode CR1304 P/N AW001YD03.

3.3.74 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contacts P/N A523A-B02 (K456P1 side) and P/N A523A-A02 (CR1304 side) by means of proper crimping tool.

3.3.75 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A356A22-G by means of marker sleeve or laser marking.

3.3.76 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A356A22-G to connector K456P1 and diode CR1304.

3.3.77 With reference to Figure 35 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin 44 of connector P111 and pin k of diode CR1304.

3.3.78 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°2 electrical contacts P/N M39029/58-360 (P111 side) and P/N A523A-A02 (CR1304 side) by means of proper crimping tool.

3.3.79 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A357A22-G by means of marker sleeve or laser marking.

3.3.80 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A357A22-G to connector P111 and diode CR1304.

3.3.81 With reference to Figure 35 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin 44 of connector J111 and the pin 1 of splice SP10695 P/N M81824/1-1.

3.3.82 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°1 electrical contact P/N M39029/56-348 (J111 side) by means of proper crimping tool.

3.3.83 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A357B22-G by means of marker sleeve or laser marking.

3.3.84 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A357B22-G to connector J111 and splice SP10695.

3.3.85 With reference to Figure 35 Wiring diagram (WAS), remove the wire L2303B24-G from the pin J of connector TB129-4 and the pin D of the connector PL19P1.

3.3.86 With reference to Figure 35 Wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin J of connector TB129-4 and pin 1 of the splice SP10695.

3.3.87 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°1 electrical contact P/N A523A-A01 (TB129-4 side) by means of proper crimping tool.

3.3.88 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A357C22-G by means of marker sleeve or laser marking.

3.3.89 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A357C22-G to connector TB129-4 and splice SP10695.

3.3.90 With reference to Figure 35 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin D of connector PL19P1 and pin 2 of splice SP10695.

3.3.91 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire n°1 electrical contact P/N M39029/56-351 (PL19P1 side) by means of proper crimping tool.

3.3.92 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A357D22-G by means of marker sleeve or laser marking.

3.3.93 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A357D22-G to connector PL19P1 and splice SP10695.

3.3.94 With reference to Figure 35 Wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin j of connector PL19P2 and pin F of connector TB183.

3.3.95 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring diagram, crimp on wire the electrical contact P/N M39029/56-351 (PL19P2 side) and the electrical contact P/N A523A-A01 (TB183 side) by means of proper crimping tool.

3.3.96 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring diagram, mark the wire as A359A22N-G by means of marker sleeve or laser marking.

3.3.97 With reference to Figure 35 Wiring diagram, perform the electrical connection of the wire marked as A359A22N-G to connector PL19P2 and splice TB183.

3.4 With reference to Figure 36 and Figure 37 Wiring diagrams, modify the C/A A1B604 as described in the following procedure:

3.4.1 With reference to Figure 37 Wiring diagram, assemble n°1 connector K457P1 by means of the connectors P/N M12883/52-001.

3.4.2 With reference to Figure 37 Wiring diagram cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin X2 of connector K457P1 and pin A of diode CR1320 P/N AW001YD03.

3.4.3 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring diagram, crimp on wire n°1 electrical contact P/N M39029/101-553 (K457P1 side) and n°1 electrical contact P/N A523A-A02 (CR1320 side) by means of proper crimping tool.

3.4.4 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring diagram, mark the wire as A370A22-G by means of marker sleeve or laser marking.

3.4.5 With reference to Figure 37 Wiring diagram, perform the electrical connection of wire marked A370A22-G to connector K457P1 and to diode CR1320.

3.4.6 With reference to Figure 37 Wiring diagram cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin K of diode CR1320 and pin 2 of splice SP1452 P/N M81824/1-1.

3.4.7 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring diagram, crimp on wire n°1 electrical contact P/N A523A-A02 (CR1320 side) by means of proper crimping tool.

3.4.8 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring diagram, mark the wire as A344E22-G by means of marker sleeve or laser marking.

3.4.9 With reference to Figure 37 Wiring diagram, perform the electrical connection of wire marked A344E22-G to connector diode CR1320 and to splice SP1452.

3.4.10 With reference to Figure 36 and Figure 37 Wiring diagram, disconnect the wire marked as A344C22-G from splice SP10509 and from connector PL163P1.

3.4.11 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring diagram, crimp on wire n°1 electrical contact P/N A523A-A02 (CR1324 side) by means of proper crimping tool.

3.4.12 With reference to Figure 37 Wiring diagram, perform the electrical connection of wire marked A344C22-G to the pin 1 of the splice SP1452 and to the pin K of the diode CR1324 P/N AW001YD03.

3.4.13 With reference to Figure 37 Wiring diagram cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin 9 of the connector PL163P1 and pin a of the diode CR1324.

3.4.14 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring diagram, crimp on wire n°1 electrical contact P/N M39029/56-348 (PL163P1 side) and n°1 electrical contact P/N A523A-A02 (CR1324 side) by means of proper crimping tool.

3.4.15 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring diagram, mark the wire as A372A22-G by means of marker sleeve or laser marking.

3.4.16 With reference to Figure 37 Wiring diagram, perform the electrical connection of wire marked A372A22-G to diode CR1324 and to connector PL163P1 pin 9.

3.4.17 With reference to Figure 37 Wiring diagram cut n°2 wires P/N A556A-T22 of adequate length and lay down between pin A1 and X1 of connector K457P1 and pin 1 of splice SP1453 P/N M81824/1-1.

3.4.18 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring diagram, crimp on wires n°2 electrical contact P/N M39029/101-553 (K457P1 side) by means of proper crimping tool.

3.4.19 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring diagram, mark the wires as A344G22-G and A344H22-G by means of marker sleeve or laser marking.

3.4.20 With reference to Figure 37 Wiring diagram, perform the electrical connection of wires marked A344G22-G and A344H22-G to connector K457P1 and splice SP1453.

3.4.21 With reference to Figure 37 Wiring diagram cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin 1 of splice SP10694 P/N M81824/1-1 and pin 2 of splice SP1453 P/N M81824/1-1.

3.4.22 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring diagram, mark the wire as A344I22-G by means of marker sleeve or laser marking.

3.4.23 With reference to Figure 37 Wiring diagram, perform the electrical connection of wires marked A344I22-G to connector SP10694 and splice SP1453.

3.4.24 With reference to Figure 37 Wiring diagram cut n°1 wires P/N A556A-T22 of adequate length and lay down between pin A2 of connector K457P1 and pin 31 of connector PL215P1.

3.4.25 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring diagram, crimp on wires n°2 electrical contact P/N M39029/101-553 (K457P1 side) and P/N M39029/56-348 (PL215P1 side) by means of proper crimping tool.

3.4.26 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring diagram, mark the wires as A344F22-G by means of marker sleeve or laser marking.

3.4.27 With reference to Figure 37 Wiring diagram, perform the electrical connection of wires marked A344F22-G to connector K457P1 and connector PL215P1.

3.4.28 With reference to Figure 36 and Figure 37 Wiring diagram, disconnect the wire marked as A344A22-G from the connector PL214P1.

3.4.29 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring diagram, crimp on wire n°1 electrical contact P/N A523A-A02 (CR1322 side) by means of proper crimping tool.

3.4.30 With reference to Figure 37 Wiring diagram, perform the electrical connection of wire marked A344A22-G to the pin K of the diode CR1322 P/N AW001YD03.

3.4.31 With reference to Figure 37 Wiring diagram cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin A of connector PL214P1 and pin A of diode CR1322 P/N AW001YD03.

3.4.32 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring diagram, crimp on wire n°1 electrical contact P/N M39029/101-553 (PL214P1 side) and n°1 electrical contact P/N A523A-A02 (CR1322 side) by means of proper crimping tool.

3.4.33 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring diagram, mark the wire as A371A22-G by means of marker sleeve or laser marking.

3.4.34 With reference to Figure 37 Wiring diagram, perform the electrical connection of wire marked A371A22-G to connector PL214P1 and to diode CR1322.

3.4.35 With reference to Figure 37 Wiring diagram cut n°1 wire P/N A556A-T22 of adequate length and lay down between pin 1 of splice SP10509 and pin 2 of splice SP1452.

3.4.36 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring diagram, mark the wire as A344D22-G by means of marker sleeve or laser marking.

3.4.37 With reference to Figure 37 Wiring diagram, perform the electrical connection of wire marked A344D22-G to splice SP10509 and to splice SP1452.

3.4.38 With reference to Figure 37 Wiring diagram, install n°1 insulation sleeving P/N M23053/8-004-C on the C/A.

NOTE

The following step 3.5 is applicable only for helicopters from S/N 41801 thru S/N 41804.

3.5 With reference to Figure 47 and Figure 48 Wiring diagrams, modify the C/A B2B727 and C/A B2L57 as described in the following procedure:

3.5.1 With reference to Figure 47 and Figure 48 Wiring diagrams disconnect the wire marked as A320H22-S from the pin M of the connector P251 and connect to the pin HH of the connector P251.

3.5.2 With reference to Figure 47 and Figure 48 Wiring diagrams disconnect the wire marked as A321H22-S from the pin L of the connector P251 and connect to the pin JJ of the connector P251.

3.5.3 With reference to Figure 47 and Figure 48 Wiring diagrams disconnect the wire marked as A320J22-S from the pin M of the connector J251 and connect to the pin HH of the connector J251.

3.5.4 With reference to Figure 47 and Figure 48 Wiring diagrams disconnect the wire marked as A321J22-S from the pin L of the connector J251 and connect to the pin JJ of the connector J251.

3.6 With reference to Figure 49 and Figure 50 Wiring diagrams, modify the C/A A1B604 as described in the following procedure:

3.6.1 With reference to Figure 49 and Figure 50 Wiring diagrams disconnect the wire marked as A210A20-G from the pin B of the connector PL214P1 and connect to the pin D of the connector PL214P1.

3.6.2 With reference to Figure 49 and Figure 50 Wiring diagrams disconnect the wire marked as A211A20-G from the pin D of the connector PL214P1 and connect to the pin B of the connector PL214P1.

3.7 With reference to Figure 13 View looking cockpit area from right side and View V, install n°2 relays P/N A649A01 and the relay P/N M83536/2-028M.

3.8 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 13 View looking cockpit area from right side and View V, install the decals P/N ED300K455, P/N ED300K456 and P/N ED300K457 in an adjacent area.

3.9 With reference to Figure 16 View looking rear LH side, install the cable lightning conductor assy P/N A537A01AA04-0240 by means of n°1 washer NAS1149D0416J and n°1 screw P/N NAS1802-4-9.

3.10 With reference to Figure 16 View looking rear LH side, connect the cable lightning conductor assy to the dummy connector.

3.11 With reference to Figure 16 View looking rear RH side, install the cable lightning

conductor assy P/N A537A01AA04-0240 by means of n°1 washer NAS1149D0416J and n°1 screw P/N NAS1802-4-9.

3.12 With reference to Figure 16 View looking rear RH side, connect the cable lightning conductor assy to the dummy connector.

NOTE

The following steps from 3.13 thru 3.14 are applicable only for helicopter to S/N 41801 thru S/N 41804.

3.13 With reference to Figure 44 View looking tail from cockpit of inspection, install n°2 bonding cable assy P/N A601A4B50 by means n°2 screw P/N NAS1802-08-10, n°4 washer P/N NAS1149DN832H and n°2 nut P/N MS21042L08.

3.14 With reference to Figure 44 View looking vertical tail, connect n°2 bonding cable assy P/N A601A4B50 to the two ground studs P/N A363A02 (GS410 and GS409).

NOTE

The following steps from 3.15 thru 3.17 are applicable only for helicopter S/N 41801.

3.15 With reference to Figure 44 View looking tail LH side, remove n°5 clamp P/N AW001CB06H and install n°5 clamp P/N AW001CB04H by means existing hardware.

3.16 With reference to Figure 44 View looking tail LH side, install the clamp P/N AW001CB04H and the spacer P/N NAS43DD3-40N by means the screw P/N NAS1802-3-36.

3.17 With reference to Figure 44 View T, remove n°2 clamps P/N AW001CB09H and install the clamp P/N AW001CB06H and the clamp P/N AW001CB08H by means the washer P/N NAS1149D0332J and the screw P/N NAS1190E3P7AK.

3.18 With reference to Figure 85 View Looking LH Rear Avionic Bay, check that the hardware of the terminal lugs is as required in figure.

3.19 Perform a functional test and a pin to pin check to make sure that all the installed components, the wires and the connections are efficient.

4. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 55 thru 57, gain access to the area affected by the installation and perform the modification of the chaff and flare structural provision P/N 3G5311A37611 as described in the following procedure:

NOTE

The following steps 4.1 and 4.2 are applicable only for helicopter S/N 41801.

4.1 With reference to Figure 56 View B, install the electrical dummy connector

P/N M38999/10-16B on the external doubler P/N 3G5317A97451 in accordance with the dimensions shown by means of n°4 rivets P/N MS20470AD4-4-5.

NOTE

Install dust cap lanyard on the bottom aft rivet location.

4.2 With reference to Figure 55 View A, install the dust cap cover P/N MS27511B16R on the electrical dummy connector P/N M38999/10-16B.

4.3 With reference to Figure 56 View B, install the dummy connector P/N A604A08CCR01RC on the structure P/N 3P5340A01233 in accordance with the dimensions shown by means of n°4 rivets P/N A297A04TW02.

4.4 With reference to Figure 56 View B and Section E-E, remove n°42 bolts P/N NAS5318E3-2, n°8 nuts P/N MS21042L3 and n°50 washers P/N NAS1149F0332P from the two omega brackets assemblies P/N 3G5317A97331 on the LH side. Retain the nuts and the washers for later reuse.

4.5 With reference to Figure 56 View B, prepare the indicated surface to assure ground contact in accordance with the dimensions shown.

4.6 With reference to Figure 56 View B and Section F-F, drill the hole Ø7.42÷7.57 thru the omega bracket assy P/N 3G5317A97331 in accordance with the dimensions shown.

4.7 With reference to Figure 56 Section F-F, install the nut plate P/N MS21076L4N on the omega bracket assy P/N 3G5317A97331 by means of n°2 rivets P/N MS20426T3-5.

4.8 With reference to Figure 56 View B and Section E-E, re-install the two omega brackets assemblies P/N 3G5317A97331 on the external doubler P/N 3G5317A97451 on the LH side by means of n°42 new bolts NAS5318E3-4 and the existing hardware removed in the previously step 4.4: n°8 nuts P/N MS21042L3 and n°50 washers P/N NAS1149F0332P. Torque the bolts and the nuts to a torque value of 3.39÷4.52 Nm.

NOTE

Perform steps 4.9 thru 4.13 only for the S/N 41802 thru S/N 41804.

4.9 With reference to Figure 56 View B and Section E-E, remove n°21 bolts P/N NAS5318E3-4, n°4 nuts P/N MS21042L3 and n°25 washers P/N NAS1149F0332P from the omega bracket assy P/N 3G5317A97331 on the LH side. Retain hardware for later reuse.

4.10 With reference to Figure 56 View B, prepare the indicated surface to assure ground

contact in accordance with the dimensions shown.

4.11 With reference to Figure 56 View B and Section F-F, drill the hole Ø7.42÷7.57 thru the omega bracket assy P/N 3G5317A97331 in accordance with the dimensions shown.

4.12 With reference to Figure 56 Section F-F, install the nut plate P/N MS21076L4N on the omega bracket assy P/N 3G5317A97331 by means of n°2 rivets P/N MS20426T3-5.

NOTE

Torque the n°4 bolts coupled with the nuts. to a torque value of 3.39÷4.52 Nm and torque the other n°17 bolts to a torque value of 2.26÷2.82 Nm.

4.13 With reference to Figure 56 View B and Section E-E, re-install the omega bracket assy P/N 3G5317A97331 on the external doubler P/N 3G5317A97451 on the LH side by means of existing hardware removed in the previously step 4.9: n°21 bolts P/N NAS5318E3-4, n°4 nuts P/N MS21042L3 and n°25 washers P/N NAS1149F0332P.

4.14 With reference to Figure 56 View B, prepare the indicated surface to assure ground contact.

4.15 Repeat step from 4.1 to step 4.14 for the RH side.

5. Perform a ring-out test in accordance to Figures 27, 29, 31, 33, 34, 35, 37, 46, 48 and 50 Wiring diagram.
6. Perform the ATK ASE system acceptance test procedure in accordance with Annex E.
7. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
8. Return the helicopter to flight configuration and record for compliance with Part V of this Service Bulletin on the helicopter logbook.
9. 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”.

PART VI

1. In accordance with AMP DM 39-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.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figure 65 Wiring Diagram, gain access to the area affected and perform the electrical modification of the TA-24 GPS military C/A P/N 3G9C01A36201.

NOTE

With reference to the following step, if necessary, it is allowed to cap and stow the indicated cables instead of removing them.

3. With reference to Figure 65 Wiring Diagram, disconnect and remove the wire marked as "R10822A24N-G" of the C/A C1A362 from the connector A624P2 (pin "32") and the terminal board TB437 (pin "C").
4. Return the helicopter to flight configuration and record for compliance with Part VI of this Service Bulletin on the helicopter logbook.
5. 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".

PART VII

1. In accordance with AMP DM 39-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.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 58 thru 61, gain access to the area affected and perform the upgrade of the ICS audio customization struct provision P/N 3G5311A35211 as described in the following procedure:

   2.1 With reference to Figure 59 Detail E and Section F-F, remove n°4 screws P/N MS27039-08-05 and n°4 washers P/N NAS1149DN816K from the ICS support P/N 3G5315A69652. Retain n°3 screws and n°3 washers for later reuse.

   2.2 With reference to Figure 58 View A-A, remove and retain the ICS support P/N 3G5315A69652 with the bonding layer P/N 3G5315A94751 and the ICS annunciator P/N LED-6A-45-KA-40497 from the lower middle panel P/N 3P5333A37231.

   2.3 With reference to Figure 59 Section F-F, enlarge and countersink 100° the indicated hole of the ICS support P/N 3G5315A69652 up to Ø 9.0.

   2.4 With reference to Figure 59 Detail E and Section F-F, temporarily locate the shim rubber P/N 3G2590A06351 on the ICS support P/N 3G5315A69652 and countermark the hole position.

   2.5 With reference to Figure 59 Section F-F, drill the hole Ø10.5 thru the shim rubber P/N 3G2590A06351.

   2.6 With reference to Figure 59 Detail E, perform the cut-out of the shim rubber P/N 3G2590A06351 in accordance with the dimensions shown.

   2.7 With reference to Figure 59 Section F-F, install the washer P/N NAS1169C8 on the ICS support P/N 3G5315A69652 by means of the adhesive C231.

   2.8 With reference to Figure 59 Detail E, install the shim rubber P/N 3G2590A06351 on the ICS support P/N 3G5315A69652 by means of adhesive C111.

   2.9 With reference to Figure 58 View A-A and Figure 59 Detail E and Section F-F, re-install the ICS annunciator P/N LED-6A-45-KA-40497 and the ICS support P/N 3G5315A69652 by means of the screw P/N MS24694-C2 and the existing hardware previously removed at step 2.1.

NOTE

Perform steps 2.10 thru 2.13 only for the helicopters S/N 41801 thru S/N 41804.

   2.10 With reference to Figure 61 Section C-C Was, fill the existing inserts by means of

adhesive C397.

2.11 With reference to Figure 61 Section C-C Becomes and Section H-H, drill n°2 holes Ø14.25÷14.38 on the panel in accordance with the new dimensions shown.

2.12 With reference to Figure 61 Section C-C Becomes, prepare the indicated surface to assure ground contact.

2.13 With reference to Figure 61 Section B-B Becomes and Section H-H, install n°2 inserts P/N NAS1832-06-3 by means of adhesive C397.

3. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
4. Return the helicopter to flight configuration and record for compliance with Part VII of this Service Bulletin on the helicopter logbook.
5. 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”.

PART VIII

1. In accordance with AMP DM 39-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.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 62 thru 64, gain access to the area affected and perform the upgrade of the cable cutter installation variant P/N 3G2560P01311 as described in the following procedure:

NOTE

Perform steps 2.1 and 2.2 only for the helicopter S/N 41801.

2.1 With reference to Figure 62 View looking outboard right side, remove the decal P/N A244A550E11.

2.2 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 62 View looking outboard right side, install the decal P/N A244A549E11 in the same position.

2.3 With reference to Figure 62 View A, get access to the hoist cable cutter Zephyr P/N ZL-1000-1.

NOTE

Perform step 2.4 only for the helicopter S/N 41806.

2.4 With reference to Figure 62 View A, remove n°3 screws P/N MS27039-1-10 and n°3 washers P/N NAS1149C0332R from the cable cutter soft cover P/N A001A015-K2C597-1. Retain hardware for later reuse.

2.5 With reference to Figure 62 View A, remove and retain the cable cutter soft cover P/N A001A015-K2C597-1.

NOTE

Perform steps 2.6 thru 2.8 only for the helicopters from S/N 41801 thru S/N 41805.

2.6 With reference to Figure 62 View A and Figure 64 Section G-G, temporarily locate the cable cutter soft cover P/N A001A015-K2C597-1 in position on the central beam P/N 3G5333A02852 and countermark n°3 hole positions in accordance with the dimensions shown.

2.7 With reference to Figure 64 Section G-G, drill n°3 holes Ø4.90÷5.05 thru the cable cutter soft cover P/N A001A015-K2C597-1 and the central beam P/N 3G5333A02852.

2.8 With reference to Figure 64 Section G-G, install n°3 nut plates P/N MS21069L3 on the central beam P/N 3G5333A02852 by means of n°6 rivets

P/N MS20426AD3-7.

NOTE

Perform step 2.9 only for the helicopter S/N 41801.

2.9 With reference to Figure 62 View A, remove n°2 screws P/N MS27039-1-07 and n°2 washers P/N NAS1149C0332R from the cable cutter soft cover P/N A001A015-K2C597-0. Retain n°1 screw and n°2 washers for later reuse.

NOTE

Perform step 2.10 only for the helicopters from S/N 41802 thru S/N 41806.

2.10 With reference to Figure 62 View A, remove n°1 screw P/N MS27039-1-07, n°1 screw P/N MS27039-1-11 and n°2 washers P/N NAS1149C0332R from the cable cutter soft cover P/N A001A015-K2C597-0. Retain hardware for later reuse.

2.11 With reference to Figure 62 View A, remove and retain the cable cutter soft cover P/N A001A015-K2C597-0.

2.12 With reference to Figure 63 Detail C, remove the quick-release pin that safeties the cable cutter Zephyr P/N ZL-1000-1 to the two lock-springs.

2.13 With reference to Figure 63 Detail C, remove and retain the cable cutter Zephyr P/N ZL-1000-1 from the two lock-springs.

NOTE

Perform steps 2.14 thru 2.21 only for the helicopter S/N 41801.

NOTE

Remember to properly clean the surface from adhesive residues.

2.14 With reference to Figure 63 Detail C, remove the velcro pile P/N A305A38B2Y650.

2.15 With reference to Figure 63 Detail C, install the new velcro pile P/N A305A38B2Y in accordance with the new dimensions shown by means of the adhesive C111.

2.16 With reference to Figure 63 Detail F Was, fill the existing insert P/N NAS1832C3-3M by means of adhesive C397.

2.17 With reference to Figure 63 Detail B, drill the hole Ø14.25÷14.38 in accordance with the new dimensions shown.

2.18 With reference to Figure 63 Detail B, install the insert P/N NAS1832C3-3M in the new position by means of adhesive C397.

2.19 With reference to Figure 63 Detail F Was, fill the existing insert

P/N NAS1832C3-3M by means of adhesive C397.

2.20 With reference to Figure 63 Detail B, remove the existing rivet and enlarge the hole up to Ø5.16÷5.28 in accordance with the new dimensions shown.

2.21 With reference to Figure 63 Detail B, install the nut plate P/N MS21069L3 in the same position by means of n°2 rivets P/N MS20426AD3-7.

2.22 With reference to Figure 64 Detail D, remove n°4 indicated screws and n°4 indicated washers from the central beam P/N 3G5333A02852. Retain hardware for later reuse.

2.23 With reference to Figure 64 Detail D, temporarily locate the omega bracket P/N 3G5318A32651 on the central beam P/N 3G5333A02852.

2.24 With reference to Figure 64 Detail D, drill n°4 holes Ø4.90÷5.05 thru the omega bracket P/N 3G5318A32651 in accordance with the dimensions shown.

2.25 With reference to Figure 64 Detail D and Section E-E, install the omega bracket P/N 3G5318A32651 on the central beam P/N 3G5333A02852 by means of n°4 existing screws and n°4 existing washers previously removed at step 2.22.

NOTE

If necessary, for constructions reason the velcro can be trimmed during the installation.

2.26 With reference to Figure 64 Detail D and Section E-E, install the Velcro hook SJ3572 on the omega bracket P/N 3G5318A32651 and the Velcro pile SJ3571 on the Zephyr P/N ZL-1000-1 in accordance with the dimensions shown by means of adhesion promoter 86A (C198).

2.27 With reference to Figure 62 View A and Figure 63 Detail C, re-install the cable cutter Zephyr P/N ZL-1000-1 in its correct position on the two lock-springs.

2.28 With reference to Figure 63 Detail C, re-install the quick release pin that safeties the cable cutter Zephyr P/N ZL-1000-1 to the two lock-springs.

NOTE

Perform step 2.29 only for the helicopter S/N 41801.

2.29 With reference to Figure 62 View A and Figure 63 Detail C, re-install the cable cutter soft cover P/N A001A015-K2C597-0 by means of the screw P/N MS27039-1-11, the existing velcro pile P/N A305A25B2Y160 and the hardware previously removed at step 2.9: the screw P/N MS27039-1-07 and n°2 washers P/N NAS1149C0332R.

NOTE

Perform step 2.30 only for the helicopters from S/N 41802 thru S/N 41806.

2.30 With reference to Figure 62 View A and Figure 63 Detail C, re-install the cable cutter soft cover P/N A001A015-K2C597-0 by means of the existing velcro pile P/N A305A25B2Y160 and the hardware previously removed at step 2.10: the screw P/N MS27039-1-07, the screw P/N MS27039-1-11 and n°2 washers P/N NAS1149C0332R.

NOTE

Perform step 2.31 only for the helicopter S/N 41806.

2.31 With reference to Figure 62 View A and Figure 63 Detail C, re-install the cable cutter soft cover P/N A001A015-K2C597-1 by means of the velcro pile P/N A305A38B2Y and the hardware previously removed at step 2.4: n°3 screws P/N MS27039-1-10 and n°3 washers P/N NAS1149C0332R.

NOTE

Perform step 2.32 only for the helicopters from S/N 41801 thru S/N 41805.

2.32 With reference to Figure 62 View A, Figure 63 Detail C and Figure 64 Section G-G, re-install the cable cutter soft cover P/N A001A015-K2C597-1 by means of the velcro pile P/N A305A38B2Y, n°3 screws P/N MS27039-1-10 and n°3 washers P/N NAS1149C0332R.

3. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
4. Return the helicopter to flight configuration and record for compliance with Part VIII of this Service Bulletin on the helicopter logbook.
5. 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”.

PART IX

1. In accordance with AMP DM 39-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.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 66 thru 72 and Figures 73 thru 79 Wiring Diagram, gain access to the area affected and perform the misc-crypto panel provision C/A installation P/N 3G4600A14311 as described in the following procedure:

   2.1 With reference to Figure 67 and Figure 76 Wiring Diagram (Was and Becomes), perform the modifications of the misc-crypto panel provisoin C/A (A2B572) P/N 3G9A02B57201 as described in the following procedure:

   2.1.1 With reference to Figure 67 Detail B Was and Figure 76 Wiring Diagram (Was), remove n°6 caps CE1263, CE1264, CE1265, CE1266, CE1267, CE1268 from the end of the wires of the C/A A2B572 marked as R11164A22-S (WH and BL), R11165A22-S (WH and BL) and R11166A22-S (WH and BL).

   2.1.2 With reference to Figure 76 Wiring Diagram (Becomes), perform the electrical connections of the C/A A2B572 to the connector A752P1 by means of the connector P/N GC329. Apply n°6 insulations sleeving P/N M23053/8-004-C.

   2.2 With reference to Figure 67 View looking nose RH side and Detail A, stow and protect the connector A752P1 by means of the plug-protective, the nomex P/N EN6049-006-32-5 and the tie strap P/N AW001CK03LC.

   2.3 With reference to Figures 73 and 76 Wiring Diagram (Was and Becomes), perform the modifications of the misc-crypto panel provision C/A (A1A649) P/N 3G9A01A64901 as described in the following procedure:

NOTE

Perform the following step 2.3.1 only for the helicopters S/N 41805 and S/N 41806.

   2.3.1 With reference to Figure 73 Wiring Diagram (Was), remove the wire marked as R11137A22-G from pin E of the terminal board TB143-2 and cut of adequate length.

NOTE

Perform the following step 2.3.2 only for the helicopters from S/N 41801 thru S/N 41804.

2.3.2 With reference to Figure 73 Wiring Diagram (Was), remove the wire marked as R11137A22-G from pin A of the terminal board TB143-2 and cut of adequate length.

2.3.3 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 73 Wiring Diagram (Becomes), crimp on wire n°1 electrical contact P/N A523A-A02 (CR3015 side) by means of a proper crimping tool.

2.3.4 With reference to Figure 73 Wiring Diagram (Becomes), cut n°1 wire P/N A556A-T22 of adequate length and lay down between the terminal board TB143-2 and the diode assembly CR3015.

2.3.5 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 73 Wiring Diagram (Becomes), crimp on wire n°1 electrical contact P/N A523A-A01 (TB143-2 side) and n°1 electrical contact P/N A523A-A02 (CR3015 side) by means of a proper crimping tool.

2.3.6 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 73 Wiring diagram (Becomes), mark wires as R13360A22-G by means of marker sleeve or laser marking.

2.3.7 With reference to Figure 73 Wiring Diagram (Becomes), perform the electrical connections between wires marked as R11137A22-G and R13360A22-G by means of the diode assembly (CR3015) P/N AW001YD03.

2.3.8 With reference to Figure 73 Wiring Diagram (Was), remove the wire marked as R11136A22-G from pin L of the terminal board TB136-2 and cut of adequate length.

2.3.9 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 73 Wiring Diagram (Becomes), crimp on wire n°1 electrical contact P/N A523A-A02 (CR3011 side) by means of a proper crimping tool.

2.3.10 With reference to Figure 73 Wiring Diagram (Becomes), cut n°1 wire P/N A556A-T22 of adequate length and lay down between the terminal board TB129-4 and the diode assembly CR3011.

2.3.11 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 73 Wiring Diagram (Becomes), crimp on wire n°1 electrical contact P/N A523A-A01 (TB129-4 side) and n°1 electrical contact P/N A523A-A02 (CR3011 side) by means of a proper crimping tool.

2.3.12 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 73 Wiring diagram (Becomes), mark wires as R11167A22-G by means of marker sleeve or laser marking.

2.3.13 With reference to Figure 73 Wiring Diagram (Becomes), perform the electrical connections between wires marked as R11136A22-G and R11167A22-G by means of the diode assembly (CR3011) P/N AW001YD03.

2.3.14 With reference to Figure 76 Wiring Diagram (Was), remove the wire marked as R11162A22-G from pin G of the connector PL13P2 and cut of adequate length.

2.3.15 With reference to Figures 76 Wiring Diagram (Was and Becomes), assemble the system customization MH139 C/A (A1A694) P/N 3G9A01A69401 as described in the following procedure:

2.3.15.1 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 76 Wiring diagram (Becomes), mark the wire R11162A22-G as A375A22-G by means of marker sleeve or laser marking.

2.3.15.2 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 76 Wiring Diagram (Becomes), crimp on wire n°1 electrical contact P/N A523A-A02 (CR3019 side) by means of a proper crimping tool.

2.3.15.3 With reference to Figure 76 Wiring Diagram (Becomes), cut n°1 wire P/N A556A-T22 of adequate length and lay down between the splice SP10509 and the diode assembly CR3019.

2.3.15.4 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 76 Wiring Diagram (Becomes), crimp on wire n°1 electrical contact P/N A523A-A02 (CR3019 side) by means of a proper crimping tool.

2.3.15.5 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 76 Wiring diagram (Becomes), mark wires as A375B22-G by means of marker sleeve or laser marking.

2.3.15.6 With reference to Figure 76 Wiring Diagram (Becomes), perform the electrical connections between wires marked as A375B22-G and A375A22-G by means of the diode assembly (CR3019) P/N AW001YD03.

2.3.15.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 76 Wiring diagram (Becomes), mark the cable assy so obtained as C/A A1A694 by means of marker sleeve or laser marking.

NOTE

Perform steps 2.4 and 2.5 only for the helicopters from S/N 41801 thru S/N 41804.

2.4 With reference to Figures 66 and 72 and Figures 77 thru 79 Wiring diagram, modify the heating C/A (C1A200) P/N 3G9C01A20021 in order to obtain the heating C/A (C1A200) P/N 3G9C01A20022 as described in the following procedure:

2.4.1 With reference to Figure 72 and Figures 77 thru 79 Wiring diagram, remove the existing 90° adapter P/N A529A490-1702 from the connector HR4P1 (C1A200) and retain the electrical connector P/N D38999/26JE35SN and the cable clamp P/N A529A400-1702C11 for later reuse.

2.4.2 With reference to Figure 72 and Figures 77 thru 79 Wiring diagram, assemble the connector HR4P1 by means of the new 45° adapter P/N A529A445-1702 and the existing electrical connector P/N D38999/26JE35SN and the cable clamp P/N A529A400-1702C11.

2.5 With reference to Figure 75 Wiring Diagram (Was and Becomes), perform the modifications of the misc-crypto panel provision C/A (A2A583) P/N 3G9A02A58301 as described in the following procedure:

2.5.1 With reference to Figure 75 Wiring Diagram (Was), remove the wires marked as R11150C22-S (WH and BL) and R11151C22-S (WH and BL) from the connector PL212P5.

2.5.2 With reference to Figure 75 Wiring Diagram (Was), remove the wires marked as R11152C22-S (WH and BL) and R11153C22-S (WH and BL) from the connector PL212P3.

2.5.3 With reference to Figure 75 Wiring Diagram (Becomes), perform the electrical connections of the wires marked as R11150C22-S (WH and BL) and R11151C22-S (WH and BL) previously removed to the connector PL212P3.

2.5.4 With reference to Figure 75 Wiring Diagram (Becomes), perform the electrical connections of the wires marked as R11152C22-S (WH and BL) and R11153C22-S (WH and BL) previously removed to the connector PL212P5.

NOTE

Perform steps 2.6 and 2.7 only for the helicopter S/N 41801.

2.6 With reference to Figure 72 Detail F and Figure 74 Wiring Diagram, remove n°2 relays P/N A653A01 (K391 and K392) and n°2 sockets P/N A653A02 from the support relay.

2.7 With reference to Figure 72 Detail F and Figure 74 Wiring Diagram, install the n°2 relays P/N A649A01 (K391 and K392) and n°2 sockets P/N A649A02 in positions on the support relay.

NOTE

Perform steps 2.8 and 2.9 only for the helicopters S/N 41805 and S/N 41806.

2.8 With reference to Figure 72 Detail F and Figure 74 Wiring Diagram, remove n°2 relays P/N A651A01 (K391 and K392) and n°2 sockets P/N A651A02 from the support relay.

2.9 With reference to Figure 72 Detail F and Figure 74 Wiring Diagram, install n°2 relays P/N A649A01 (K391 and K392) and n°2 sockets P/N A649A02 in positions on the support relay.

3. With reference to Figure 84 Wiring Diagram, assemble the C/A A1A746 as described in the following procedure:

3.1 With reference to Figure 84 Wiring Diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay down between the pin “D” of connector TB143-2 and pin “s” connector TB143-2.

3.2 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 84 Wiring Diagram, crimp on wire n°2 electrical contacts P/N A523A-A01 by means of a proper crimping tool.

3.3 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 84 Wiring Diagram, mark wires as H1822B22-G by means of marker sleeve or laser marking.

3.4 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 85 Wiring diagram, mark the cable assy so obtained as C/A A1A746 by means of marker sleeve or laser marking.

4. Perform a pin-to-pin continuity check of all the electrical connections made.
5. Perform misc-sw crypto panel electrical provision acceptance test procedure in accordance with Annex A.
6. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
7. Return the helicopter to flight configuration and record for compliance with Part IX of this Service Bulletin on the helicopter logbook.
8. 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”.

PART X

1. In accordance with AMP DM 39-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.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figure 80, gain access to the area affected and perform the upgrade of the cockpit door armour complete provision from the P/N 3G5311A32511 to the P/N 3G5311A32512 as described in the following procedure:
   2.1 With reference to Figure 80 Internal View pilot door LH side, remove and retain the cover LH P/N 3G5211A05952 and the fixing hardware from the LH pilot door assy high visibility P/N 3G5211A03233.

   NOTE

   If present fill the existing insert use to install the ballistic protection by means of adhesive C397.

   2.2 With reference to Figure 80 Internal View pilot door LH side, drill the hole Ø11.48÷11.61 thru the LH pilot door assy high visibility P/N 3G5211A03233 in the indicated position (location n°1).
   2.3 With reference to Figure 80 Internal View pilot door LH side and Section A-A, install the insert P/N NAS1836-3-13 at location n°1 by means of adhesive C397.
   2.4 With reference to Figure 80 Internal View pilot door LH side, Section A-A and Section B-B, re-install the cover LH P/N 3G5211A05952 by means of n°2 screws P/N A428A3C05 (locations n°1 and n°2) and the existing fixing hardware previously removed.
   2.5 Repeat steps from 2.1 thru 2.4 for the RH door assy high visibility P/N 3G5211A03333 and the cover RH P/N 3G5211A06052.
3. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
4. Return the helicopter to flight configuration and record for compliance with Part X of this Service Bulletin on the helicopter logbook.
5. Send the attached compliance form to the following mail box:

   engineering.support.lhd@leonardo.com

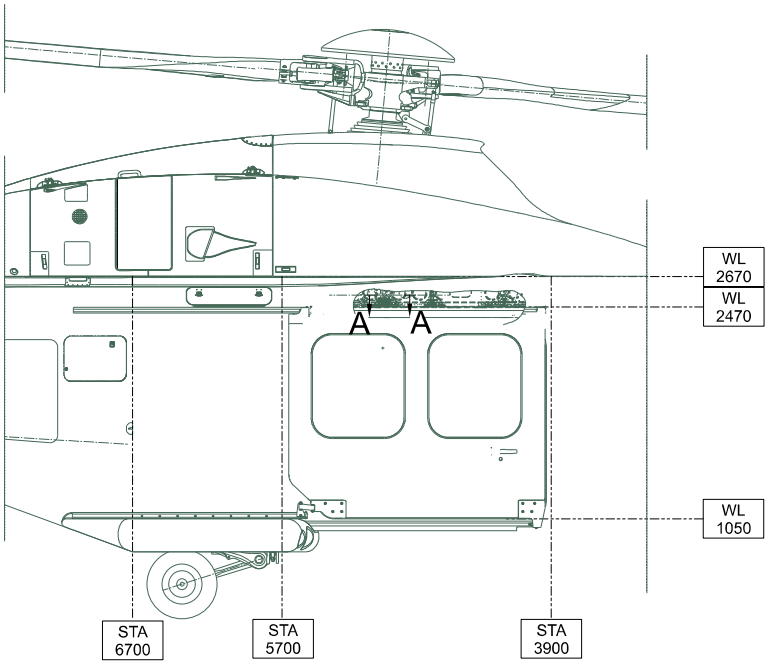
   As an alternative, gain access to My Communications section on Leonardo WebPortal and compile the “Service Bulletin Application Communication”.

PART XI

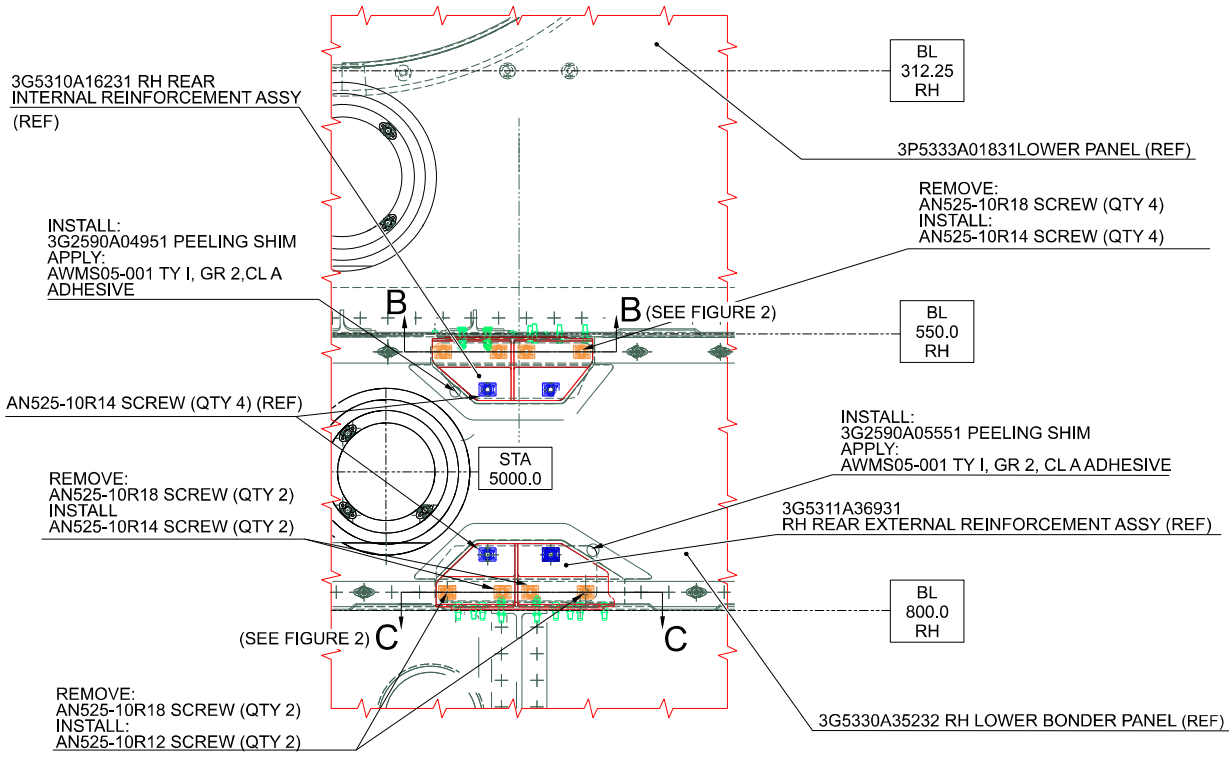
1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figure 81 Wiring Diagram, gain access to the area affected and perform the modification of the L-3 AS TACAN C/A (D3B246) P/N 3G9D03B24601 as described in the following procedure:
   2.1 With reference to Figure 81 Wiring Diagram, disconnect the connector E185P1 of the C/A D3B246 from the antenna E185. Remove and replace the coaxial connector P/N 190410 with the new coaxial connector P/N 190411.
   2.2 With reference to Figure 81 Wiring Diagram, perform the electrical connection of the new connector E185P1 (C/A D3B246) to the antenna E185.
3. Perform electrical provision Tacan system acceptance test procedure in accordance with Annex B.
4. Return the helicopter to flight configuration and record for compliance with Part XI of this Service Bulletin on the helicopter logbook.
5. 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”.

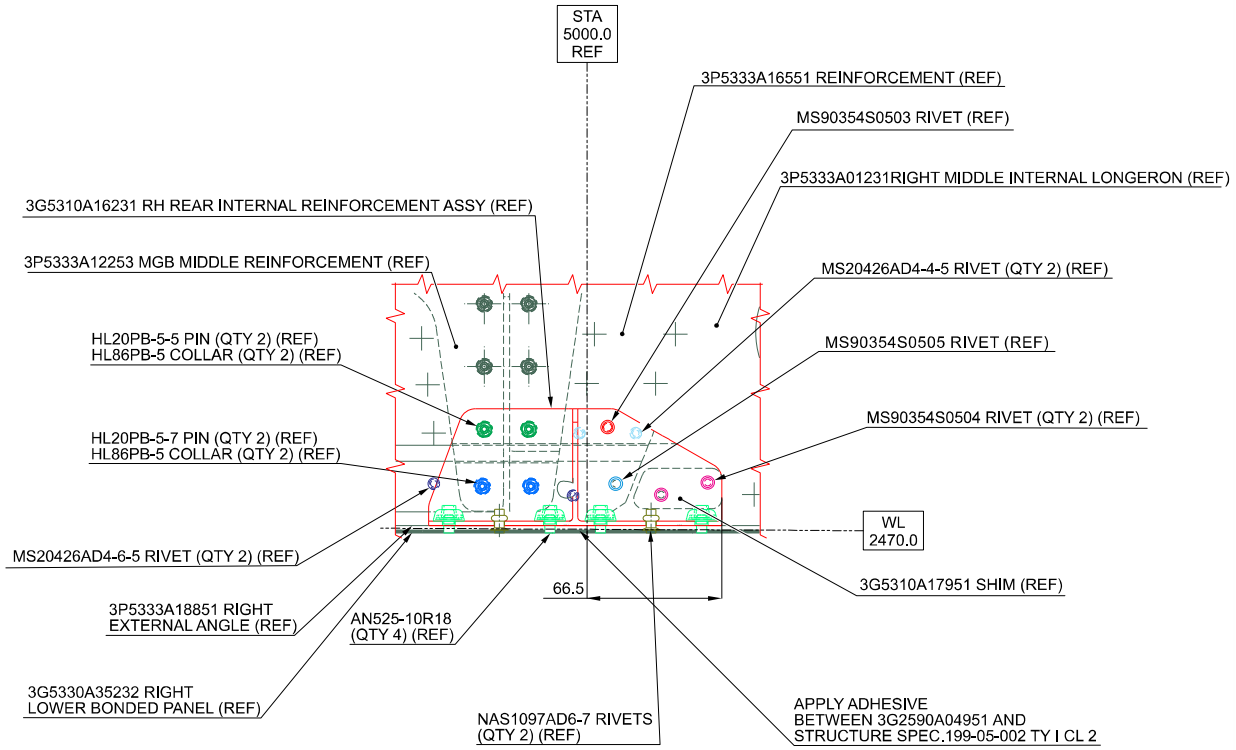


VIEW LOOKING INBOARD RIGHT SIDE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



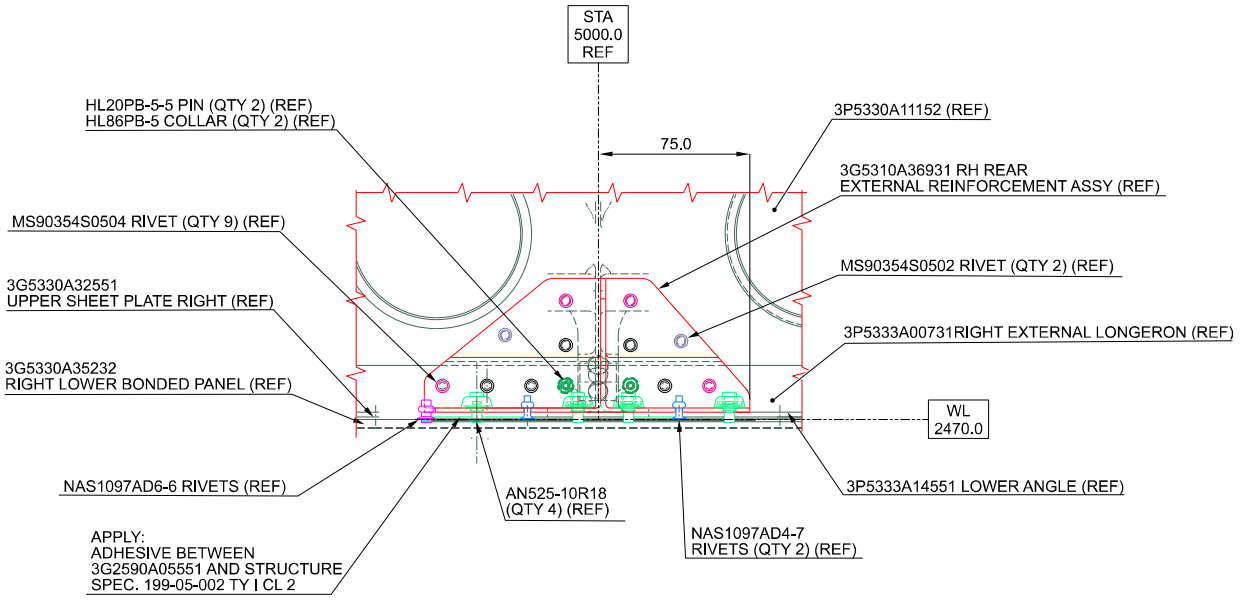
SECTION A-A
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 1



SECTION B-B

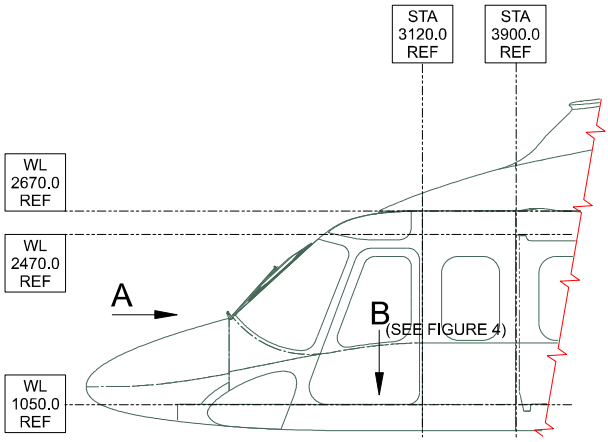
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 1)



SECTION C-C

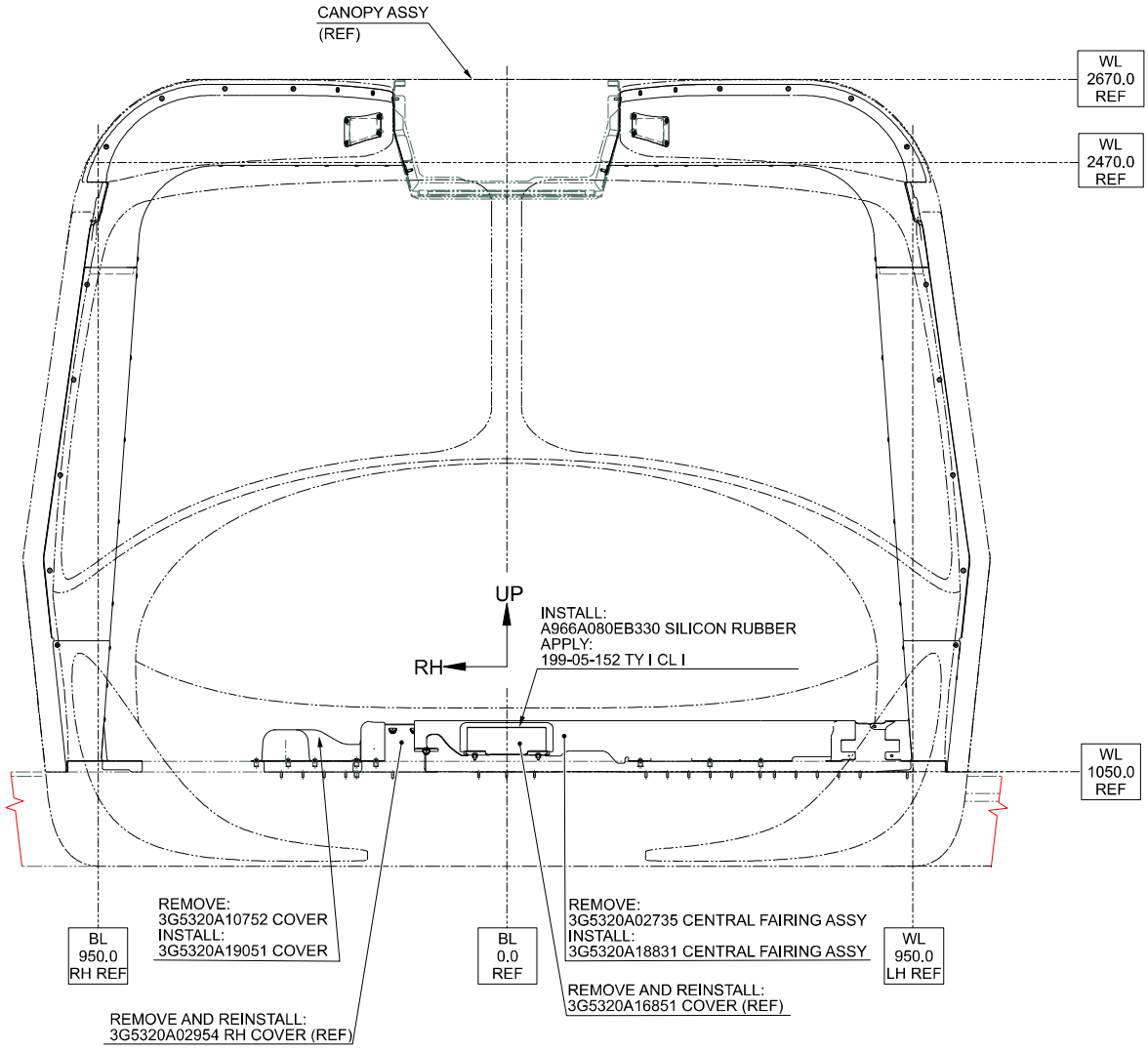
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 1)

Figure 2



VIEW LOOKING INBOARD LEFT SIDE

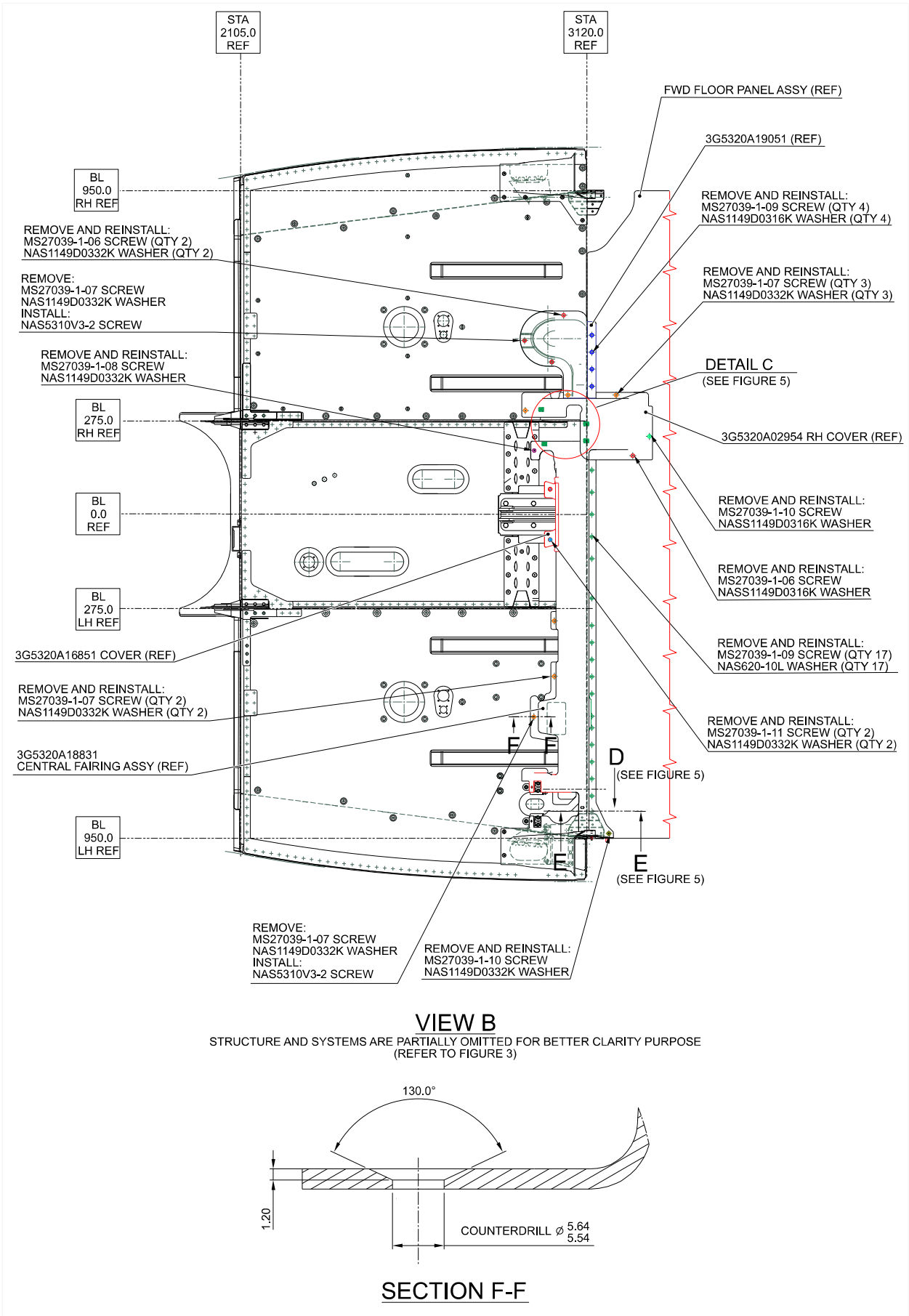
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



VIEW A

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 3

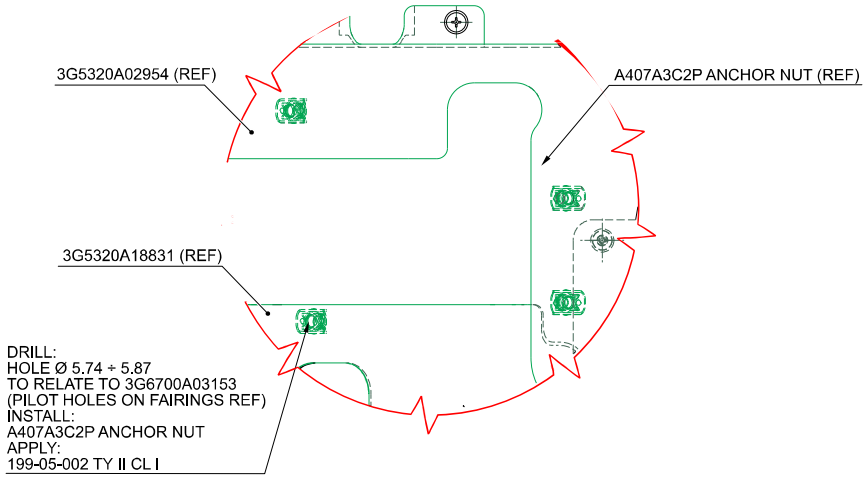


VIEW B

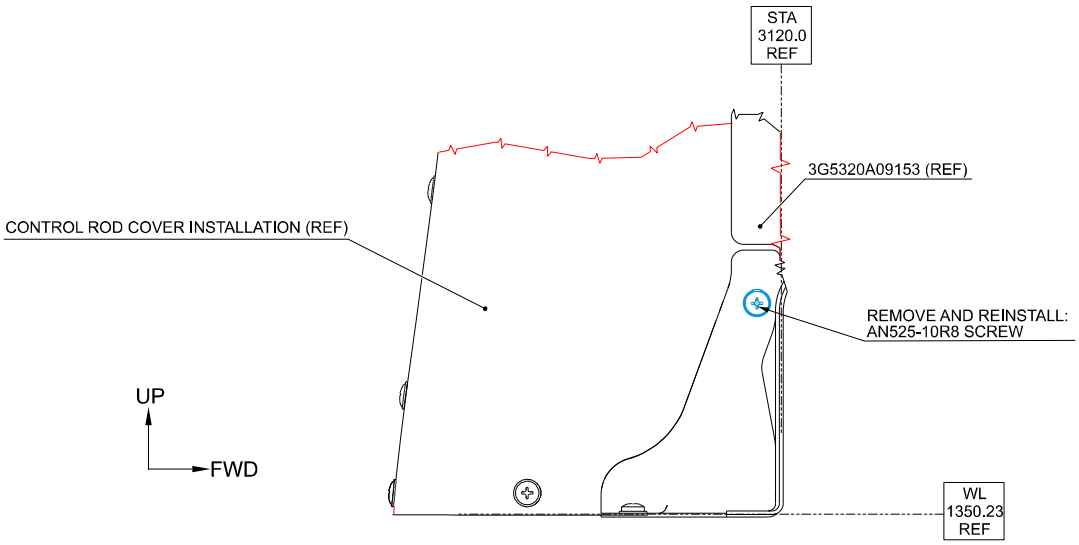
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE (REFER TO FIGURE 3)

SECTION F-F

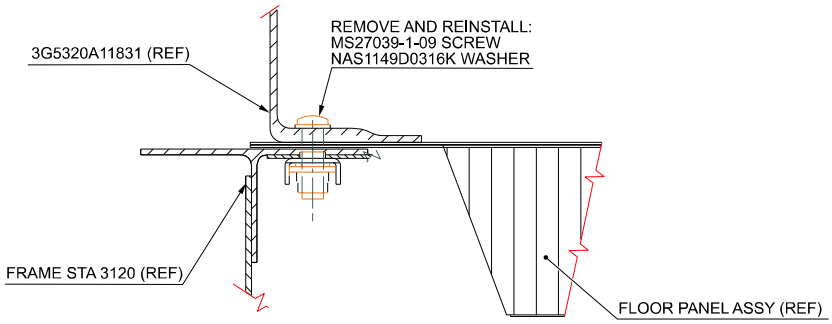
Figure 4



DETAIL C
(REFER TO FIGURE 4)



VIEW D
(REFER TO FIGURE 4)



SECTION E-E
(REFER TO FIGURE 4)

Figure 5

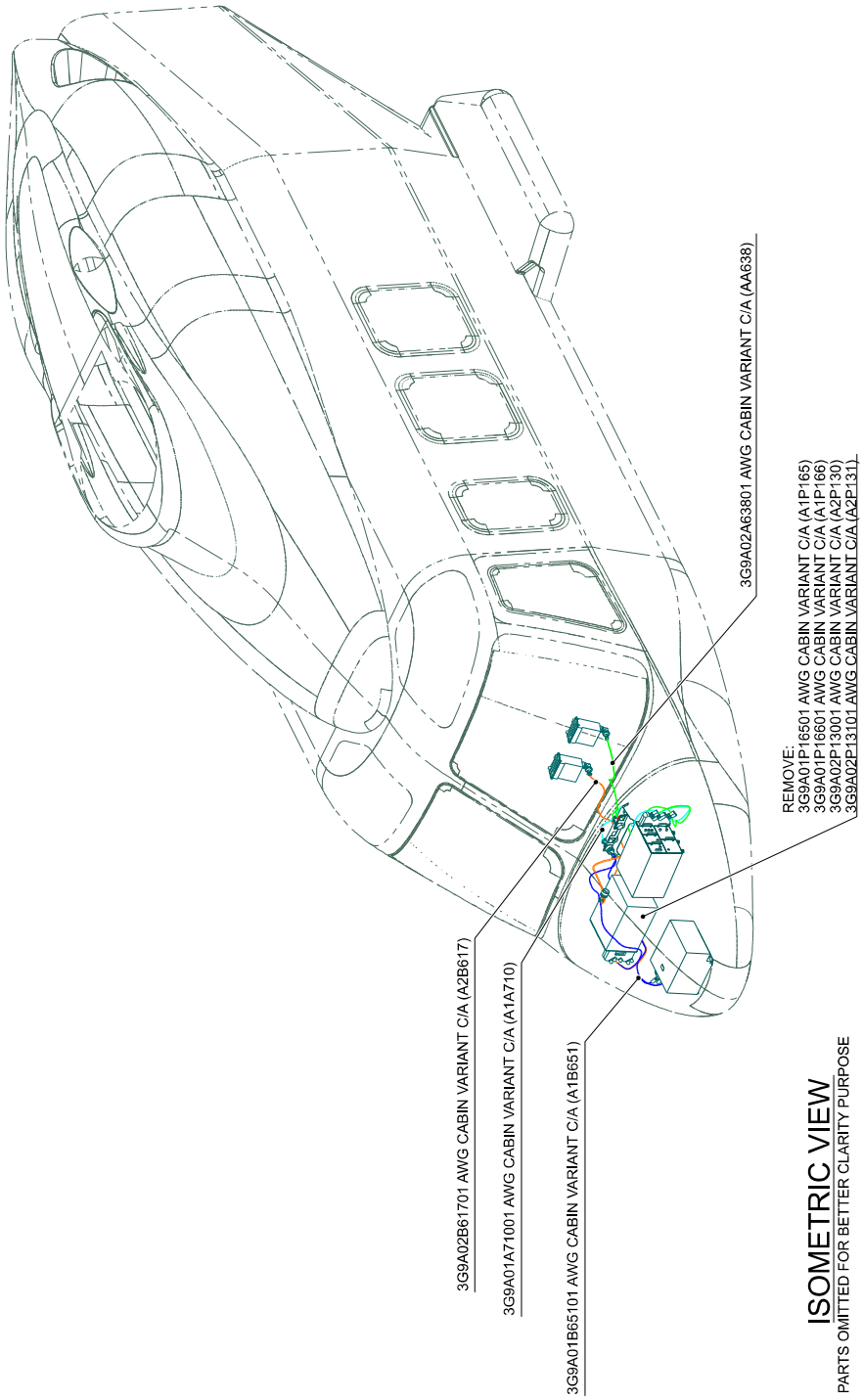
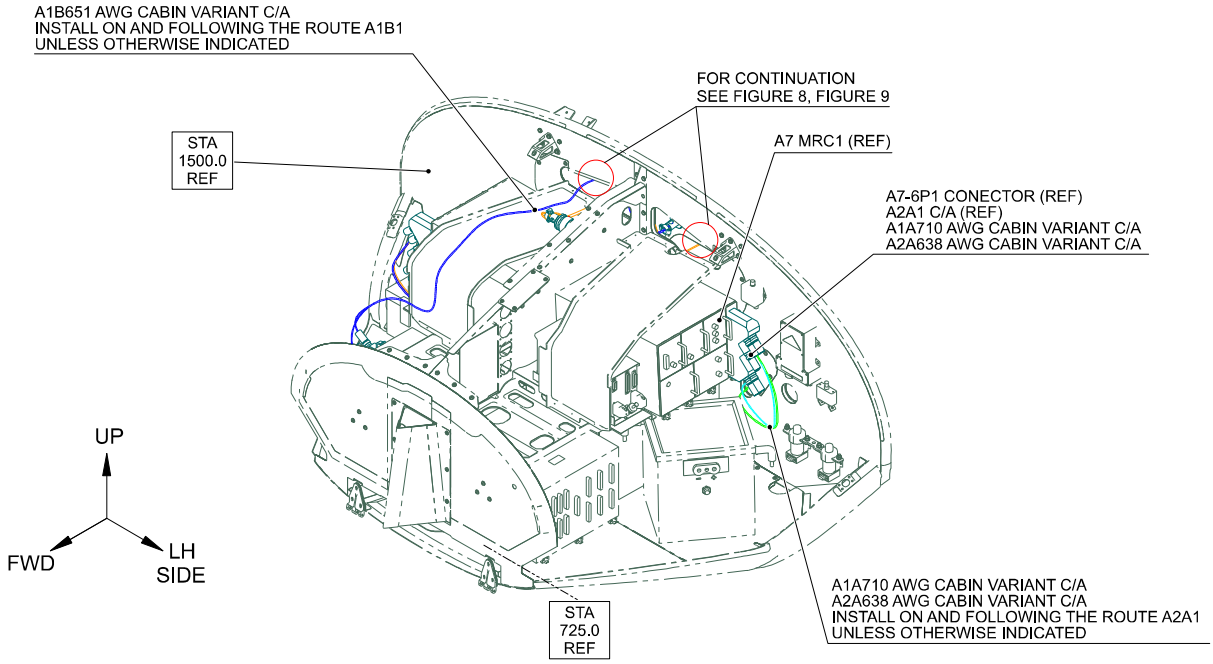
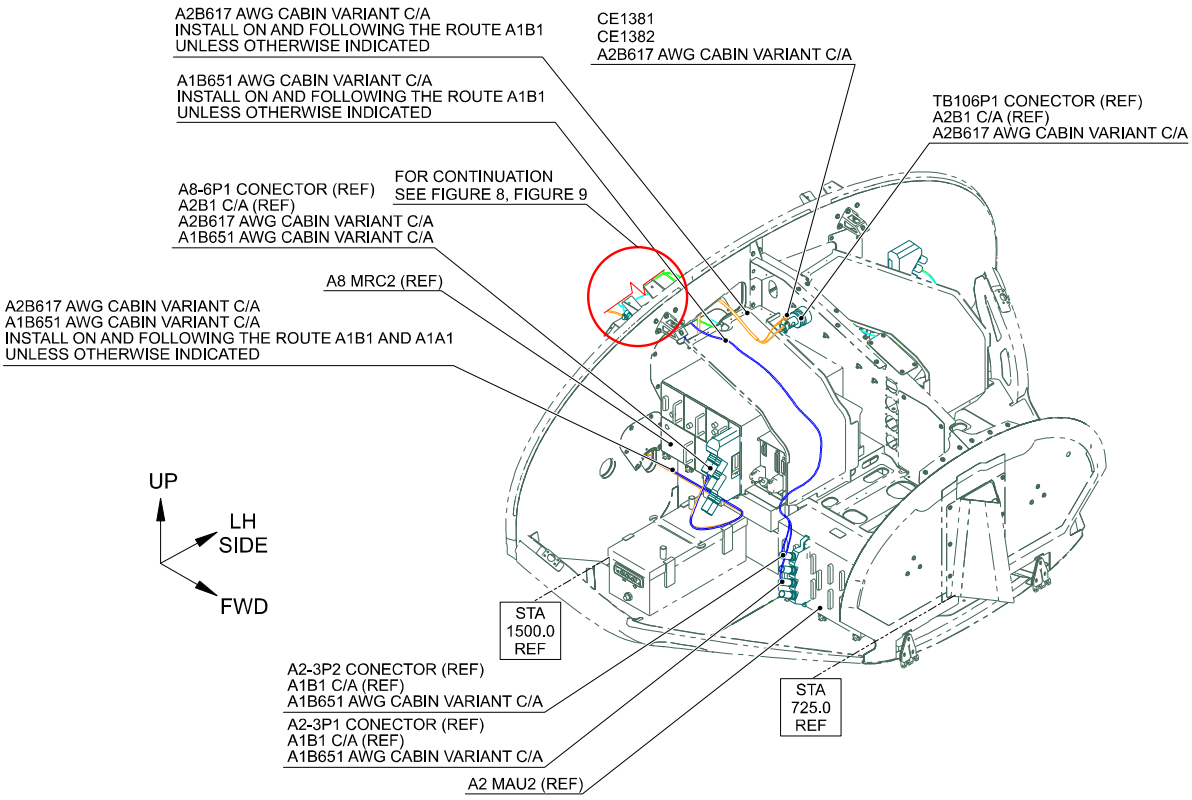

AWG CABIN VARIANT C/A INSTL
3G2350P05711
3G9A02A63801 AWG CABIN VARIANT C/A (AA638)
REMOVE:
3G9A01P16501 AWG CABIN VARIANT C/A (A1P165)
3G9A01P16601 AWG CABIN VARIANT C/A (A1P166)
3G9A02P13001 AWG CABIN VARIANT C/A (A2P130)
3G9A02P13101 AWG CABIN VARIANT C/A (A2P131)
3G9A02B61701 AWG CABIN VARIANT C/A (A2B617)
3G9A01A71001 AWG CABIN VARIANT C/A (A1A710)
3G9A01B65101 AWG CABIN VARIANT C/A (A1B651)
ISOMETRIC VIEW
PARTS OMITTED FOR BETTER CLARITY PURPOSE

Figure 6



VIEW LOOKING NOSE FROM STA 725 TO STA 1500
LH SIDE
PARTS OMITTED FOR BETTER CLARITY PURPOSE



VIEW LOOKING NOSE FROM STA 725 TO STA 1500
RH SIDE
PARTS OMITTED FOR BETTER CLARITY PURPOSE

Figure 7

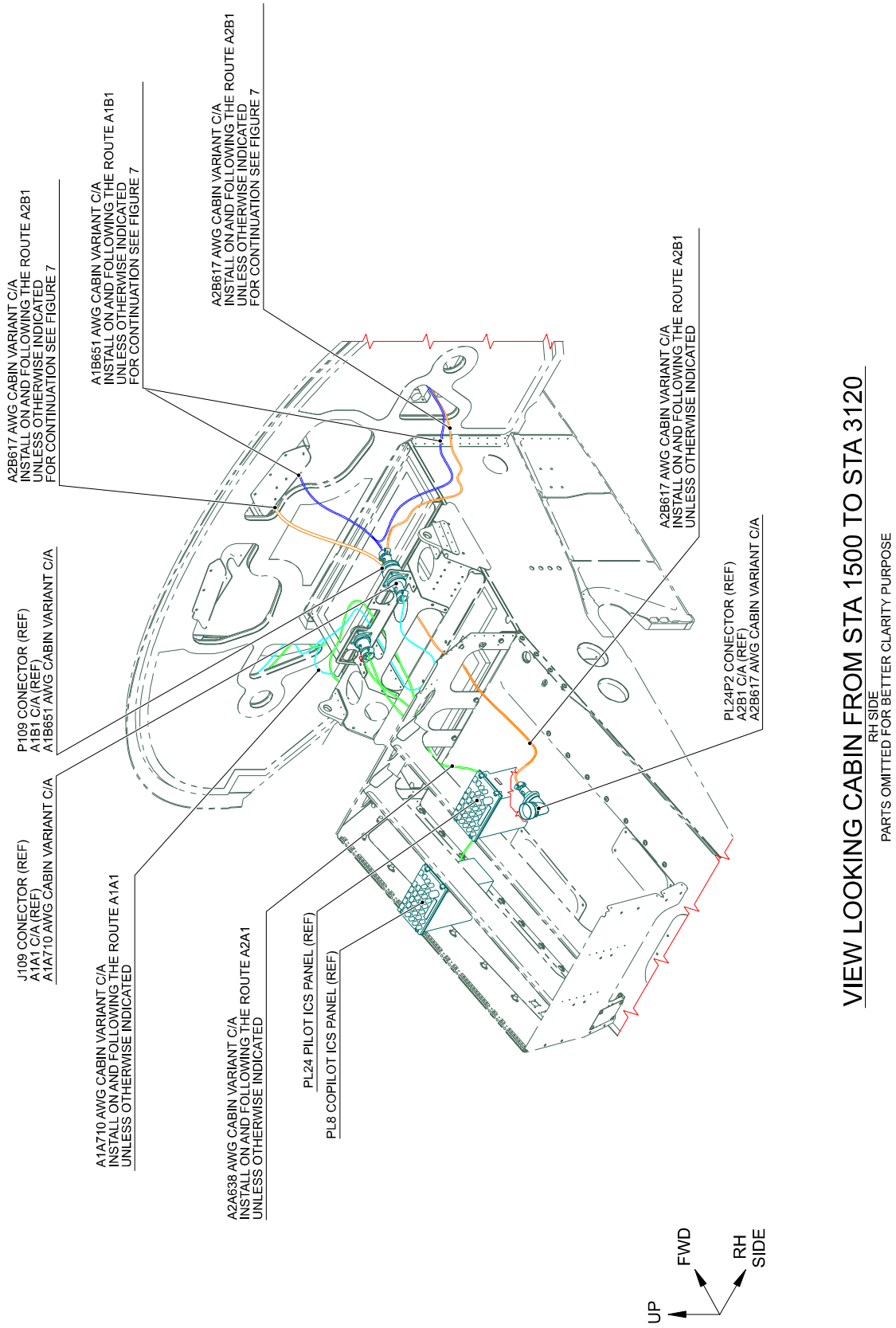

A2B617 AWG CABIN VARIANT C/A
INSTALL ON AND FOLLOWING THE ROUTE A2B1
UNLESS OTHERWISE INDICATED
FOR CONTINUATION SEE FIGURE 7
A1B651 AWG CABIN VARIANT C/A
INSTALL ON AND FOLLOWING THE ROUTE A1B1
UNLESS OTHERWISE INDICATED
FOR CONTINUATION SEE FIGURE 7
A2B617 AWG CABIN VARIANT C/A
INSTALL ON AND FOLLOWING THE ROUTE A2B1
UNLESS OTHERWISE INDICATED
FOR CONTINUATION SEE FIGURE 7
P109 CONECTOR (REF)
A1B1 C/A (REF)
A1B651 AWG CABIN VARIANT C/A
A2B617 AWG CABIN VARIANT C/A
INSTALL ON AND FOLLOWING THE ROUTE A2B1
UNLESS OTHERWISE INDICATED
J109 CONECTOR (REF)
A1A1 C/A (REF)
A1A710 AWG CABIN VARIANT C/A
PL24P2 CONECTOR (REF)
A2B1 C/A (REF)
A2B617 AWG CABIN VARIANT C/A
A1A710 AWG CABIN VARIANT C/A
INSTALL ON AND FOLLOWING THE ROUTE A1A1
UNLESS OTHERWISE INDICATED
PL24 PILOT ICS PANEL (REF)
PL8 COPILOT ICS PANEL (REF)
A2A638 AWG CABIN VARIANT C/A
INSTALL ON AND FOLLOWING THE ROUTE A2A1
UNLESS OTHERWISE INDICATED
UP
FWD
RH SIDE
VIEW LOOKING CABIN FROM STA 1500 TO STA 3120
RH SIDE
PARTS OMITTED FOR BETTER CLARITY PURPOSE

Figure 8

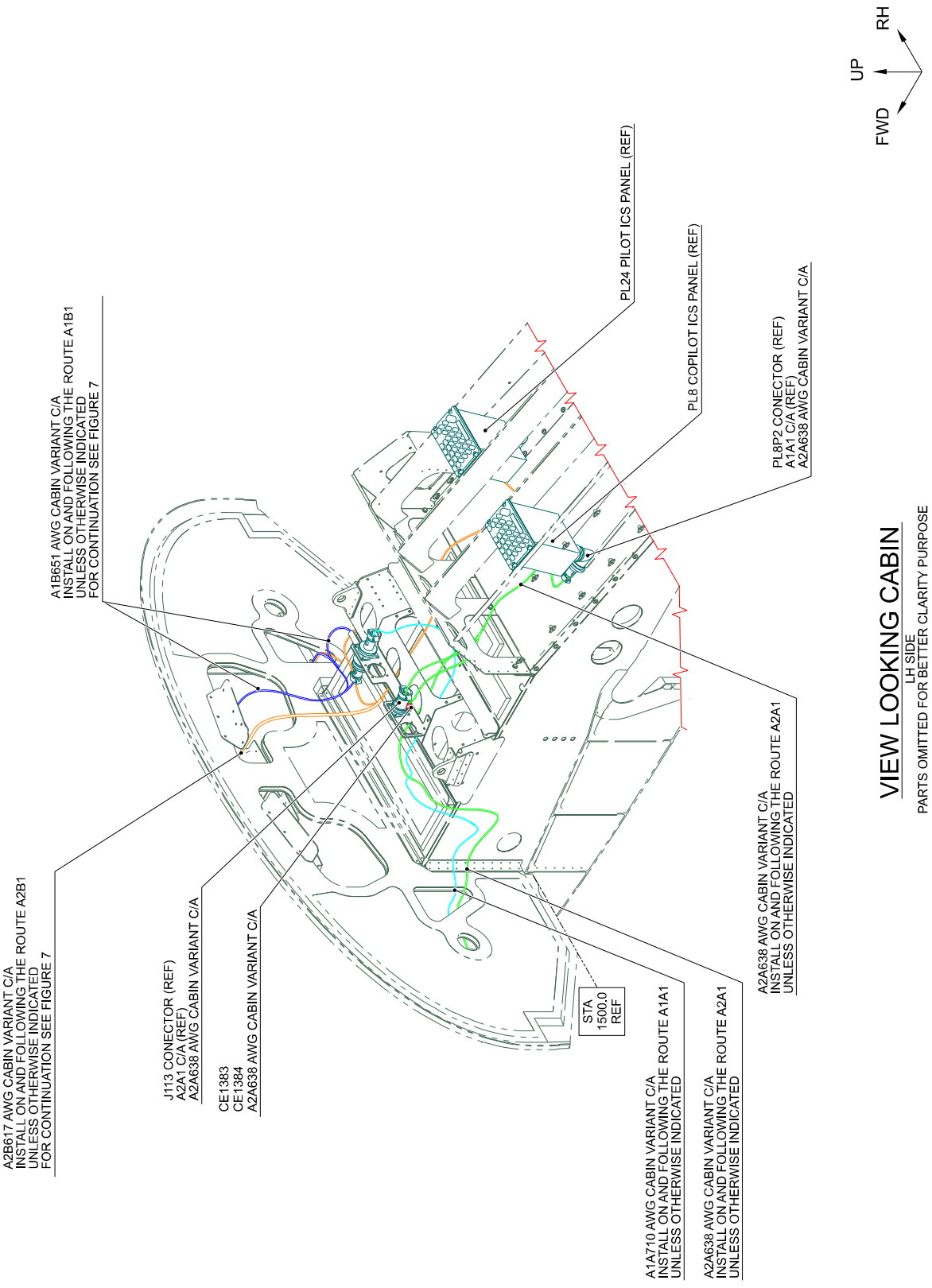

A1B651 AWG CABIN VARIANT C/A
INSTALL ON AND FOLLOWING THE ROUTE A1B1
UNLESS OTHERWISE INDICATED
FOR CONTINUATION SEE FIGURE 7
PL24 PILOT ICS PANEL (REF)
PL8 COPILOT ICS PANEL (REF)
PL8P2 CONECTOR (REF)
A1A1 C/A (REF)
A2A638 AWG CABIN VARIANT C/A
A2B617 AWG CABIN VARIANT C/A
INSTALL ON AND FOLLOWING THE ROUTE A2B1
UNLESS OTHERWISE INDICATED
FOR CONTINUATION SEE FIGURE 7
J113 CONECTOR (REF)
A2A1 C/A (REF)
A2A638 AWG CABIN VARIANT C/A
CE1383
CE1384
A2A638 AWG CABIN VARIANT C/A
STA
1500.0
REF
A1A710 AWG CABIN VARIANT C/A
INSTALL ON AND FOLLOWING THE ROUTE A1A1
UNLESS OTHERWISE INDICATED
A2A638 AWG CABIN VARIANT C/A
INSTALL ON AND FOLLOWING THE ROUTE A2A1
UNLESS OTHERWISE INDICATED
A2A638 AWG CABIN VARIANT C/A
INSTALL ON AND FOLLOWING THE ROUTE A2A1
UNLESS OTHERWISE INDICATED
UP
RH
FWD
VIEW LOOKING CABIN
LH SIDE
PARTS OMITTED FOR BETTER CLARITY PURPOSE

Figure 9

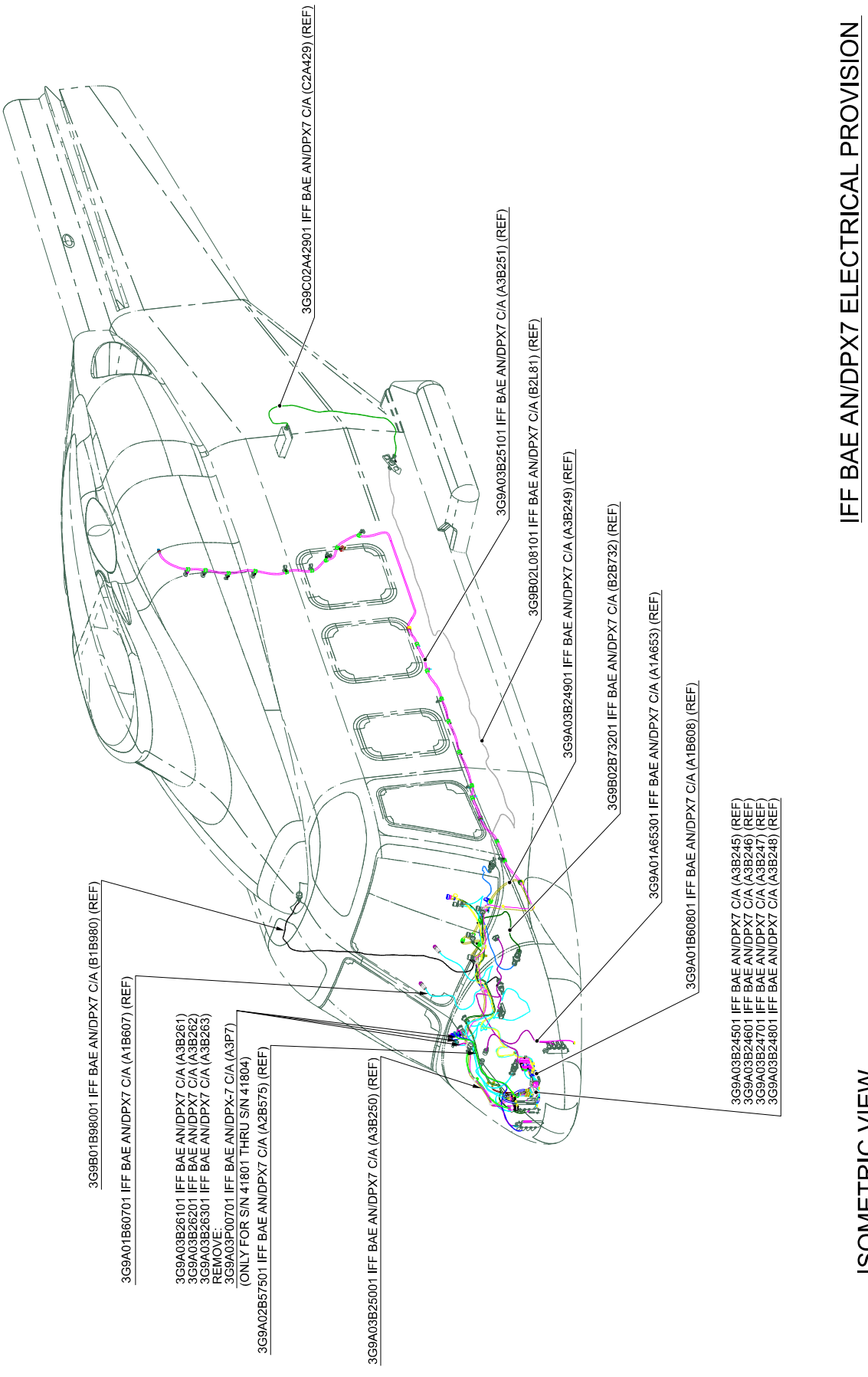
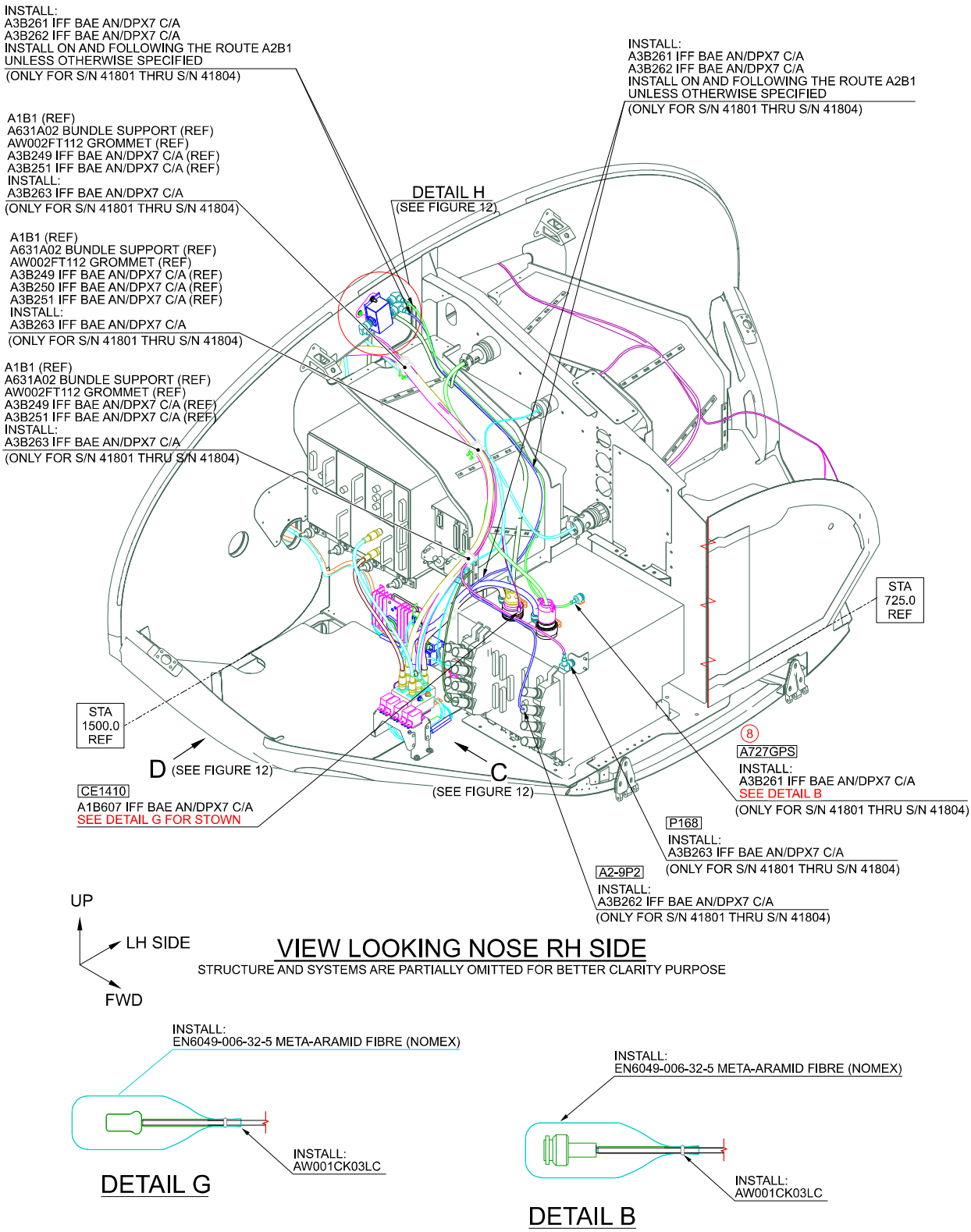

IFF BAE AN/DPX7 ELECTRICAL PROVISION
3G9340A01611
ISOMETRIC VIEW
3G9C02A42901 IFF BAE AN/DPX7 C/A (C2A429) (REF)
3G9A03B25101 IFF BAE AN/DPX7 C/A (A3B251) (REF)
3G9B02L08101 IFF BAE AN/DPX7 C/A (B2L81) (REF)
3G9A03B24901 IFF BAE AN/DPX7 C/A (A3B249) (REF)
3G9B02B73201 IFF BAE AN/DPX7 C/A (B2B732) (REF)
3G9A01A65301 IFF BAE AN/DPX7 C/A (A1A653) (REF)
3G9A01B60801 IFF BAE AN/DPX7 C/A (A1B608) (REF)
3G9A03B24501 IFF BAE AN/DPX7 C/A (A3B245) (REF)
3G9A03B24601 IFF BAE AN/DPX7 C/A (A3B246) (REF)
3G9A03B24701 IFF BAE AN/DPX7 C/A (A3B247) (REF)
3G9A03B24801 IFF BAE AN/DPX7 C/A (A3B248) (REF)
3G9B01B98001 IFF BAE AN/DPX7 C/A (B1B980) (REF)
3G9A01B60701 IFF BAE AN/DPX7 C/A (A1B607) (REF)
3G9A03B26101 IFF BAE AN/DPX7 C/A (A3B261)
3G9A03B26201 IFF BAE AN/DPX7 C/A (A3B262)
3G9A03B26301 IFF BAE AN/DPX7 C/A (A3B263)
REMOVE:
3G9A03P00701 IFF BAE AN/DPX-7 C/A (A3P7)
(ONLY FOR S/N 41801 THRU S/N 41804)
3G9A02B57501 IFF BAE AN/DPX7 C/A (A2B575) (REF)
3G9A03B25001 IFF BAE AN/DPX7 C/A (A3B250) (REF)

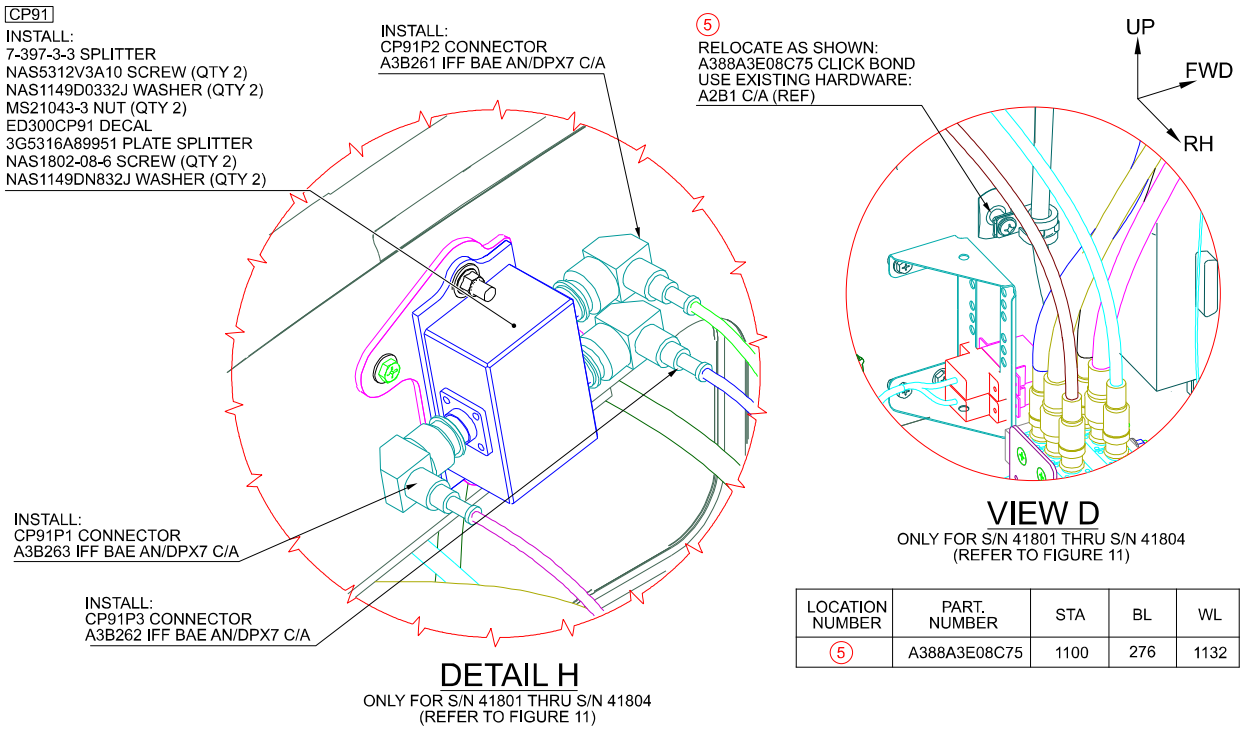
Figure 10



INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:

LOCATION NUMBER	PART. NUMBER	STA	BL	WL	ORIENTATION
8	AW001CL001-N6	897	186	1316	-

Figure 11



LOCATION NUMBER	PART. NUMBER	STA	BL	WL
5	A388A3E08C75	1100	276	1132

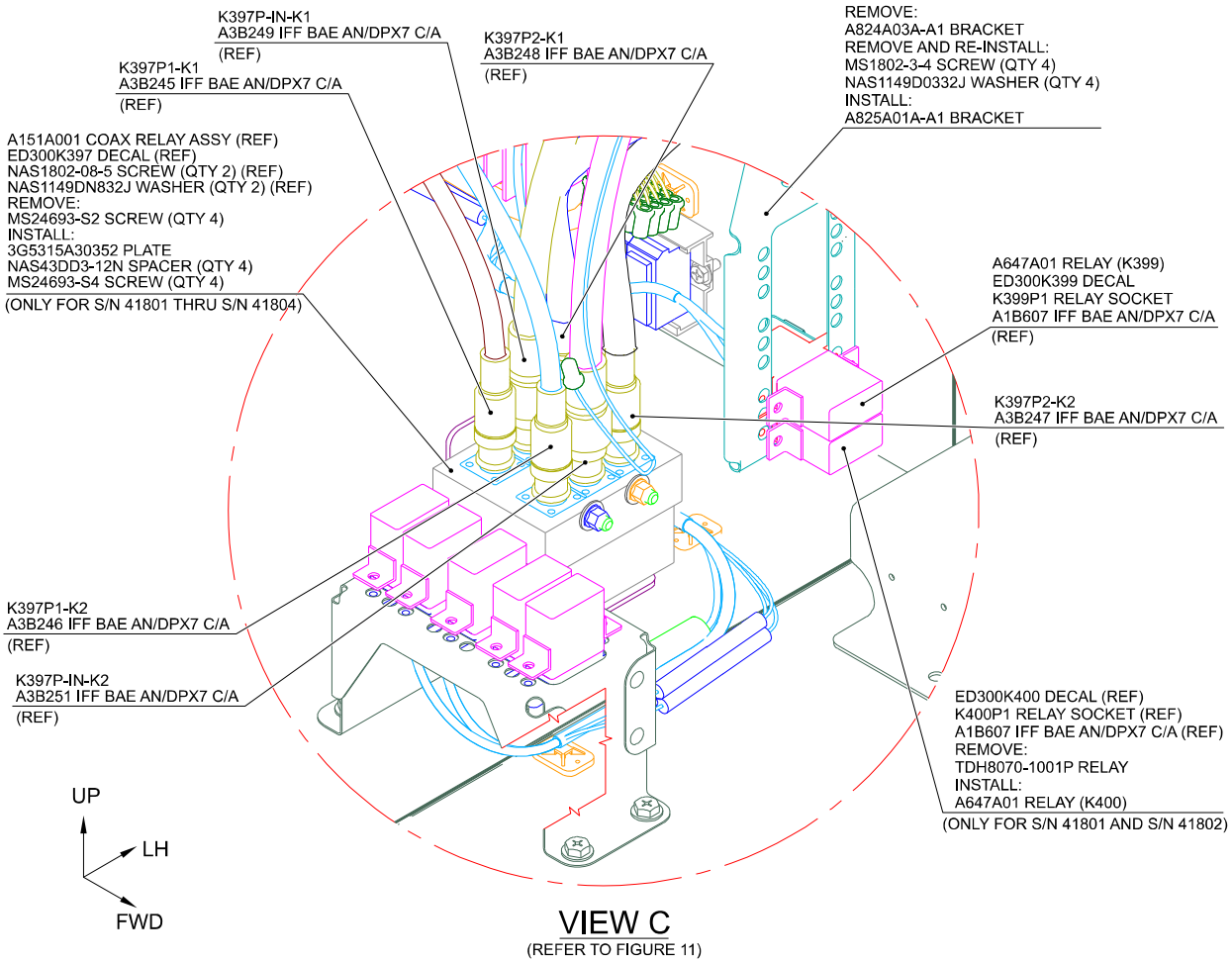
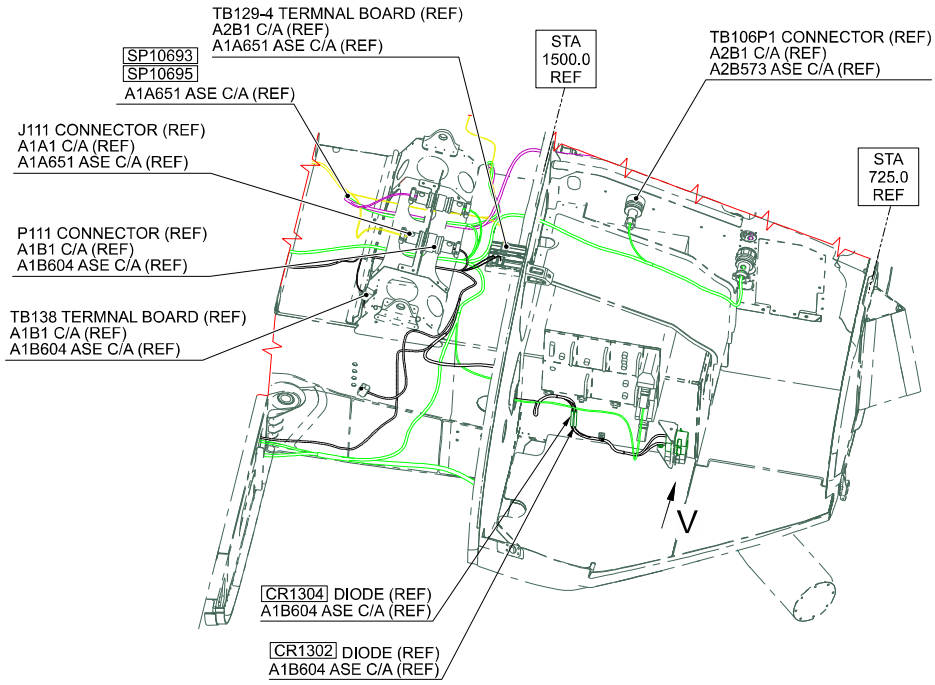
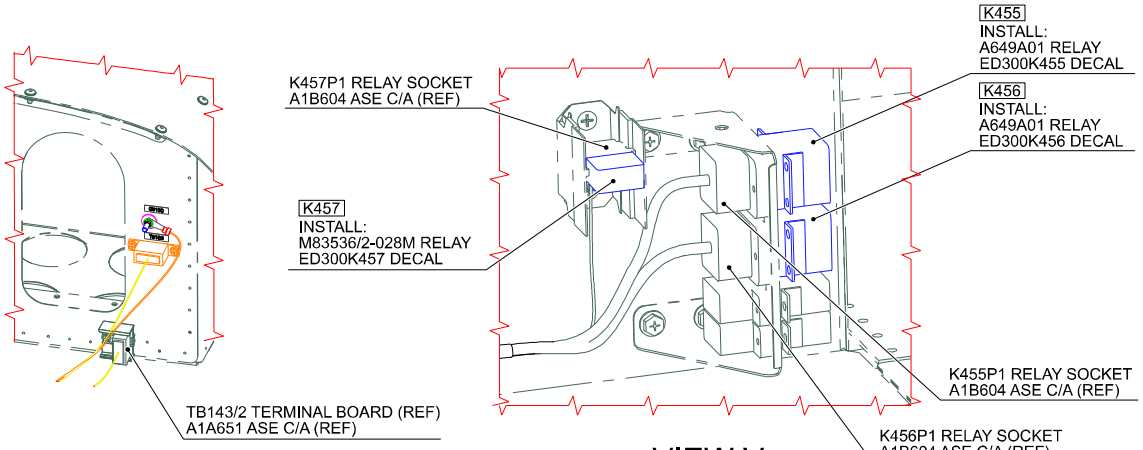


Figure 12



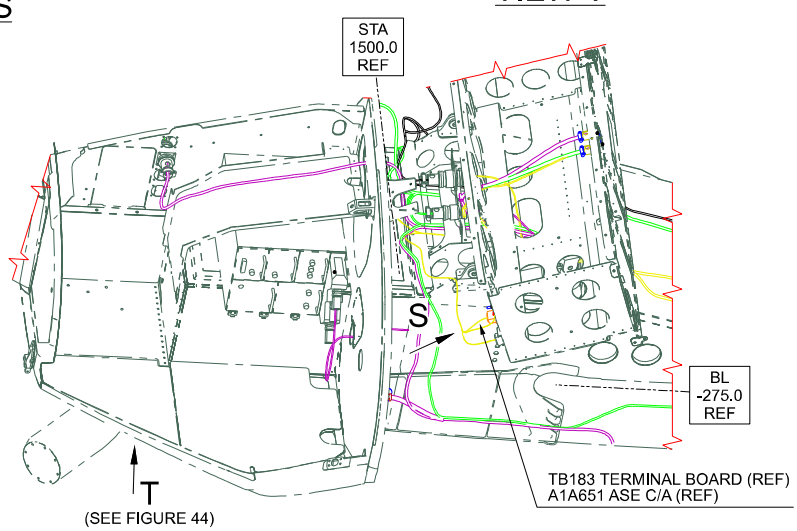
VIEW LOOKING COCKPIT AREA FROM RIGHT SIDE

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



VIEW S

VIEW V



VIEW LOOKING COCKPIT AREA FROM LEFT SIDE

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 13

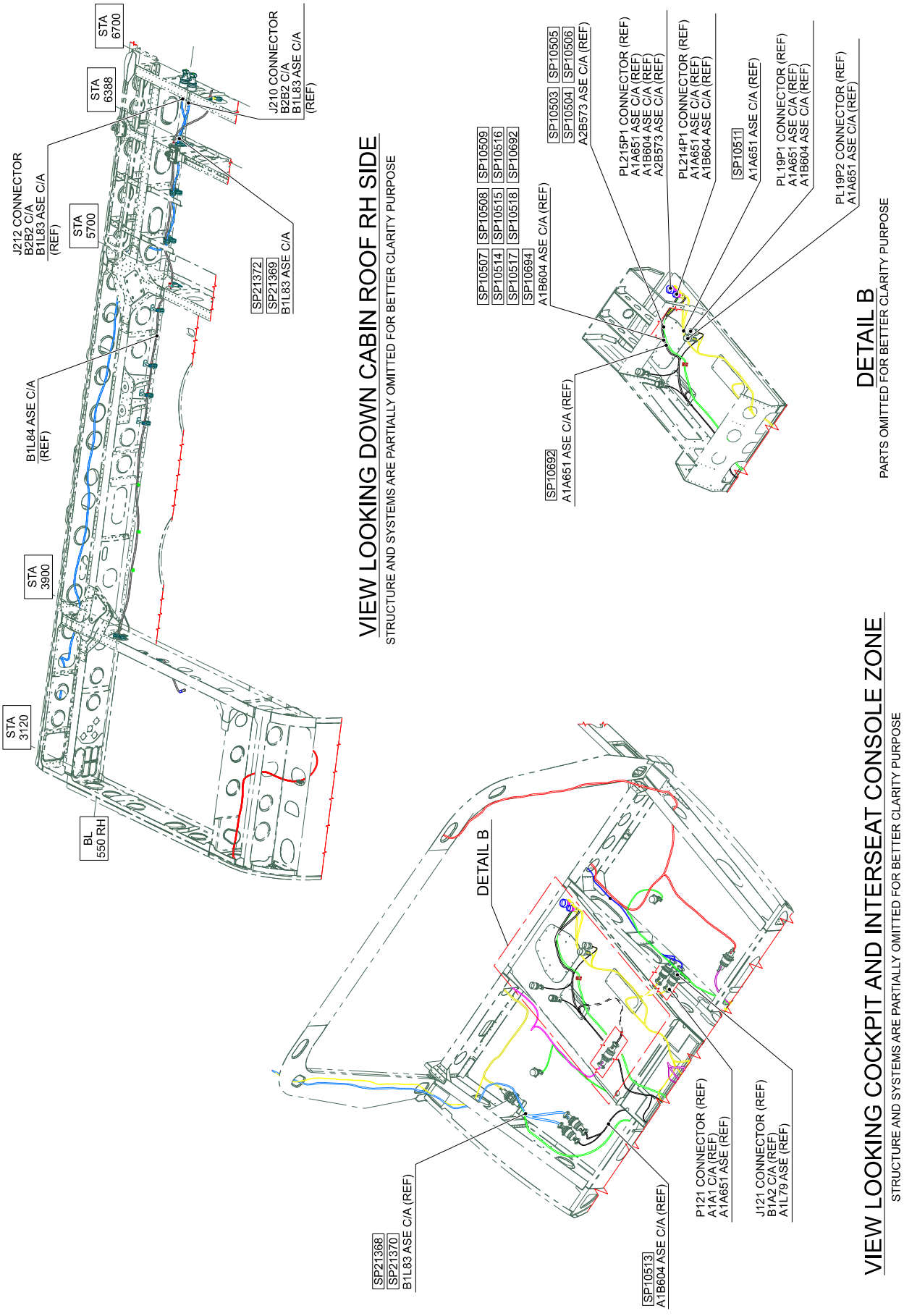

VIEW LOOKING DOWN CABIN ROOF RH SIDE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
STA 6700
STA 6388
STA 5700
STA 3900
STA 3120
BL 550 RH
J212 CONNECTOR B2B2 C/A B1L83 ASE C/A (REF)
B1L84 ASE C/A (REF)
J210 CONNECTOR B2B2 C/A B1L83 ASE C/A (REF)
SP21372
SP21369
B1L83 ASE C/A
DETAIL B
SP10507 SP10508 SP10509
SP10514 SP10515 SP10516
SP10517 SP10518 SP10692
SP10694
A1B604 ASE C/A (REF)
SP10503 SP10505
SP10504 SP10506
A2B573 ASE C/A (REF)
PL215P1 CONNECTOR (REF)
A1A651 ASE C/A (REF)
A1B604 ASE C/A (REF)
A2B573 ASE C/A (REF)
PL214P1 CONNECTOR (REF)
A1A651 ASE C/A (REF)
A1B604 ASE C/A (REF)
SP10511
A1A651 ASE C/A (REF)
PL19P1 CONNECTOR (REF)
A1A651 ASE C/A (REF)
A1B604 ASE C/A (REF)
PL19P2 CONNECTOR (REF)
A1A651 ASE C/A (REF)
SP10692
A1A651 ASE C/A (REF)
DETAIL B
PARTS OMITTED FOR BETTER CLARITY PURPOSE
VIEW LOOKING COCKPIT AND INTERSEAT CONSOLE ZONE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
SP21368
SP21370
B1L83 ASE C/A (REF)
SP10513
A1B604 ASE C/A (REF)
P121 CONNECTOR (REF)
A1A1 C/A (REF)
A1A651 ASE (REF)
J121 CONNECTOR (REF)
B1A2 C/A (REF)
A1L79 ASE (REF)

Figure 14

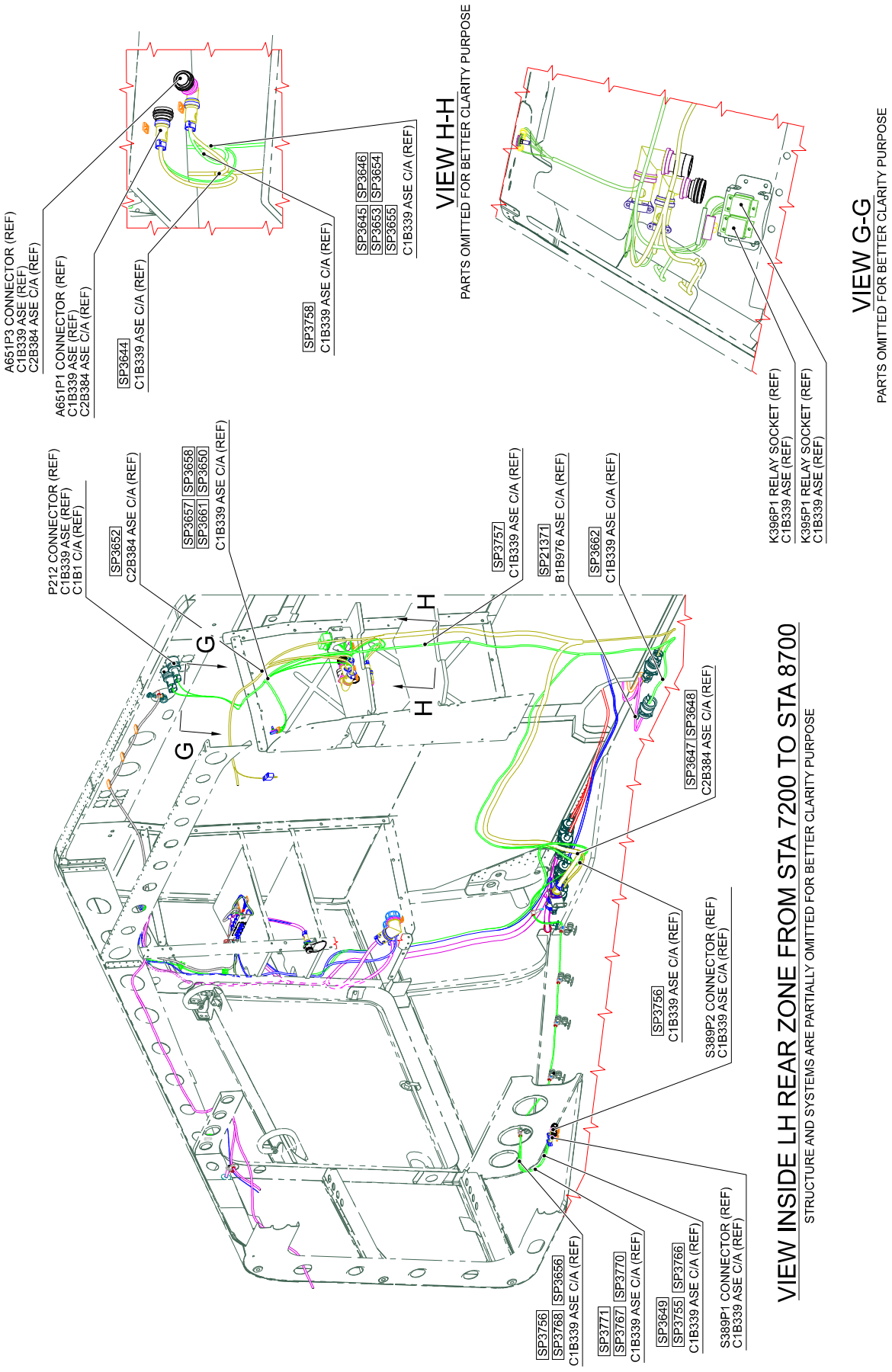

VIEW INSIDE LH REAR ZONE FROM STA 7200 TO STA 8700
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
VIEW H-H
PARTS OMITTED FOR BETTER CLARITY PURPOSE
VIEW G-G
PARTS OMITTED FOR BETTER CLARITY PURPOSE
A651P3 CONNECTOR (REF)
C1B339 ASE (REF)
C2B384 ASE C/A (REF)
A651P1 CONNECTOR (REF)
C1B339 ASE (REF)
C2B384 ASE C/A (REF)
SP3644
C1B339 ASE C/A (REF)
SP3758
C1B339 ASE C/A (REF)
SP3645
SP3653
SP3655
SP3646
SP3654
C1B339 ASE C/A (REF)
K396P1 RELAY SOCKET (REF)
C1B339 ASE (REF)
K395P1 RELAY SOCKET (REF)
C1B339 ASE (REF)
P212 CONNECTOR (REF)
C1B339 ASE (REF)
C1B1 C/A (REF)
SP3652
C2B384 ASE C/A (REF)
SP3657
SP3661
SP3658
SP3650
C1B339 ASE C/A (REF)
SP3757
C1B339 ASE C/A (REF)
SP21371
B1B976 ASE C/A (REF)
SP3662
C1B339 ASE C/A (REF)
SP3647
SP3648
C2B384 ASE C/A (REF)
S389P2 CONNECTOR (REF)
C1B339 ASE C/A (REF)
SP3756
C1B339 ASE C/A (REF)
S389P1 CONNECTOR (REF)
C1B339 ASE C/A (REF)
SP3649
SP3755
SP3766
C1B339 ASE C/A (REF)
SP3771
SP3767
SP3770
C1B339 ASE C/A (REF)
SP3756
SP3768
SP3656
C1B339 ASE C/A (REF)
G
G
H
H

Figure 15

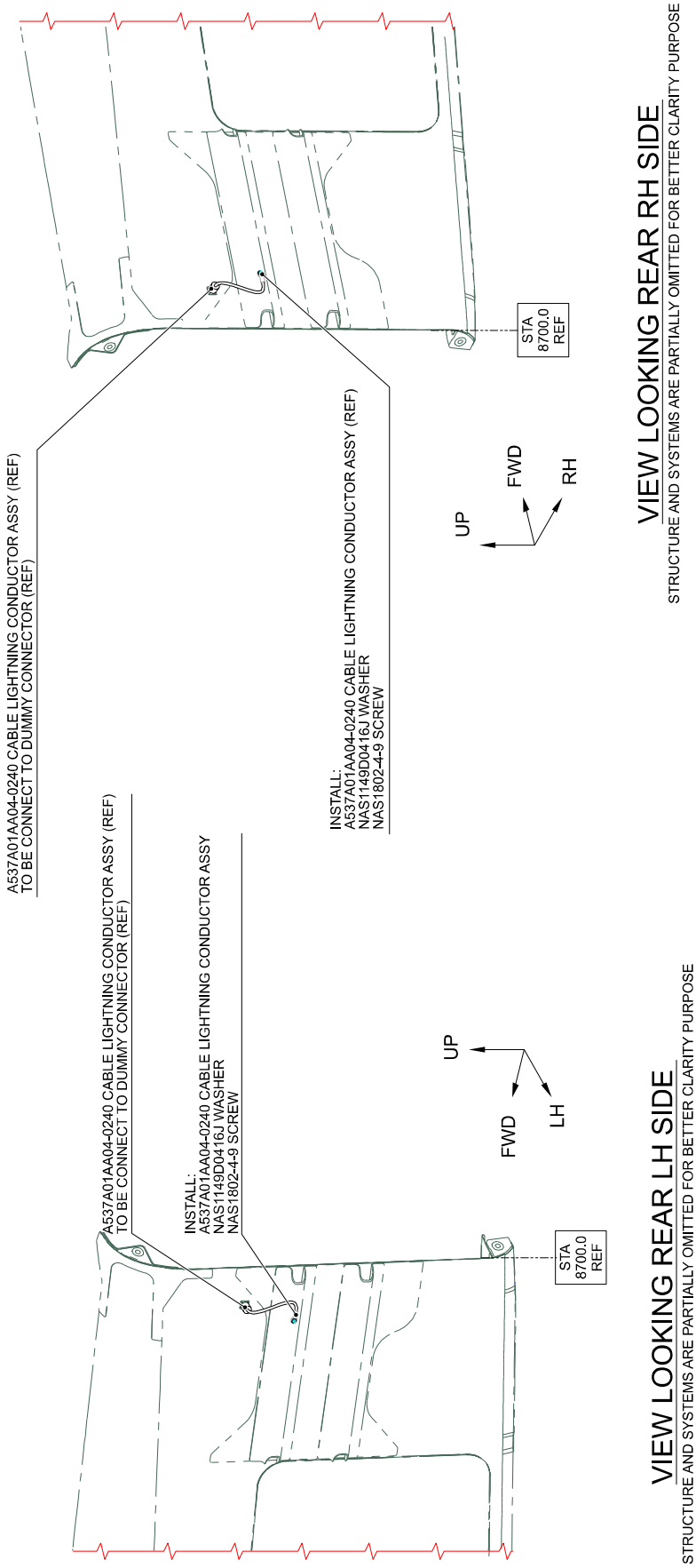
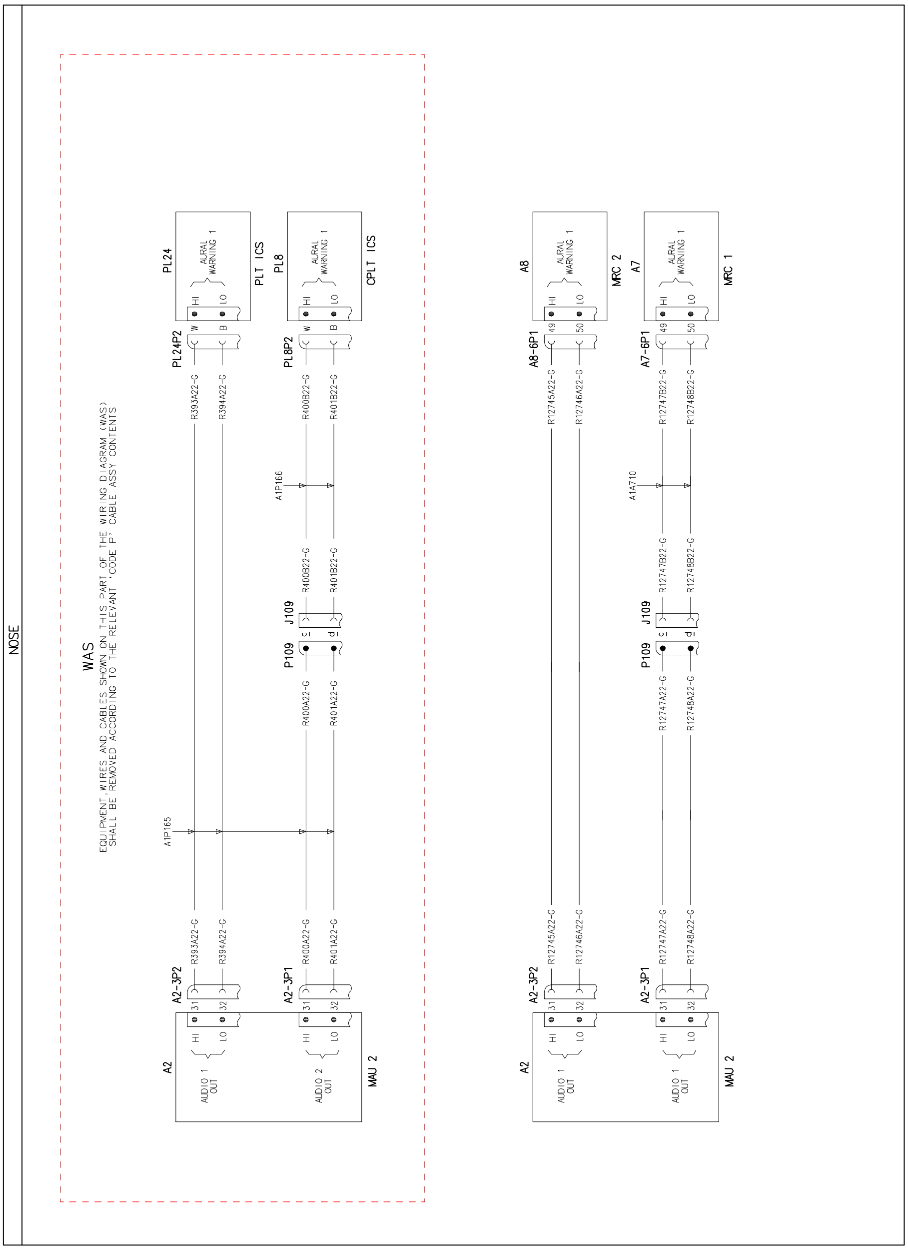

A537A01AA04-0240 CABLE LIGHTNING CONDUCTOR ASSY (REF)
TO BE CONNECT TO DUMMY CONNECTOR (REF)
INSTALL:
A537A01AA04-0240 CABLE LIGHTNING CONDUCTOR ASSY (REF)
NAS1149D0416J WASHER
NAS1802-4-9 SCREW
STA 8700.0 REF
UP
FWD
RH
VIEW LOOKING REAR RH SIDE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
A537A01AA04-0240 CABLE LIGHTNING CONDUCTOR ASSY (REF)
TO BE CONNECT TO DUMMY CONNECTOR (REF)
INSTALL:
A537A01AA04-0240 CABLE LIGHTNING CONDUCTOR ASSY
NAS1149D0416J WASHER
NAS1802-4-9 SCREW
STA 8700.0 REF
UP
FWD
LH
VIEW LOOKING REAR LH SIDE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 16

3G2350W15911
WIRING DIAGRAM AWG CABIN VARIANT
SHEET 1



NOSE
WAS
EQUIPMENT, WIRES AND CABLES SHOWN ON THIS PART OF THE WIRING DIAGRAM (WAS) SHALL BE REMOVED ACCORDING TO THE RELEVANT 'CODE P' CABLE ASSY CONTENTS
A2
MAU 2
AUDIO 1 OUT
AUDIO 2 OUT
A2-3P2
A2-3P1
A1P165
A1P166
A1A710
P109
J109
PL24P2
PL8P2
A8-6P1
A7-6P1
PL24
PLT ICS
PL8
CPLT ICS
A8
MRC 2
A7
MRC 1
AURAL WARNING 1
R393A22-G
R394A22-G
R400A22-G
R401A22-G
R400B22-G
R401B22-G
R12745A22-G
R12746A22-G
R12747A22-G
R12748A22-G
R12747B22-G
R12748B22-G

FUNCTIONAL NOTES

ALL CABLES ARE IN LOOM A1B651 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556A1 22 UNLESS SPECIFIED

Figure 17

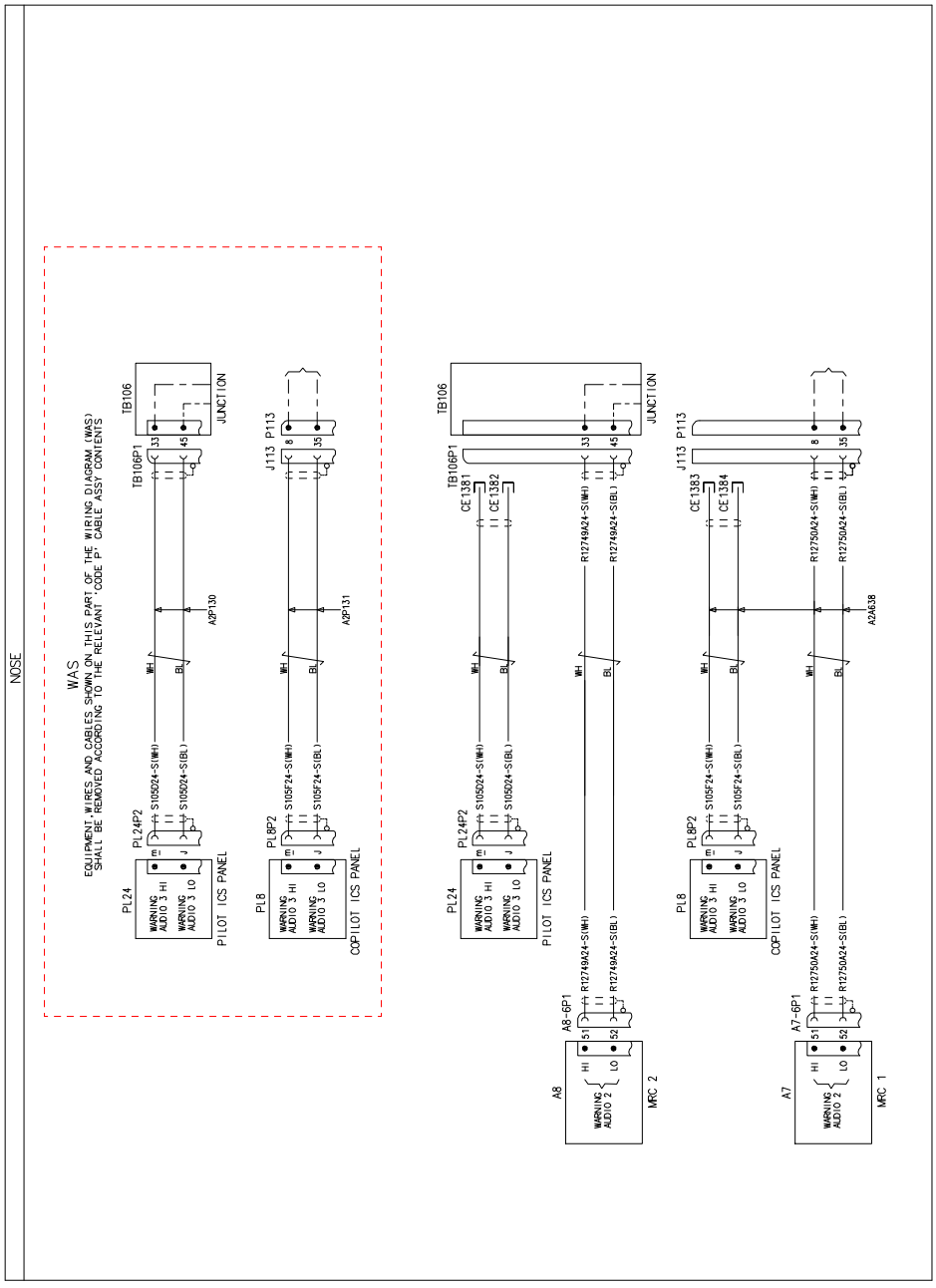

NOSE
WAS
EQUIPMENT WIRES AND CABLES SHOWN ON THIS PART OF THE WIRING DIAGRAM (WAS)
SHALL BE REMOVED ACCORDING TO THE RELEVANT "CODE P" CABLE ASSY CONTENTS
TB106
JUNCTION
TB106P1
33
45
PL24P2
S105024-S(WH)
S105024-S(BL)
A2P130
PL24
WARNING AUDIO 3 HI
WARNING AUDIO 3 LO
PILOT ICS PANEL
J113 P113
8
J5
PL8P2
S105F24-S(WH)
S105F24-S(BL)
A2P131
PL8
WARNING AUDIO 3 HI
WARNING AUDIO 3 LO
COPILOT ICS PANEL
TB106
JUNCTION
TB106P1
CE1381
CE1382
PL24P2
S105024-S(WH)
S105024-S(BL)
PL24
WARNING AUDIO 3 HI
WARNING AUDIO 3 LO
PILOT ICS PANEL
R12749A24-S(WH)
R12749A24-S(BL)
A8-6P1
51
52
A8
HI
LO
WARNING AUDIO 2
MRC 2
J113 P113
CE1383
CE1384
PL8P2
S105F24-S(WH)
S105F24-S(BL)
PL8
WARNING AUDIO 3 HI
WARNING AUDIO 3 LO
COPILOT ICS PANEL
R12750A24-S(WH)
R12750A24-S(BL)
A2A638
A7-6P1
51
52
A7
HI
LO
WARNING AUDIO 2
MRC 1
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A2B617 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE AS61A12 24 UNLESS SPECIFIED

Figure 18

3G9340W00811
WIRING DIAGRAM IFF BAE AN/DPX7
SHEET 1

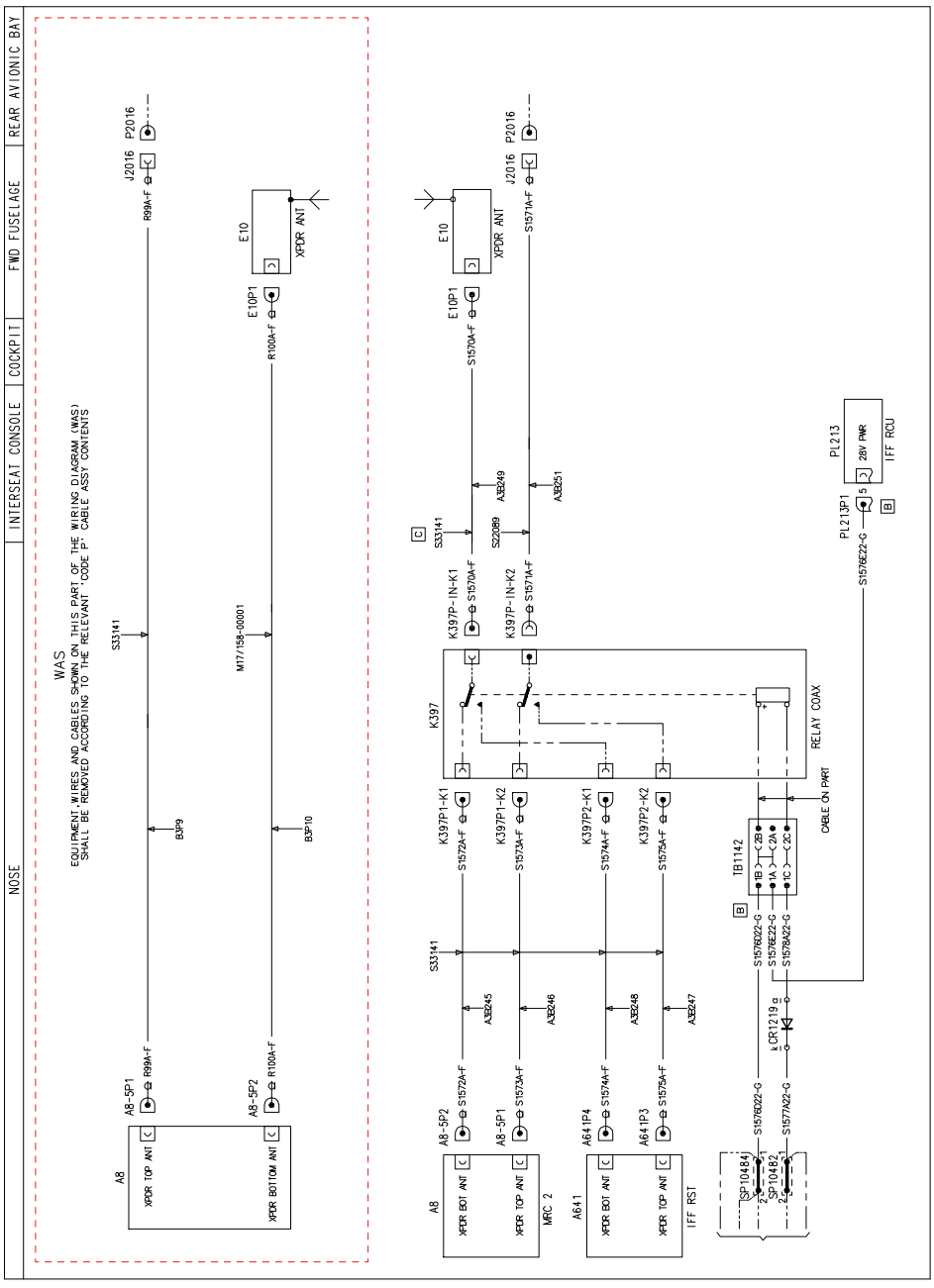


Figure 19

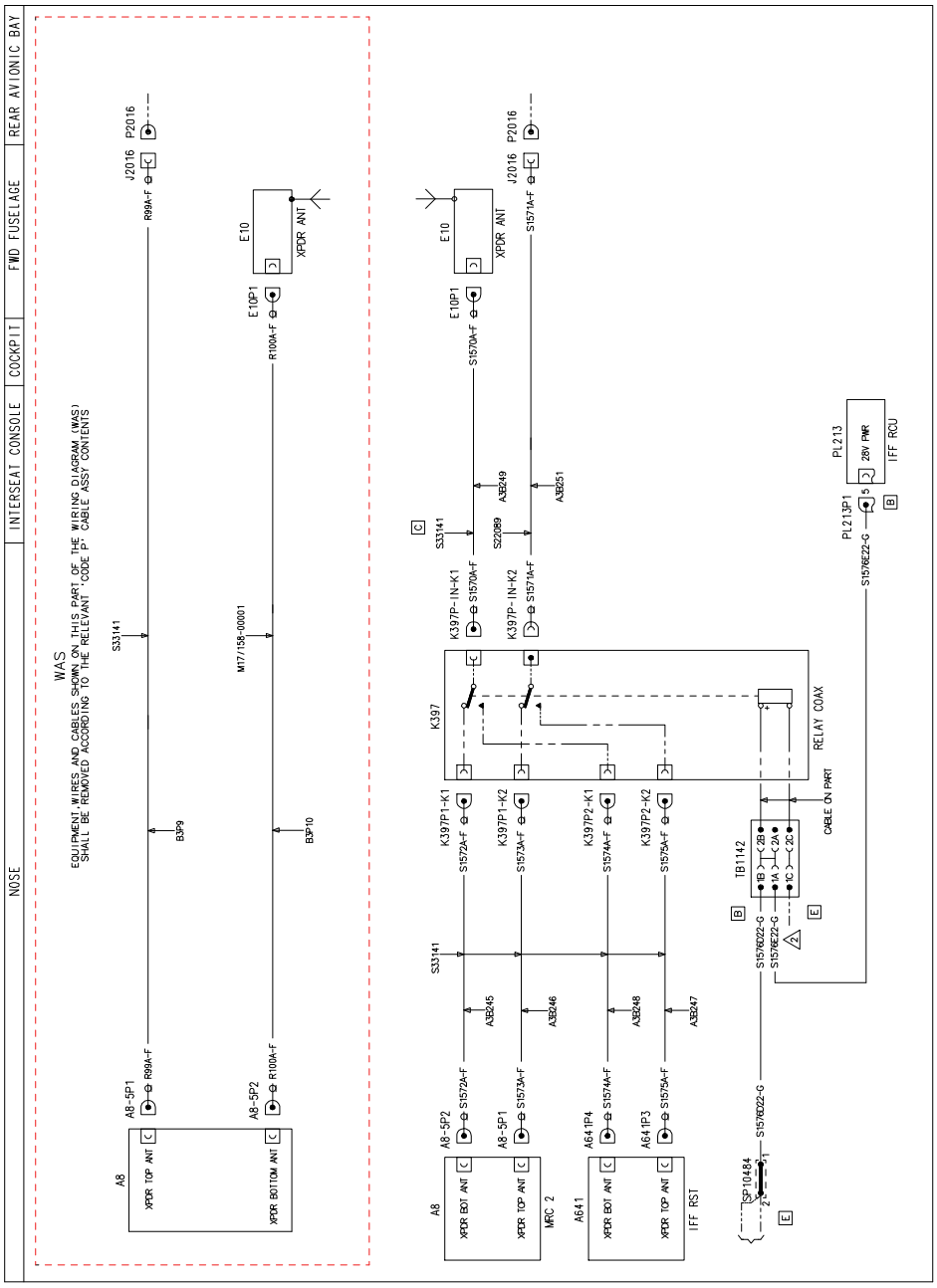

NOSE
INTERSEAT CONSOLE
COCKPIT
FWD FUSELAGE
REAR AVIONIC BAY
WAS
EQUIPMENT WIRES AND CABLES SHOWN ON THIS PART OF THE WIRING DIAGRAM (WAS) SHALL BE REMOVED ACCORDING TO THE RELEVANT "CODE P" CABLE ASSY CONTENTS
A8
XPDR TOP ANT
XPDR BOTTOM ANT
A8-5P1
A8-5P2
R99A-F
R100A-F
S33141
M77/158-00001
B3P9
B3P10
J2016
P2016
E10
E10P1
XPDR ANT
S1571A-F
S1570A-F
S22089
A3B249
A3B251
K397
K397P-IN-K1
K397P-IN-K2
K397P1-K1
K397P1-K2
K397P2-K1
K397P2-K2
S1572A-F
S1573A-F
S1574A-F
S1575A-F
A3B245
A3B246
A3B248
A3B247
A641
A641P4
A641P3
XPDR BOT ANT
XPDR TOP ANT
MRC 2
IFF RST
TB1142
1B
1A
1C
2B
2A
2C
S1576D22-G
CP10484
RELAY COAX
CABLE ON PART
P1213
P1213P1
28V PWR
IFF RCU
FUNCTIONAL NOTES
ALL CABLES ARE IN LOW A83007 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A3B241 22 UNLESS SPECIFIED

Figure 20

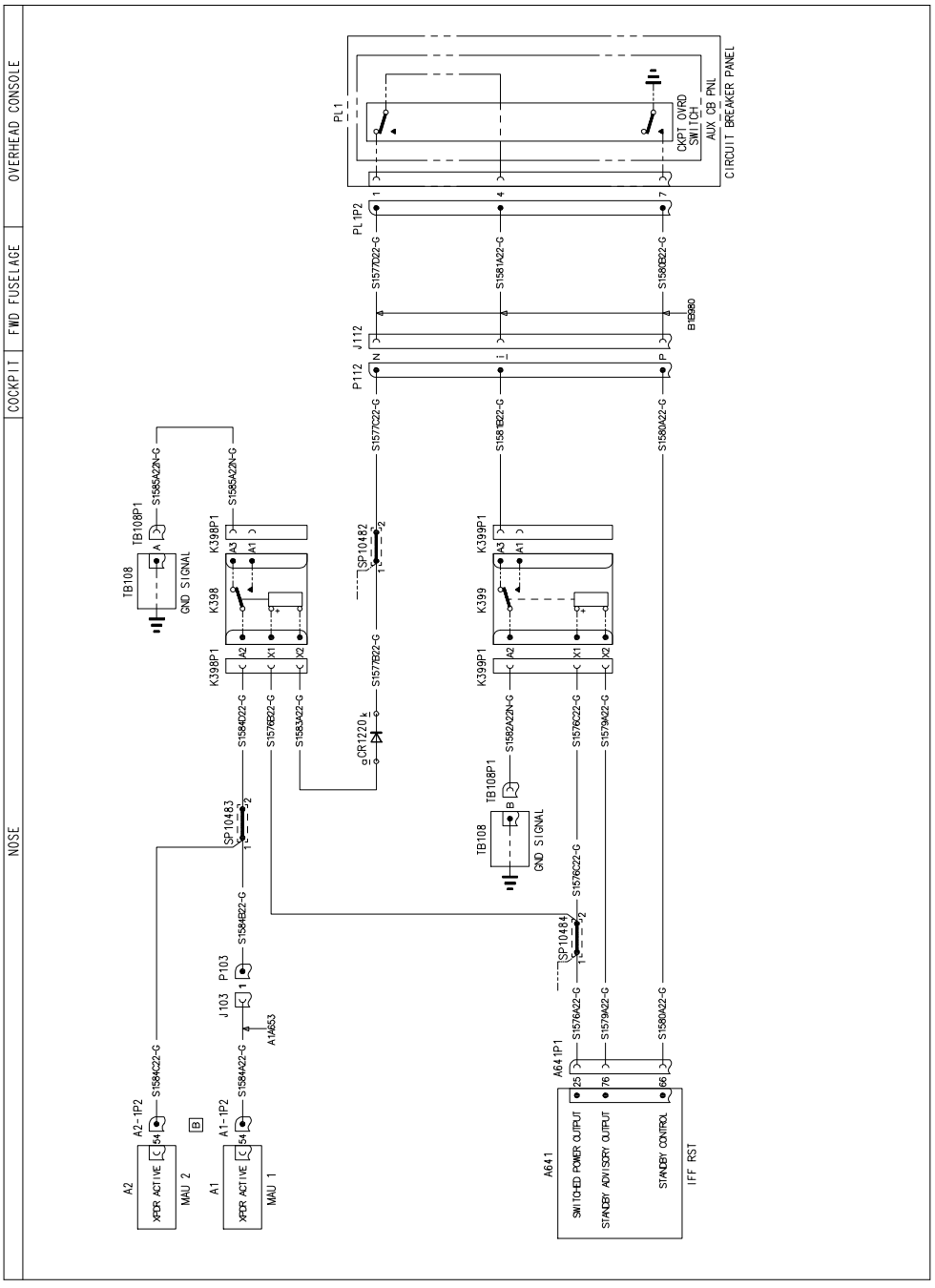

NOSE
COCKPIT
FWD FUSELAGE
OVERHEAD CONSOLE
PL1
CIRCUIT BREAKER PANEL
AUX CB PNL
CKPT OVRD SWITCH
PL1P2
J112
P112
S1577D22-G
S1581A22-G
S1580B22-G
S1580A22-G
S1581B22-G
S1577B22-G
E16980
SP10482
K398P1
K398
K399P1
K399
TB108
TB108P1
GND SIGNAL
S1585A22N-G
S1582A22N-G
S1584D22-G
S1578B22-G
S1583A22-G
CR1220
SP10483
SP10484
S1584B22-G
S1576B22-G
S1576C22-G
S1579A22-G
P103
J103
A1A653
A2
A2-1P2
XPDR ACTIVE
MAU 2
A1
A1-1P2
MAU 1
S1584C22-G
S1584A22-G
A641
A641P1
SWITCHED POWER OUTPUT
STANDBY ADVISORY OUTPUT
STANDBY CONTROL
IFF RST
S1576A22-G
S1579A22-G
S1580A22-G
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A18607 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE AS56AT 22 UNLESS SPECIFIED

Figure 21

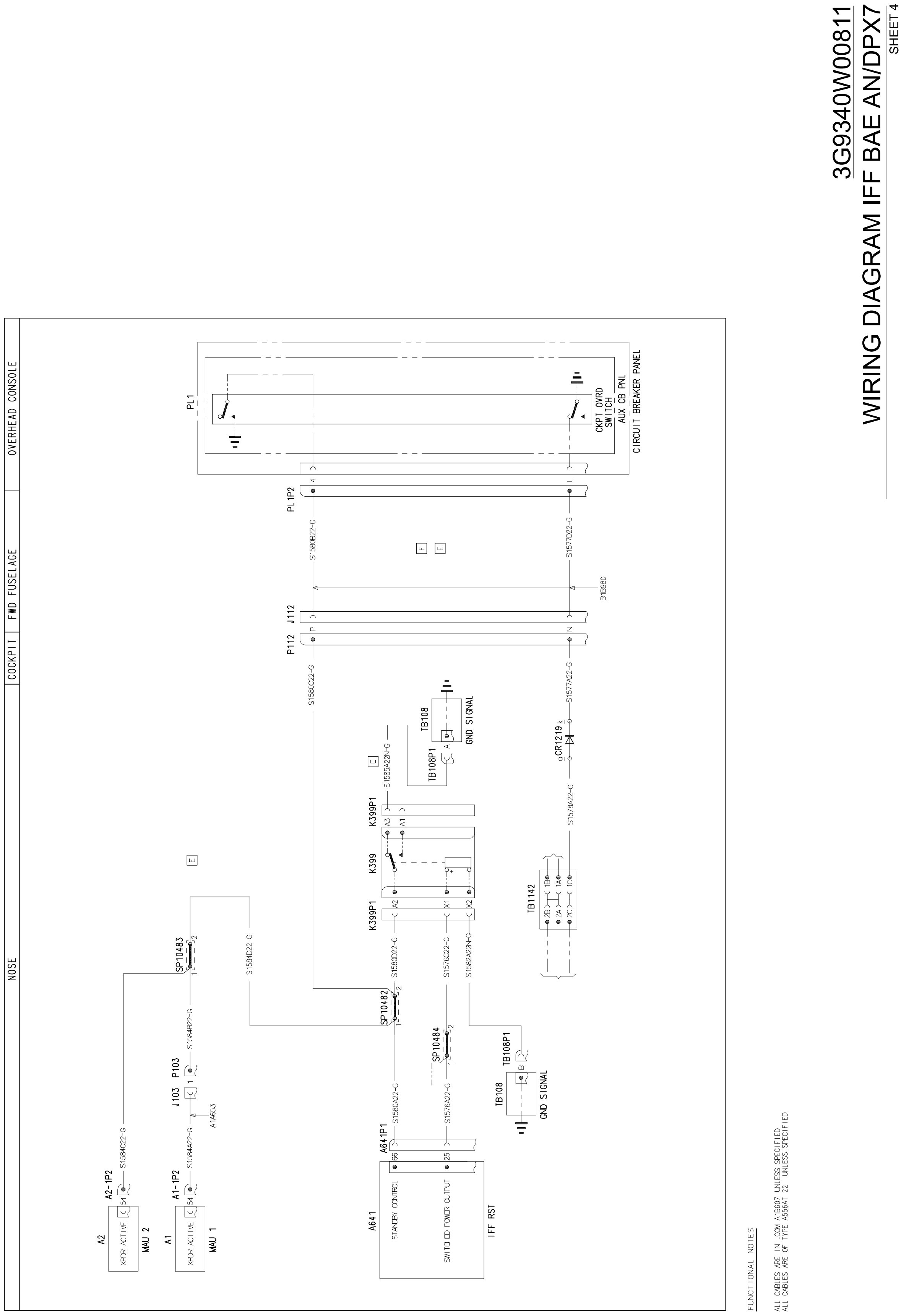

3G9340W00811
WIRING DIAGRAM IFF BAE AN/DPX7
SHEET 4
NOSE
COCKPIT
FWD FUSELAGE
OVERHEAD CONSOLE
CIRCUIT BREAKER PANEL
AUX CB PNL
CKPT OVRD SWITCH
PL1
PL1P2
J112
P112
K399
K399P1
TB108
TB108P1
GND SIGNAL
TB1142
CR1219
SP10482
SP10483
SP10484
J103
P103
A641
A641P1
STANDBY CONTROL
SWITCHED POWER OUTPUT
IFF RST
A1
A1-1P2
XPDR ACTIVE
MAU 1
A2
A2-1P2
MAU 2
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1B607 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

Figure 22

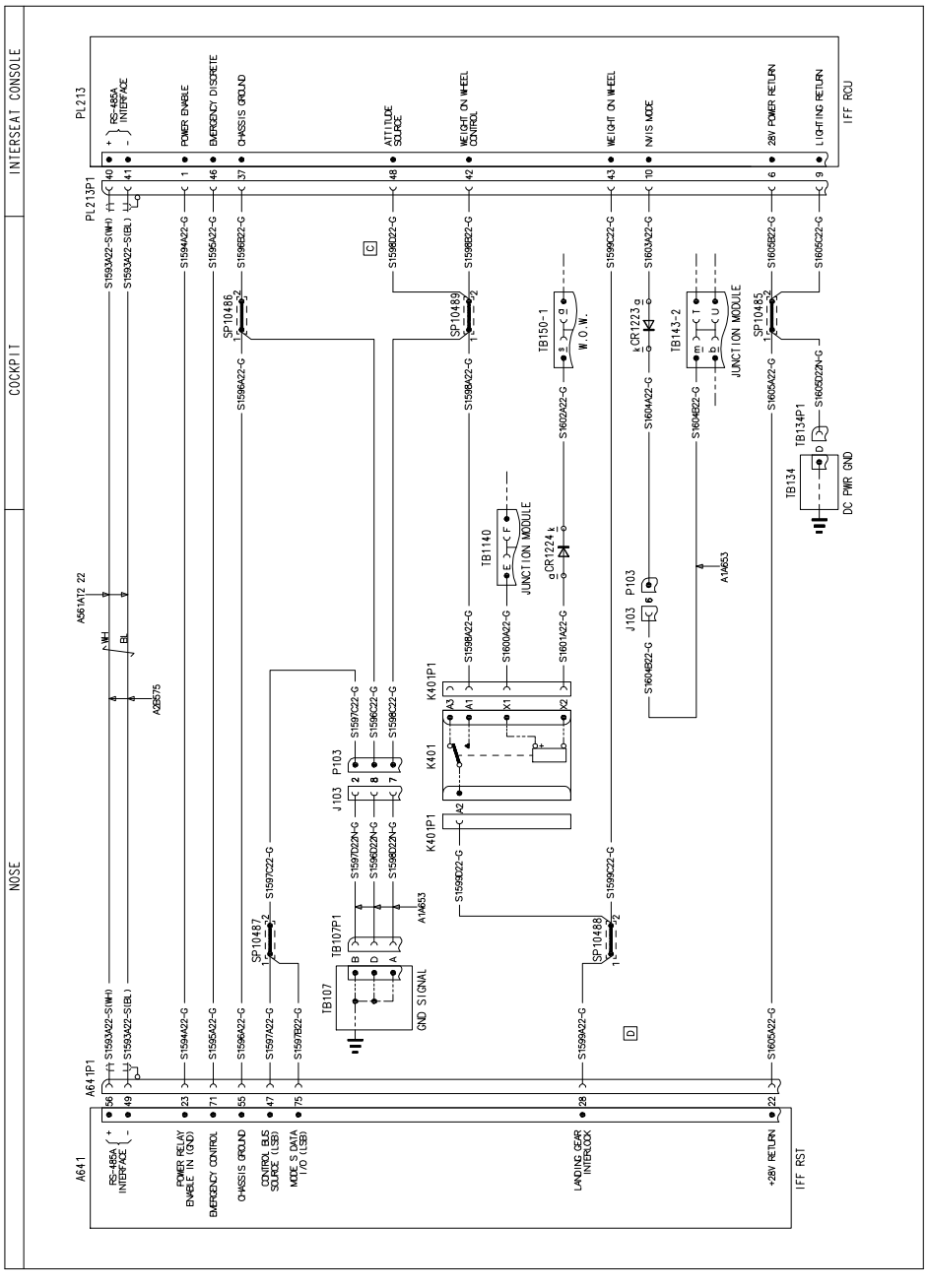

NOSE
COCKPIT
INTERSEAT CONSOLE
A641
A64-1P1
PL213
PL213P1
RS-485A INTERFACE
POWER ENABLE IN (GND)
EMERGENCY CONTROL
CHASSIS GROUND
CONTROL BUS SOURCE (LSB)
MODE S DATA I/O (LSB)
LANDING GEAR INTERLOCK
+28V RETURN
IFF RST
POWER ENABLE
EMERGENCY DISCRETE
CHASSIS GROUND
ATTITUDE SOURCE
WEIGHT ON WHEEL CONTROL
WEIGHT ON WHEEL
NAVIS MODE
28V POWER RETURN
LIGHTING RETURN
IFF RCU
TB107
TB107P1
GND SIGNAL
K401
K401P1
TB1140
JUNCTION MODULE
TB150-1
W.O.W.
TB143-2
JUNCTION MODULE
TB134
TB134P1
DC PWR GND
SP10486
SP10487
SP10488
SP10489
SP10485
J103 P103
A1A653
A56AT2 22
A28575
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A19607 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A56AT 22 UNLESS SPECIFIED

Figure 23

3G9340W00811

WIRING DIAGRAM IFF BAE AN/DPX7

SHEET 7

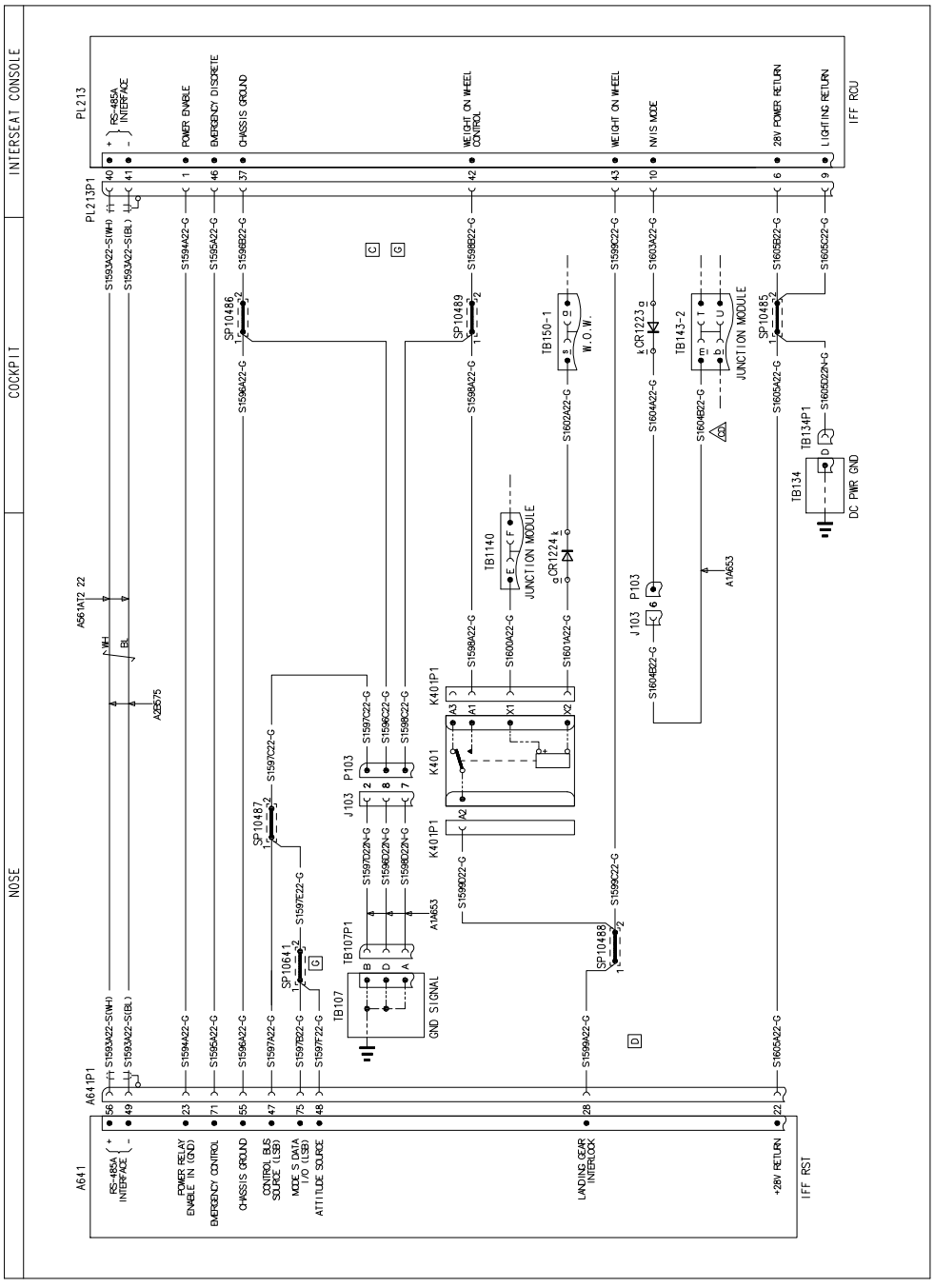


Figure 24

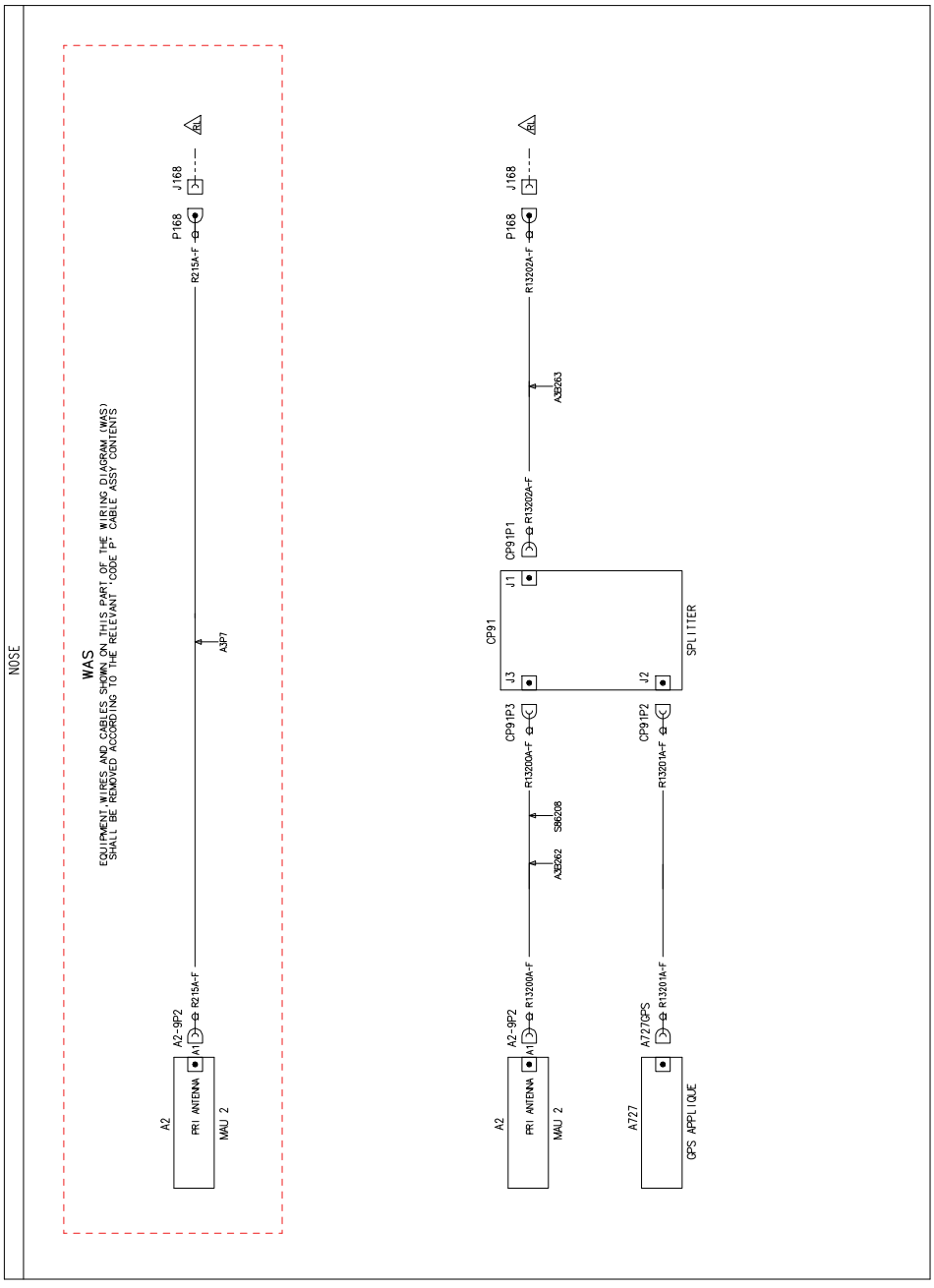

NOSE
WAS
EQUIPMENT WIRES AND CABLES SHOWN ON THIS PART OF THE WIRING DIAGRAM (WAS)
SHALL BE REMOVED ACCORDING TO THE RELEVANT 'CODE P' CABLE ASSY CONTENTS
A2
PRI ANTENNA
MAU 2
A2-9P2
A1
R215A-F
A3P7
P168
J168
A2
PRI ANTENNA
MAU 2
A2-9P2
A1
R13200A-F
A352062
S962208
CP91P3
CP91
J3
J1
CP91P1
R13202A-F
A352063
P168
J168
A727
GPS APPLIQUE
A727GPS
R13201A-F
CP91P2
J2
SPLITTER
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A352061 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE S33141 UNLESS SPECIFIED

Figure 25

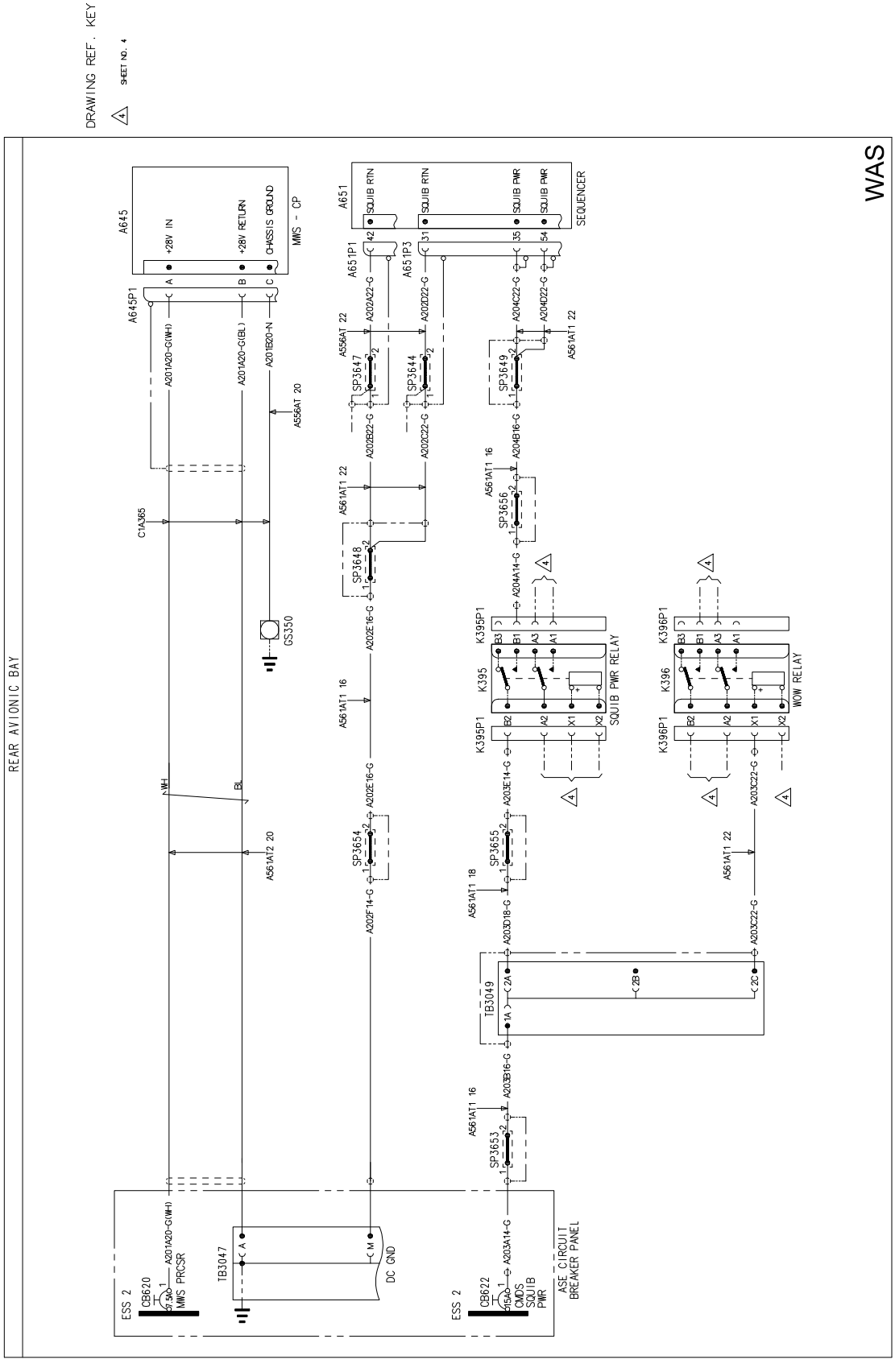

WAS
REAR AVIONIC BAY
DRAWING REF. KEY
SHEET NO. 4
A645
+28V IN
+28V RETURN
CHASSIS GROUND
MWS - CP
A645P1
A201A20-G(WH)
A201A20-G(BL)
A201E20-N
A556AT 20
C1A365
GS350
WH
BL
A561AT12 20
TB3047
DC GND
ESS 2
CB620
5A
MWS PROCSR
A651
SQUIB RTN
SQUIB RTN
SQUIB PWR
SQUIB PWR
SEQUENCER
A651P1
A651P3
A556AT 22
A202A22-G
A202D22-G
A204C22-G
A204D22-G
SP3647
SP3644
SP3649
A561AT1 22
A202B22-G
A202C22-G
A204B16-G
A561AT1 16
SP3656
SP3648
A202E16-G
A204A14-G
K395P1
K395
SQUIB PWR RELAY
K396P1
K396
WOW RELAY
SP3654
SP3655
A202F14-G
A203E14-G
A561AT1 18
A203D18-G
A203C22-G
TB3049
SP3653
A203B16-G
A203A14-G
CB622
15A
CMDS SQUIB PWR
ASE CIRCUIT BREAKER PANEL
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM C1B339 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A561AT1 14 UNLESS SPECIFIED

Figure 26

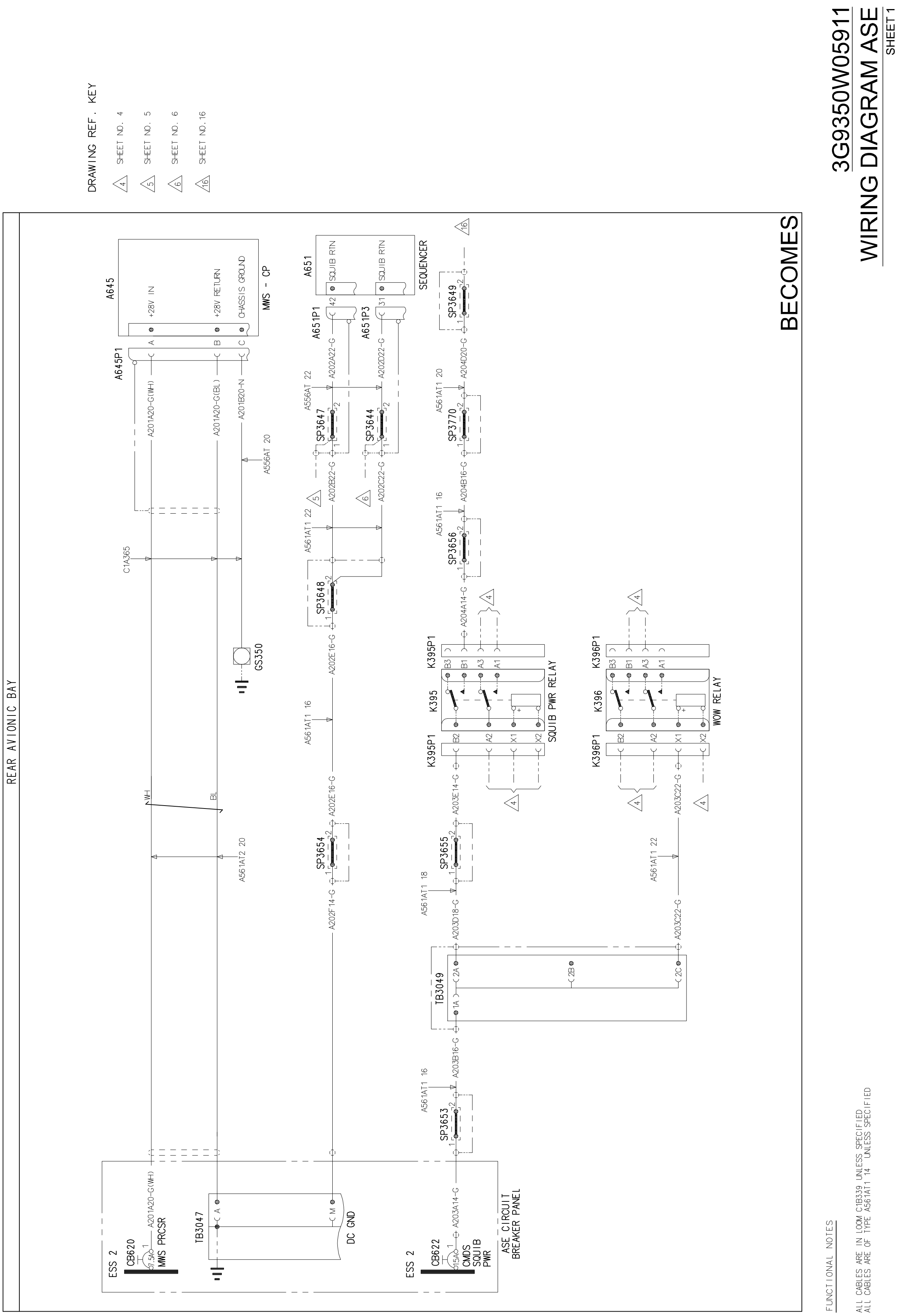

3G9350W05911
WIRING DIAGRAM ASE
SHEET 1
BECOMES
DRAWING REF. KEY
SHEET NO. 4
SHEET NO. 5
SHEET NO. 6
SHEET NO. 16
REAR AVIONIC BAY
A645
A645P1
+28V IN
+28V RETURN
CHASSIS GROUND
MWS - CP
A651
A651P1
A651P3
SQUIB RTN
SEQUENCER
GS350
K395
K395P1
SQUIB PWR RELAY
K396
K396P1
WOW RELAY
TB3049
TB3047
DC GND
ESS 2
CB620
MWS PRCSR
CB622
CMDS SQUIB PWR
ASE CIRCUIT BREAKER PANEL
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM C1B339 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A561AT1 14 UNLESS SPECIFIED

Figure 27

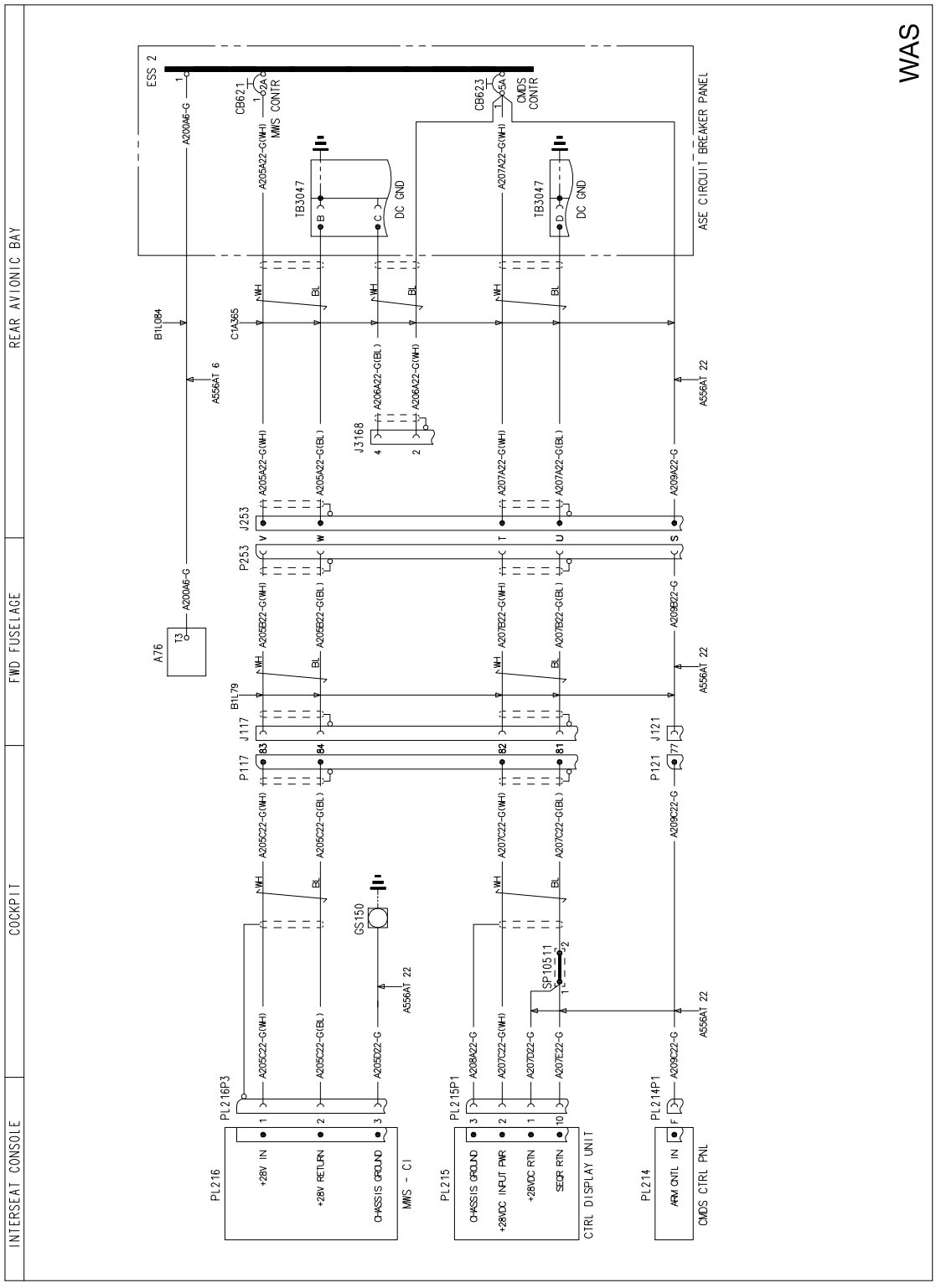

WAS
INTERSEAT CONSOLE
COCKPIT
FWD FUSELAGE
REAR AVIONIC BAY
ESS 2
CB621
MMS CONTR
CB623
CMDS CONTR
TB3047
DC GND
ASE CIRCUIT BREAKER PANEL
A76
J3168
J253
P253
J117
P117
J121
P121
GS150
SP10511
PL216
PL216P3
+28V IN
+28V RETURN
CHASSIS GROUND
MMS - CI
PL215
PL215P1
CHASSIS GROUND
+28VDC INPUT PWR
+28VDC RTN
SEQR RTN
CTRL DISPLAY UNIT
PL214
PL214P1
ARM CNTL IN
CMDS CTRL PNL
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1A651 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE AS61A12 22 UNLESS SPECIFIED

Figure 28

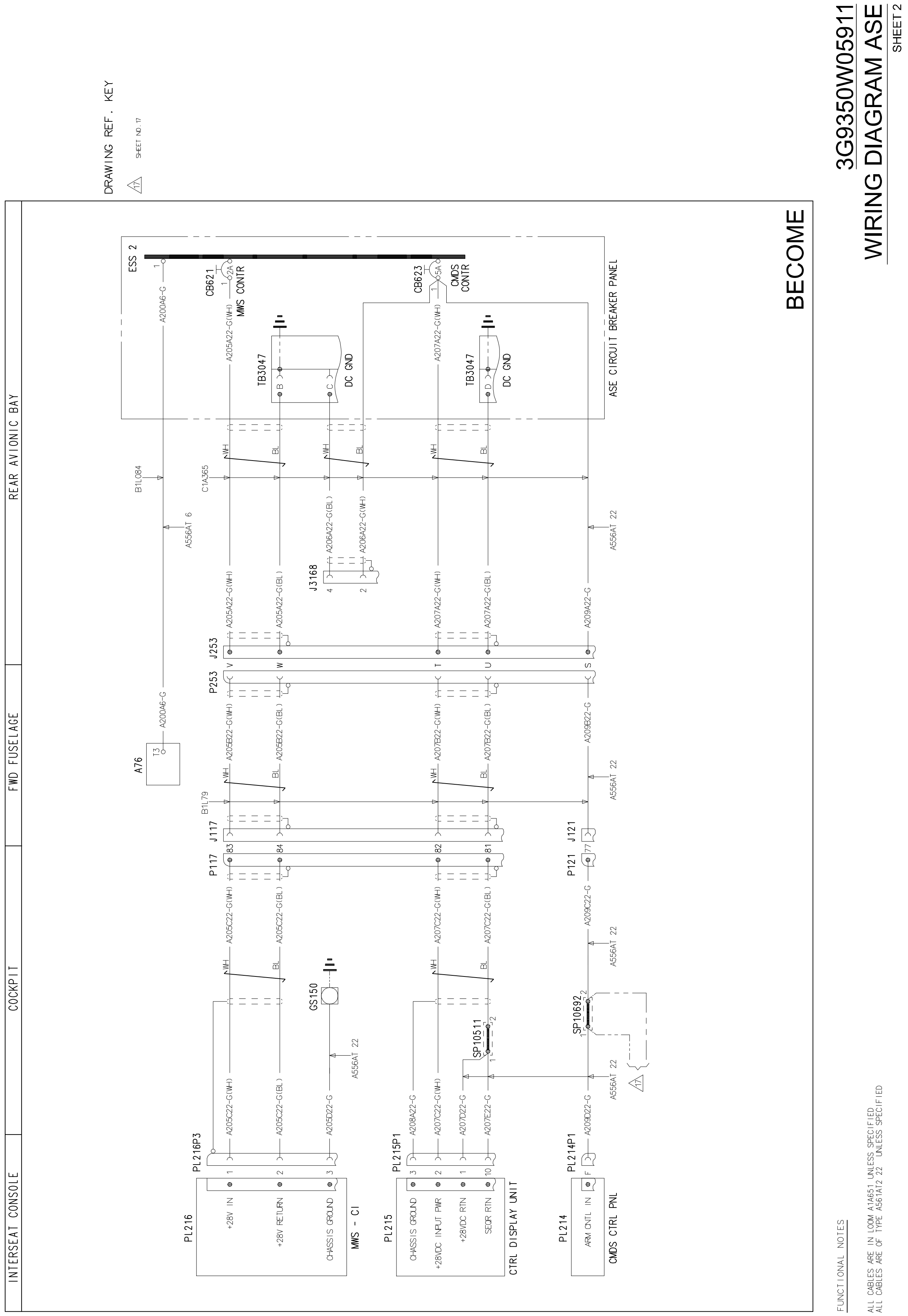

3G9350W05911
WIRING DIAGRAM ASE
SHEET 2
BECOME
DRAWING REF. KEY
SHEET NO. 17
REAR AVIONIC BAY
FWD FUSELAGE
COCKPIT
INTERSEAT CONSOLE
ESS 2
CB621
MWS CONTR
CB623
CMDS CONTR
TB3047
DC GND
ASE CIRCUIT BREAKER PANEL
J3168
J253
P253
A76
J117
P117
J121
P121
GS150
SP10511
SP10692
PL216
PL216P3
+28V IN
+28V RETURN
CHASSIS GROUND
MWS - CI
PL215
PL215P1
+28VDC INPUT PWR
+28VDC RTN
SEQR RTN
CTRL DISPLAY UNIT
PL214
PL214P1
ARM CNTL IN
CMDS CTRL PNL
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1A651 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A561AT2 22 UNLESS SPECIFIED

Figure 29

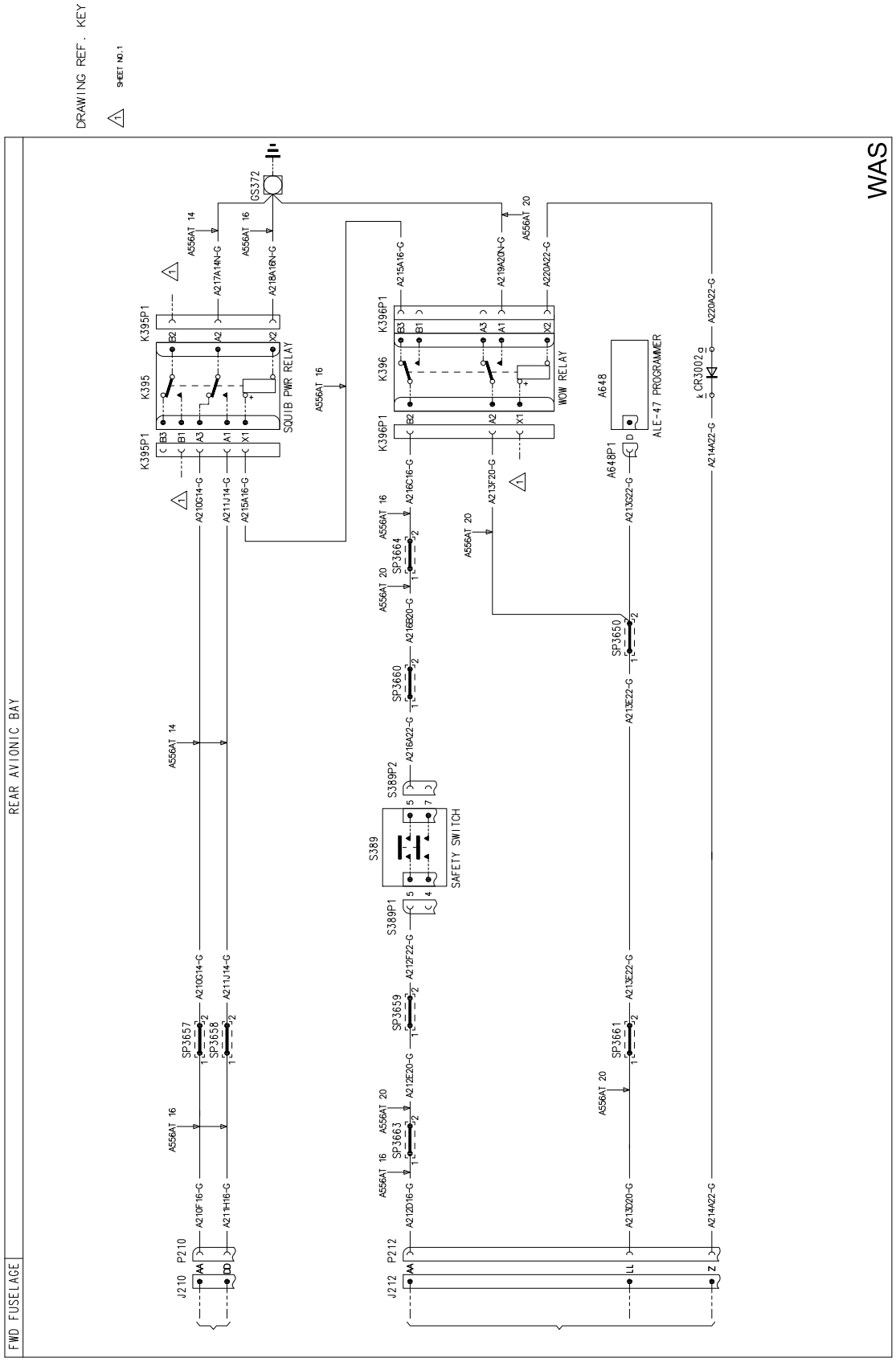

DRAWING REF. KEY
SHEET NO.1
WAS
FWD FUSELAGE
REAR AVIONIC BAY
GS372
K395P1
K395
SQUIB PWR RELAY
K396P1
K396
WOW RELAY
A648
A648P1
ALE-47 PROGRAMMER
CR3002
S389
S389P1
S389P2
SAFETY SWITCH
SP3657
SP3658
SP3659
SP3660
SP3661
SP3663
SP3664
SP3650
J210
P210
J212
P212
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM C1B339 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

Figure 30

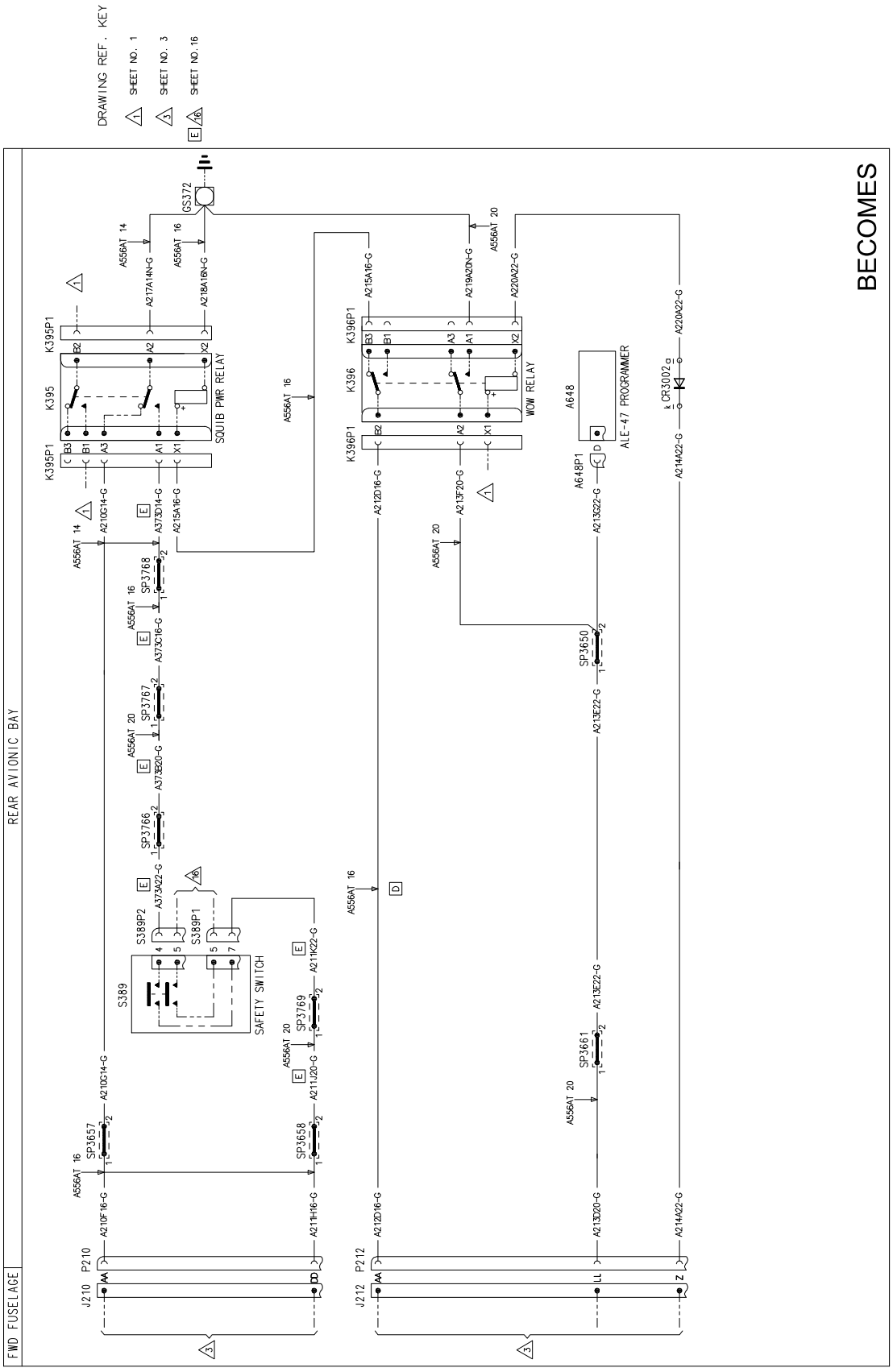

FWD FUSELAGE
REAR AVIONIC BAY
BECOMES
DRAWING REF. KEY
SHEET NO. 1
SHEET NO. 3
SHEET NO. 16
GS372
K395P1
K395
SQUIB PWR RELAY
K396P1
K396
WOW RELAY
A648
A648P1
ALE-47 PROGRAMMER
CR3002
S389
S389P1
S389P2
SAFETY SWITCH
SP3768
SP3767
SP3766
SP3769
SP3657
SP3658
SP3650
SP3661
J210
P210
J212
P212
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM C1B339 UNLESS SPECIFIED.
ALL CABLES ARE OF TYPE A556A1 22 UNLESS SPECIFIED

Figure 31

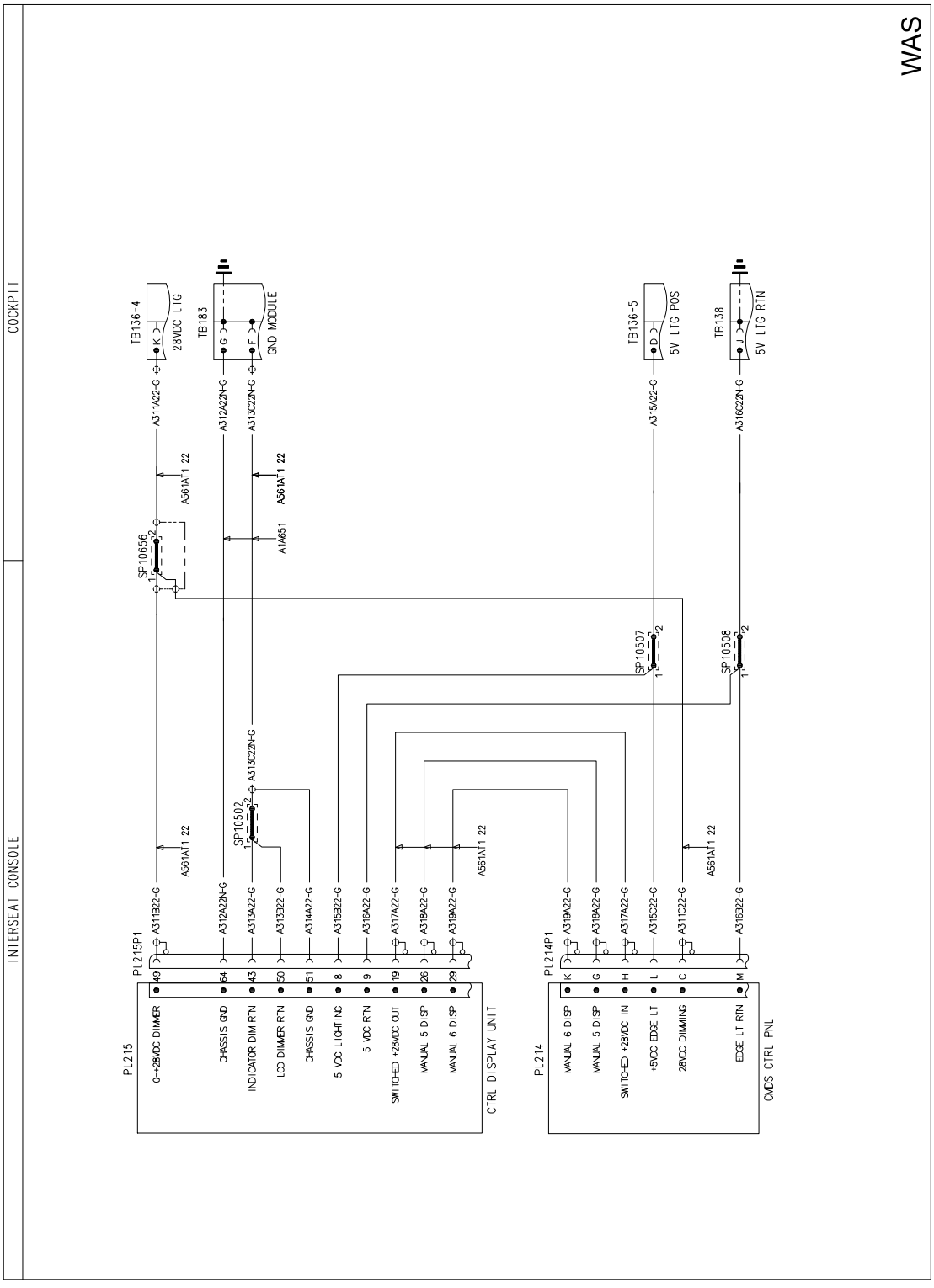

WAS
COCKPIT
INTERSEAT CONSOLE
TB136-4
28VDC LTG
TB183
GND MODULE
TB136-5
5V LTG POS
TB138
5V LTG RTN
SP10656
SP10502
SP10507
SP10508
A561AT1 22
A1A651
PL215P1
PL214P1
PL215
CTRL DISPLAY UNIT
PL214
CMDS CTRL PNL
0-+28VDC DIMMER
CHASSIS GND
INDICATOR DIM RTN
LCD DIMMER RTN
5 VDC LIGHTING
5 VDC RTN
SWITCHED +28VDC OUT
MANUAL 5 DISP
MANUAL 6 DISP
+5VDC EDGE LT
28VDC DIMMING
EDGE LT RTN
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1B604 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

Figure 32

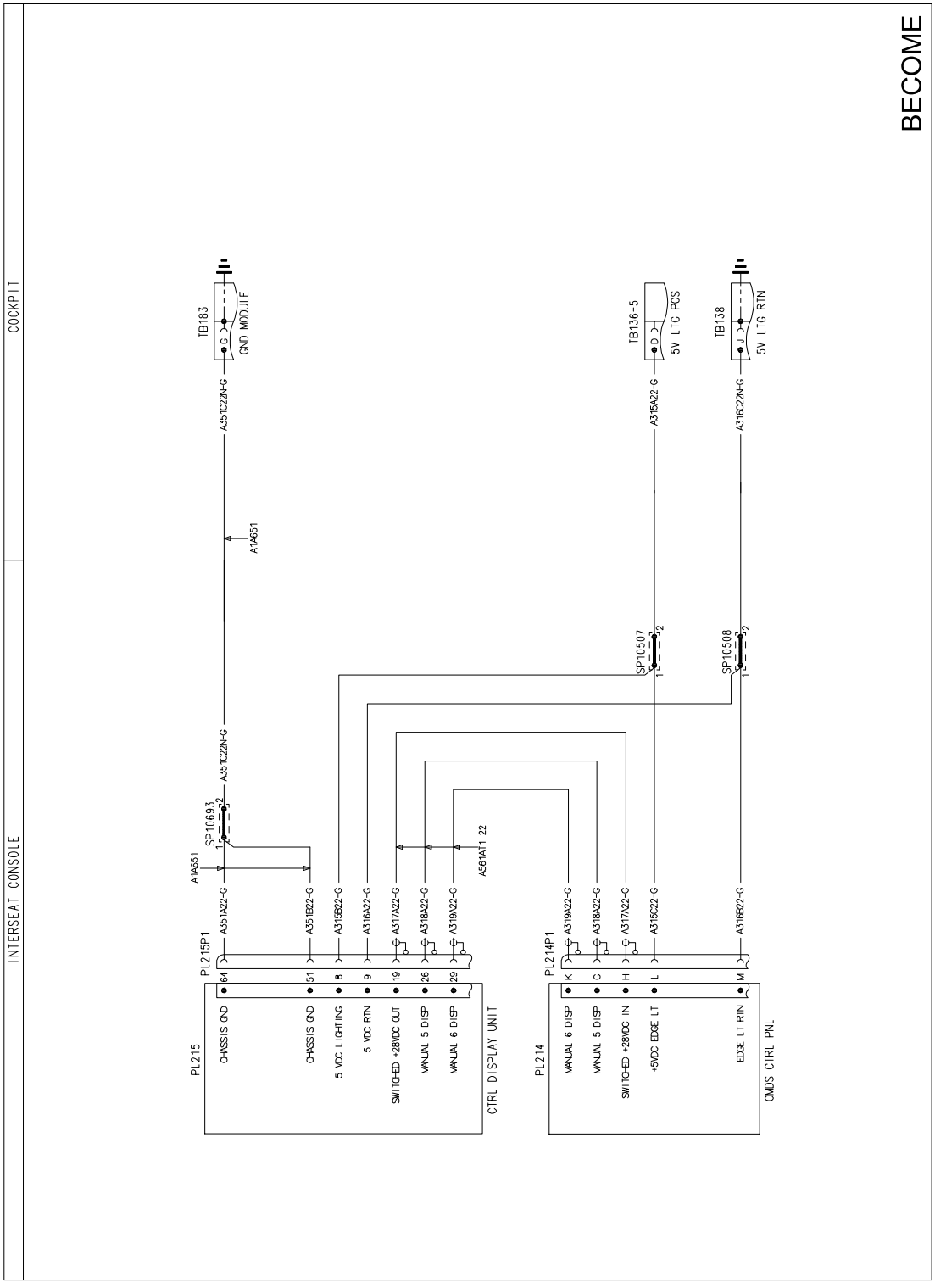

COCKPIT
INTERSEAT CONSOLE
BECOME
TB183
GND MODULE
A351C22N-G
A1A651
SP10693
A351A22-G
A351B22-G
A316B22-G
A316A22-G
A317A22-G
A318A22-G
A319A22-G
A561A11 22
PL215P1
64
51
8
9
19
26
29
PL215
CHASSIS GND
CHASSIS GND
5 VDC LIGHTING
5 VDC RTN
SWITCHED +28VDC OUT
MANUAL 5 DISP
MANUAL 6 DISP
CTRL DISPLAY UNIT
PL214P1
K
G
H
L
M
PL214
MANUAL 6 DISP
MANUAL 5 DISP
SWITCHED +28VDC IN
+5VDC EDGE LT
EDGE LT RTN
CMDS CTRL PNL
TB136-5
5V LTG POS
A315A22-G
SP10507
TB138
5V LTG RTN
A316C22N-G
SP10508
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1B604 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556A1 22 UNLESS SPECIFIED

Figure 33

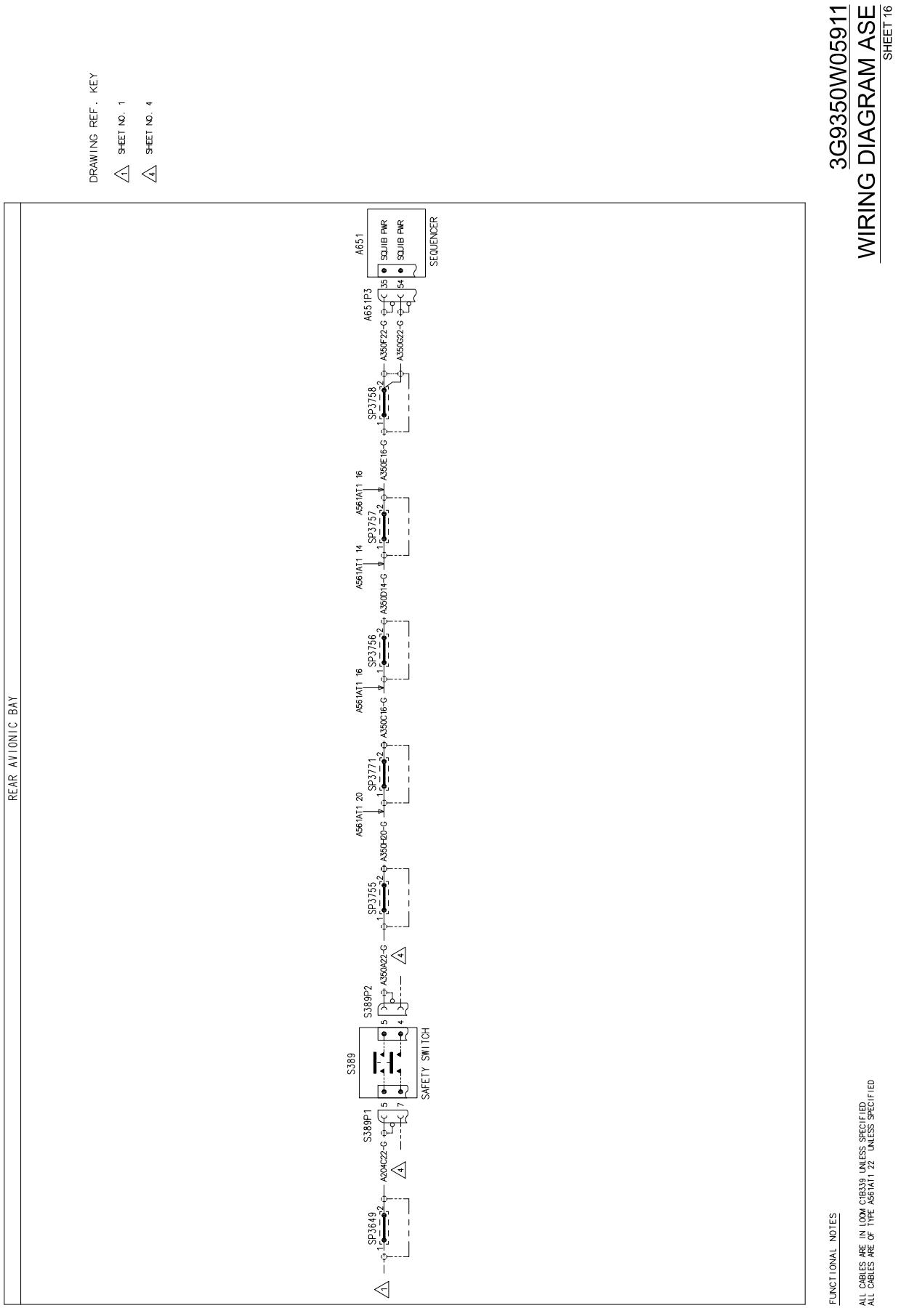

3G9350W05911
WIRING DIAGRAM ASE
SHEET 16
DRAWING REF. KEY
1 SHEET NO. 1
4 SHEET NO. 4
REAR AVIONIC BAY
SEQUENCER
A651
SQUIB PWR
SQUIB PWR
A651P3
SP3758
SP3757
SP3756
SP3771
SP3755
SP3649
S389P1
S389P2
S389
SAFETY SWITCH
A350F22-G
A350G22-G
A350E16-G
A350D14-G
A350C16-G
A350H20-G
A350A22-G
A204C22-G
A561AT1 14
A561AT1 16
A561AT1 20
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM C1B339 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A561AT1 22 UNLESS SPECIFIED

Figure 34

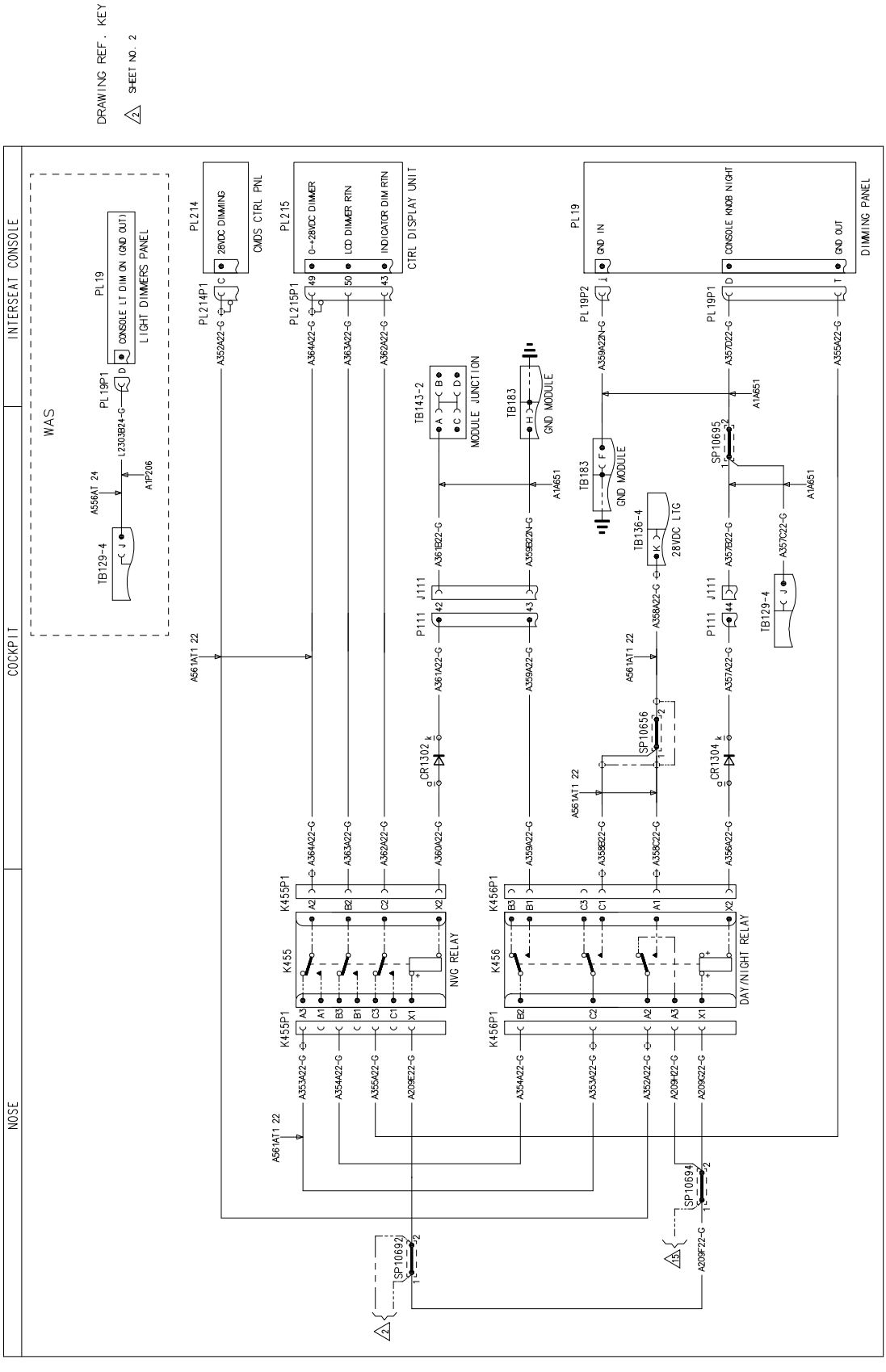

DRAWING REF. KEY
SHEET NO. 2
NOSE
COCKPIT
INTERSEAT CONSOLE
WAS
LIGHT DIMMERS PANEL
PL19
CONSOLE LT DIM ON (GND OUT)
PL19P1
TB129-4
A556AT 24
L230JB24-G
A1P206
PL214
28VDC DIMMING
OMDS CTRL PNL
PL214P1
A352A22-G
PL215
0-+28VDC DIMMER
LCD DIMMER RTN
INDICATOR DIM RTN
CTRL DISPLAY UNIT
PL215P1
A364A22-G
A363A22-G
A362A22-G
TB143-2
MODULE JUNCTION
TB183
GND MODULE
A1A651
A561AT1 22
P111 J111
A361BE22-G
A359BE24-G
A361A22-G
A359A22-G
CR1302
CR1304
A360A22-G
A356A22-G
K455P1
K456P1
K455
K456
NVG RELAY
DAY/NIGHT RELAY
A353A22-G
A354A22-G
A355A22-G
A209EE22-G
A209FF22-G
A209GG22-G
A209HF22-G
SP10692
SP10694
SP10656
PL19
GND IN
PL19P2
A359A22N-G
TB183
GND MODULE
TB136-4
28VDC LTG
A358A22-G
A358BE22-G
A358CE22-G
SP10695
PL19P1
CONSOLE KNOB NIGHT
GND OUT
DIMMING PANEL
A357D22-G
A357BE22-G
A357A22-G
A357C22-G
TB129-4
A355A22-G
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1B604 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

Figure 35

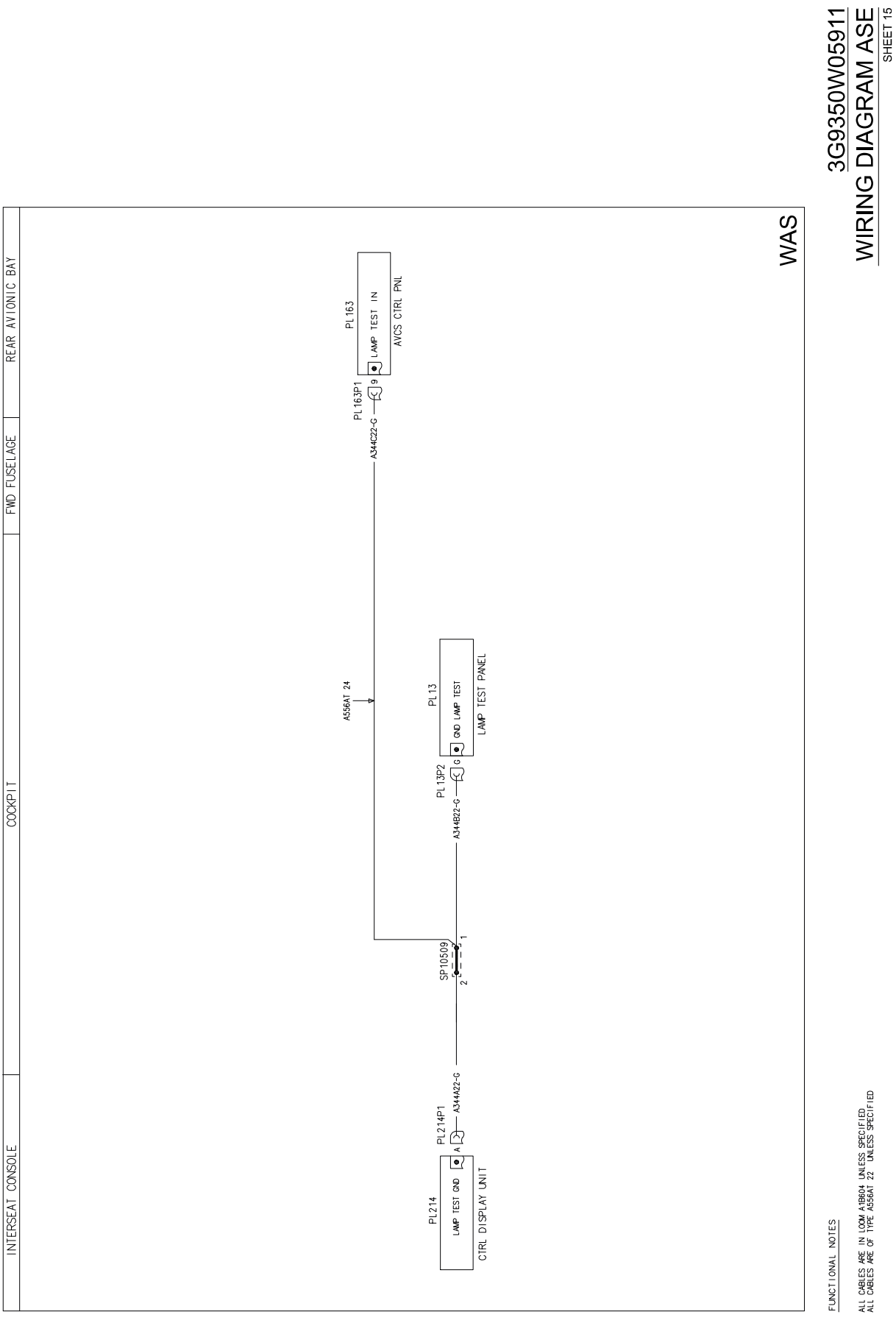

3G9350W05911
WIRING DIAGRAM ASE
SHEET 15
WAS
INTERSEAT CONSOLE
COCKPIT
FWD FUSELAGE
REAR AVIONIC BAY
PL214
LAMP TEST GND
CTRL DISPLAY UNIT
PL214P1
A
A344A22-G
SP10509
1
2
A344B22-G
PL13P2
G
PL13
GND LAMP TEST
LAMP TEST PANEL
A556AT 24
PL163P1
9
A344C22-G
PL163
LAMP TEST IN
AVCS CTRL PNL
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1B604 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

Figure 36

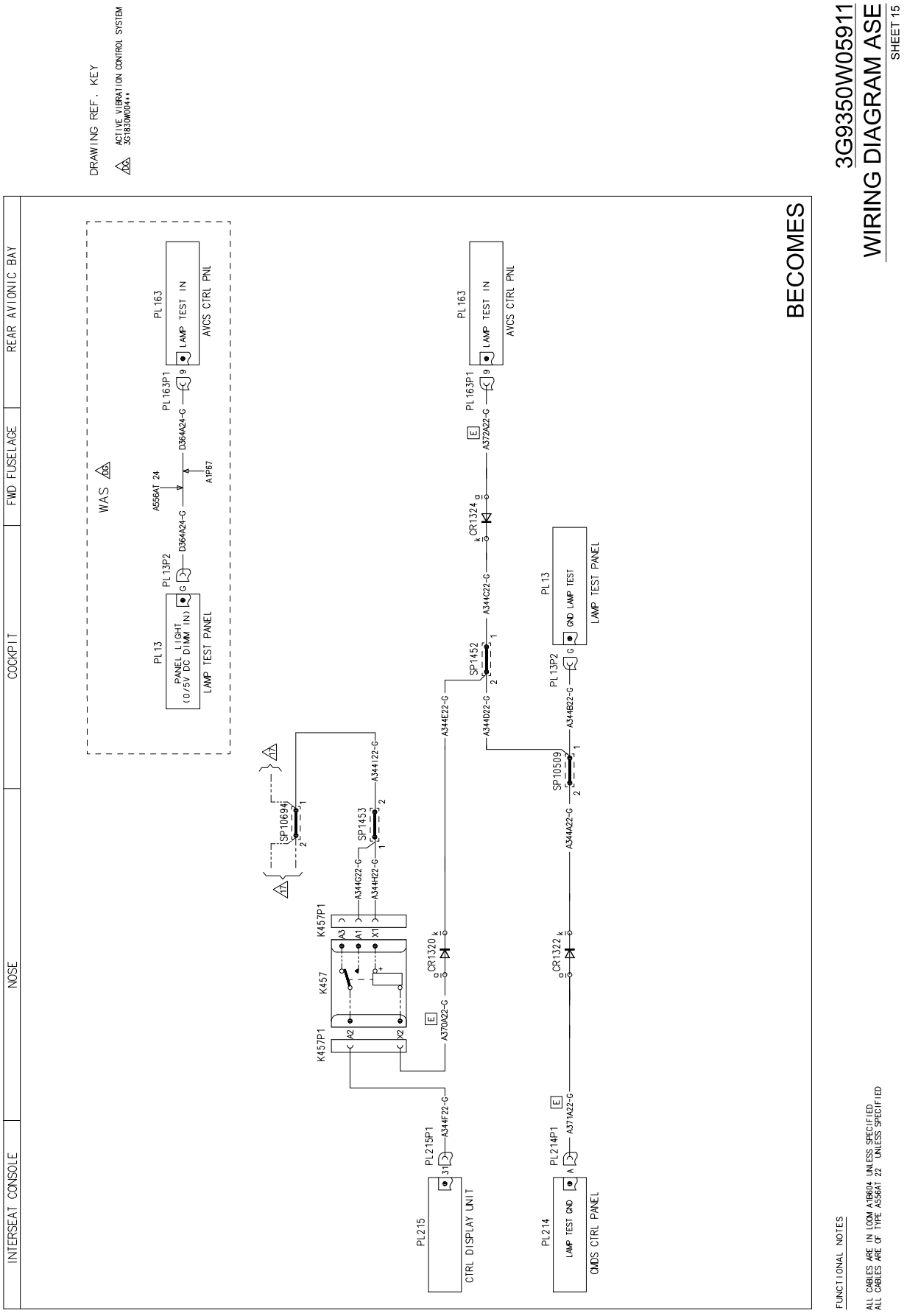
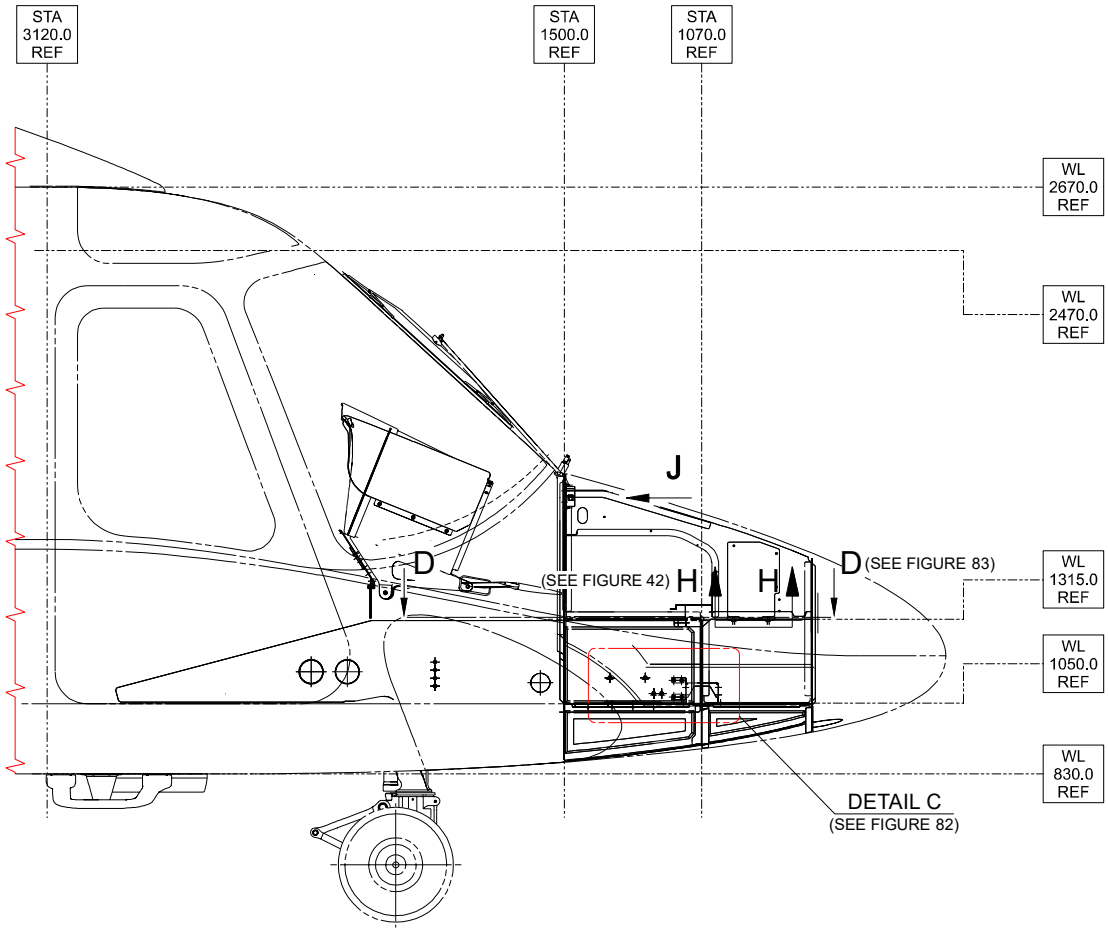
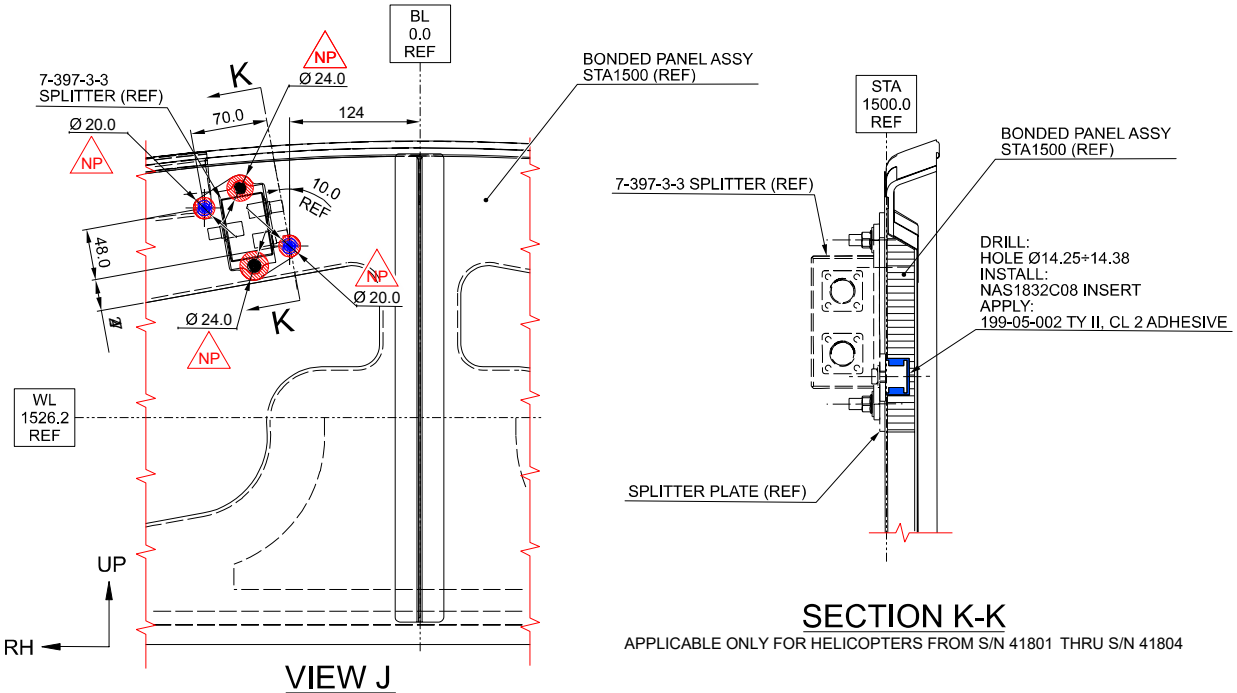

3G9350W05911
WIRING DIAGRAM ASE
SHEET 15
INTERSEAT CONSOLE
NOSE
COCKPIT
FWD FUSELAGE
REAR AVIONIC BAY
DRAWING REF. KEY
ACTIVE VIBRATION CONTROL SYSTEM 3G1835W0044
WAS
BECOMES
PL13
PANEL LIGHT (0/5V DC DIMM IN)
LAMP TEST PANEL
PL13P2
D364A24-G
A556A1 24
A1P67
PL163P1
PL163
LAMP TEST IN
AVCS CTRL PNL
SP10694
SP1453
SP1452
SP10509
K457P1
K457
A344G22-G
A344H22-G
A344I22-G
A344E22-G
A344C22-G
A344D22-G
A344B22-G
A344A22-G
A370A22-G
A372A22-G
CR1320
CR1322
CR1324
PL215P1
PL215
CTRL DISPLAY UNIT
PL214P1
PL214
LAMP TEST GND
CMDS CTRL PANEL
A344F22-G
A371A22-G
PL13P2
PL13
GND LAMP TEST
LAMP TEST PANEL
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1B604 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556A1 22 UNLESS SPECIFIED

Figure 37



VIEW LOOKING INBOARD RIGHT SIDE

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



VIEW J

APPLICABLE ONLY FOR HELICOPTERS FROM S/N 41801 THRU S/N 41804

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

SECTION K-K

APPLICABLE ONLY FOR HELICOPTERS FROM S/N 41801 THRU S/N 41804

3G5311A34611

IFF BAE AN/DPX7 STRUCTURAL PROVISION

Figure 38

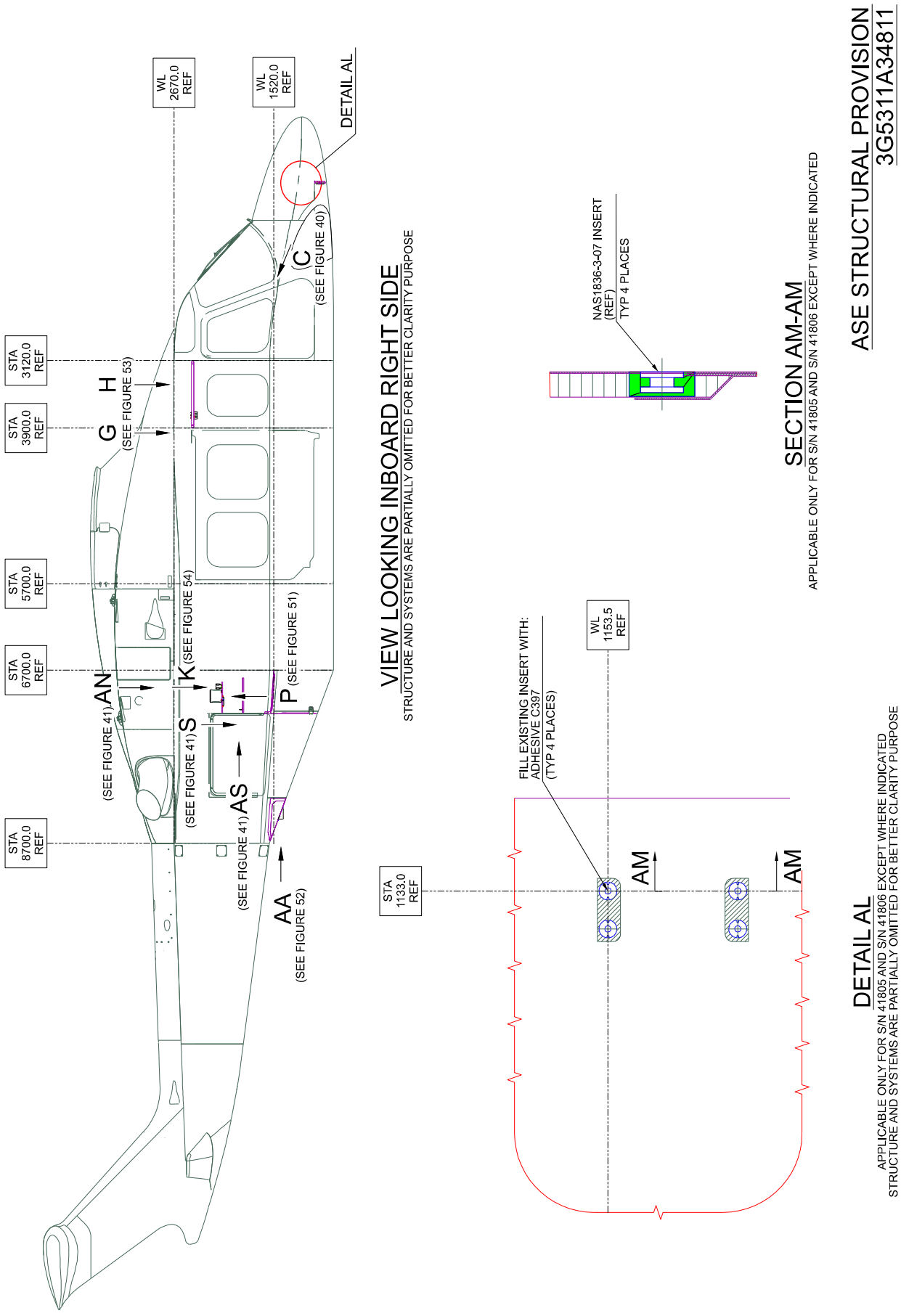

ASE STRUCTURAL PROVISION
3G5311A34811
VIEW LOOKING INBOARD RIGHT SIDE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
SECTION AM-AM
APPLICABLE ONLY FOR S/N 41805 AND S/N 41806 EXCEPT WHERE INDICATED
DETAIL AL
APPLICABLE ONLY FOR S/N 41805 AND S/N 41806 EXCEPT WHERE INDICATED
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
WL 2670.0 REF
WL 1520.0 REF
WL 1153.5 REF
STA 8700.0 REF
STA 6700.0 REF
STA 5700.0 REF
STA 3900.0 REF
STA 3120.0 REF
STA 1133.0 REF
DETAIL AL
(SEE FIGURE 40)
(SEE FIGURE 53)
(SEE FIGURE 41)
(SEE FIGURE 54)
(SEE FIGURE 41)
(SEE FIGURE 41)
(SEE FIGURE 51)
(SEE FIGURE 52)
NAS1836-3-07 INSERT (REF) TYP 4 PLACES
FILL EXISTING INSERT WITH: ADHESIVE C397 (TYP 4 PLACES)

Figure 39

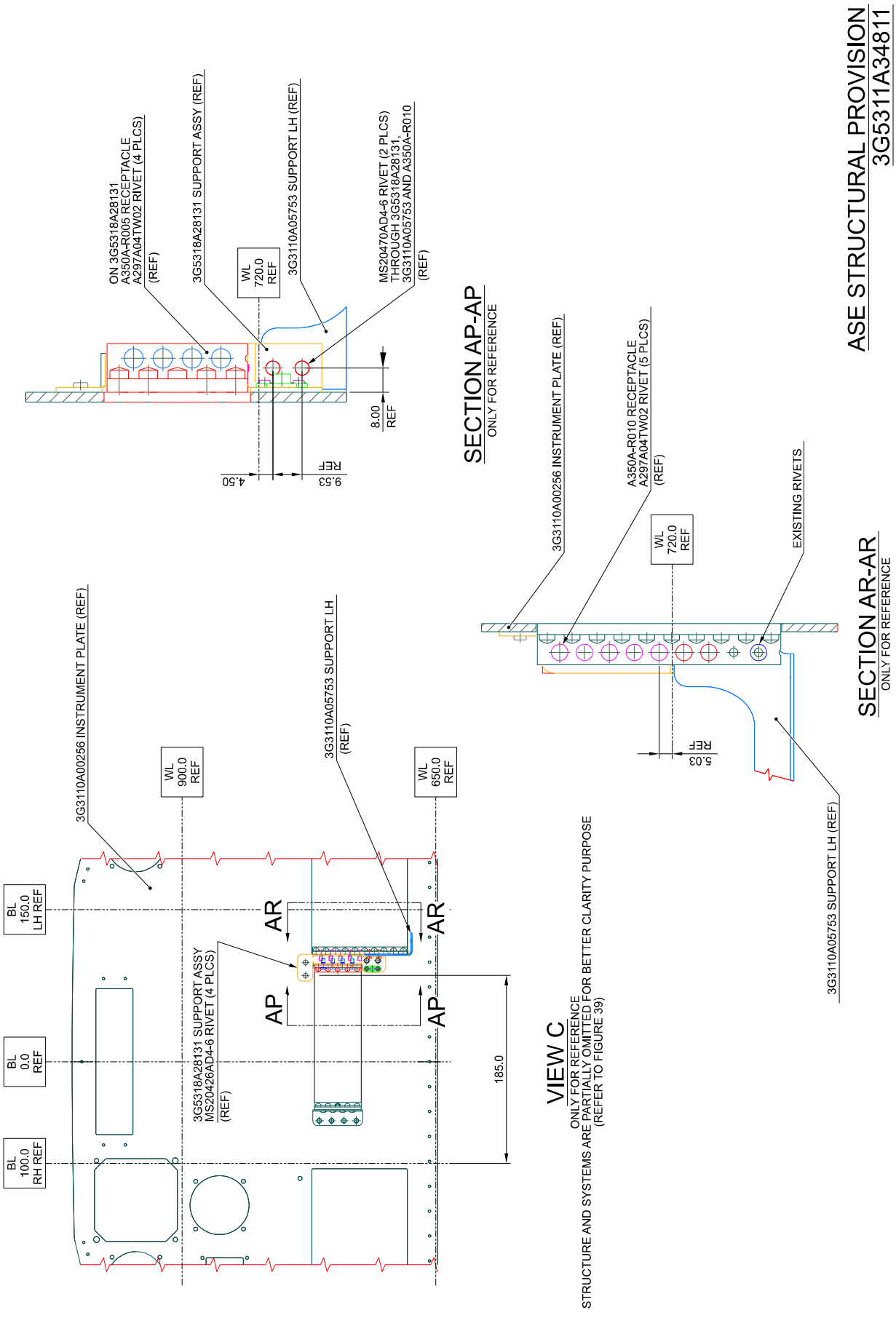

ASE STRUCTURAL PROVISION
3G5311A34811
SECTION AP-AP
ONLY FOR REFERENCE
ON 3G5318A28131
A350A-R005 RECEPTACLE
A297A04TW02 RIVET (4 PLCS)
(REF)
3G5318A28131 SUPPORT ASSY (REF)
WL
720.0
REF
3G3110A05753 SUPPORT LH (REF)
MS20470AD4-6 RIVET (2 PLCS)
THROUGH 3G5318A28131,
3G3110A05753 AND A350A-R010
(REF)
8.00
REF
9.53
REF
4.50
SECTION AR-AR
ONLY FOR REFERENCE
3G3110A00256 INSTRUMENT PLATE (REF)
A350A-R010 RECEPTACLE
A297A04TW02 RIVET (5 PLCS)
(REF)
WL
720.0
REF
EXISTING RIVETS
5.03
REF
3G3110A05753 SUPPORT LH (REF)
VIEW C
ONLY FOR REFERENCE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 39)
3G3110A00256 INSTRUMENT PLATE (REF)
WL
900.0
REF
3G3110A05753 SUPPORT LH
(REF)
WL
650.0
REF
BL
150.0
LH REF
BL
0.0
REF
BL
100.0
RH REF
AR
AR
AP
AP
3G5318A28131 SUPPORT ASSY
MS20426AD4-6 RIVET (4 PLCS)
(REF)
185.0

Figure 40

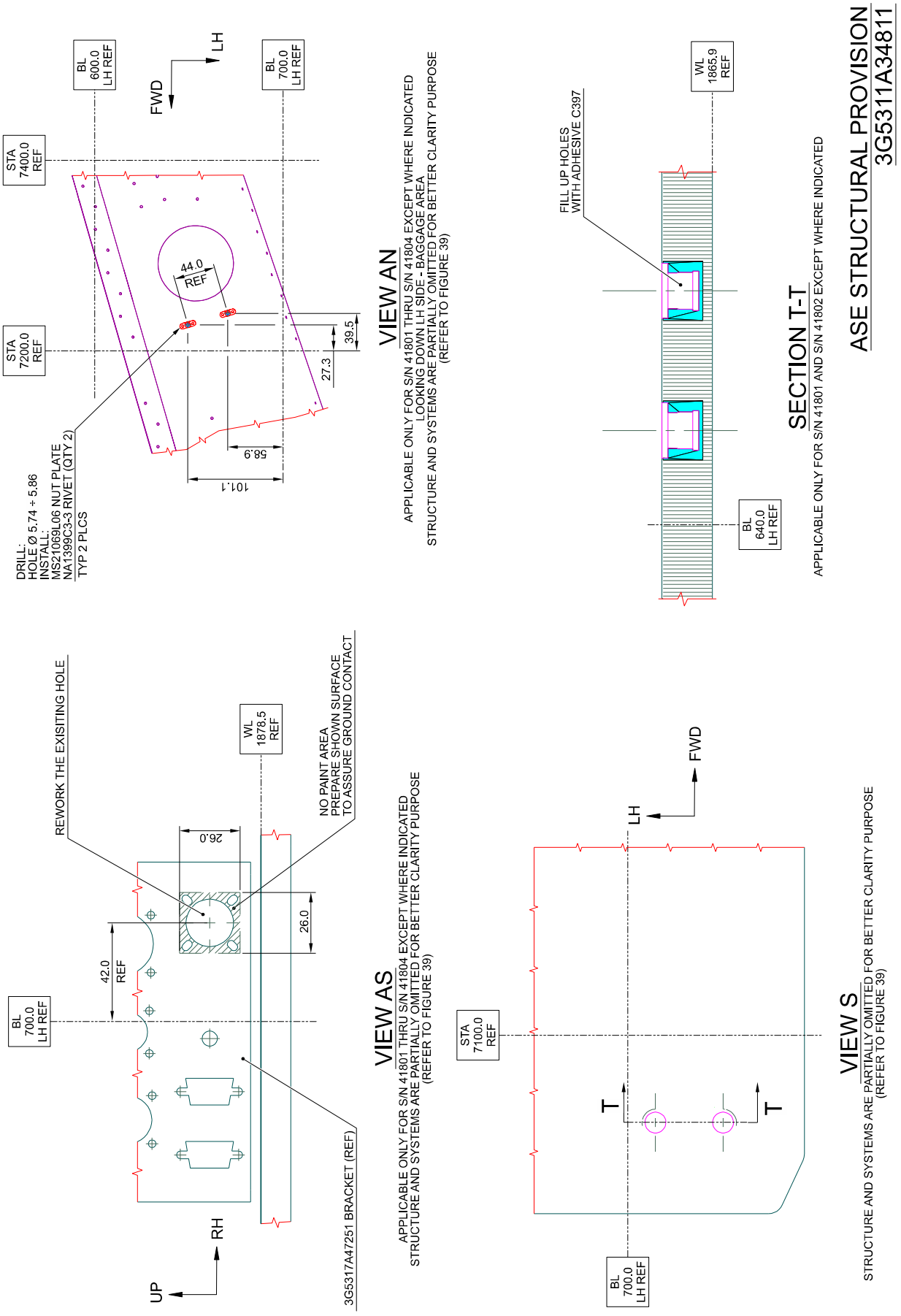
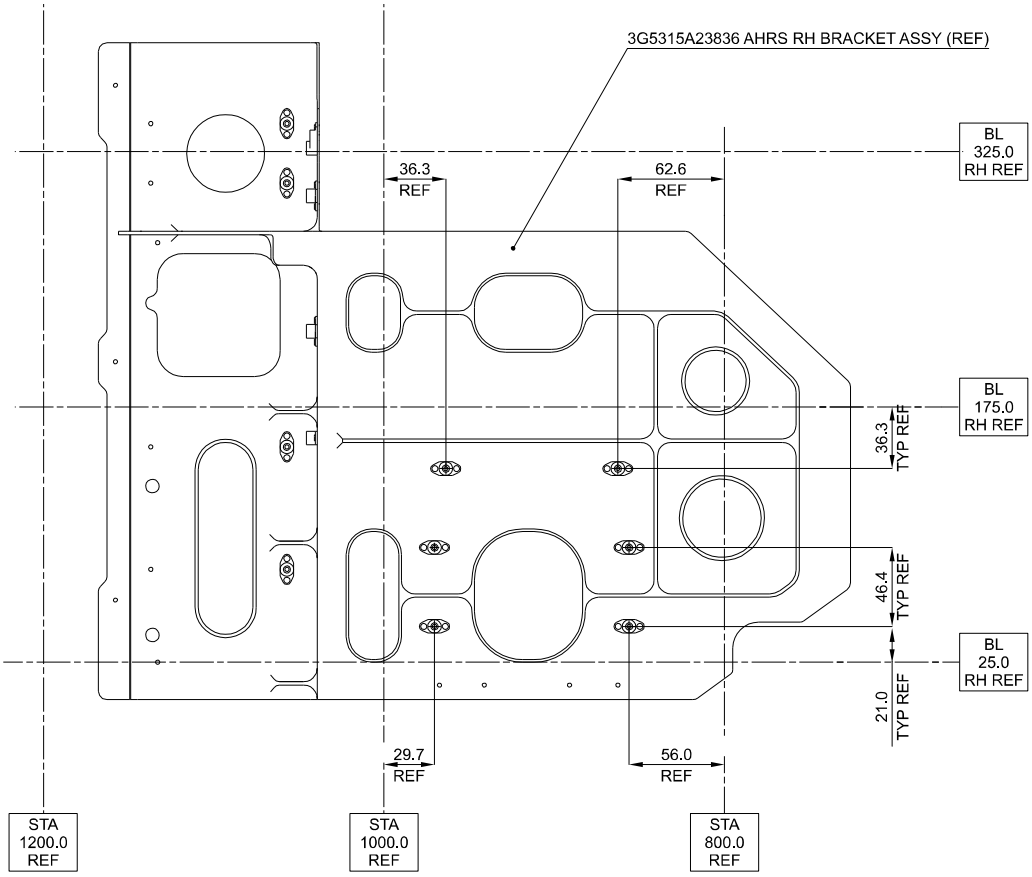

ASE STRUCTURAL PROVISION
3G5311A34811
VIEW AN
APPLICABLE ONLY FOR S/N 41801 THRU S/N 41804 EXCEPT WHERE INDICATED
LOOKING DOWN LH SIDE - BAGGAGE AREA
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 39)
DRILL:
HOLE Ø 5.74 ÷ 5.86
INSTALL:
MS21069L06 NUT PLATE
NA1399C3-3 RIVET (QTY 2)
TYP 2 PLCS
STA 7400.0 REF
STA 7200.0 REF
BL 600.0 LH REF
BL 700.0 LH REF
FWD
LH
44.0 REF
39.5
27.3
58.9
101.1
SECTION T-T
APPLICABLE ONLY FOR S/N 41801 AND S/N 41802 EXCEPT WHERE INDICATED
FILL UP HOLES
WITH ADHESIVE C397
WL 1865.9 REF
BL 640.0 LH REF
VIEW AS
APPLICABLE ONLY FOR S/N 41801 THRU S/N 41804 EXCEPT WHERE INDICATED
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 39)
REWORK THE EXISITING HOLE
NO PAINT AREA
PREPARE SHOWN SURFACE
TO ASSURE GROUND CONTACT
WL 1878.5 REF
BL 700.0 LH REF
42.0 REF
26.0
26.0
UP
RH
3G5317A47251 BRACKET (REF)
VIEW S
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 39)
STA 7100.0 REF
BL 700.0 LH REF
FWD
LH
T
T

Figure 41



VIEW H-H

ONLY FOR REFERENCE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 38)

3G5311A34611
IFF BAE AN/DPX7 STRUCTURAL PROVISION

Figure 42

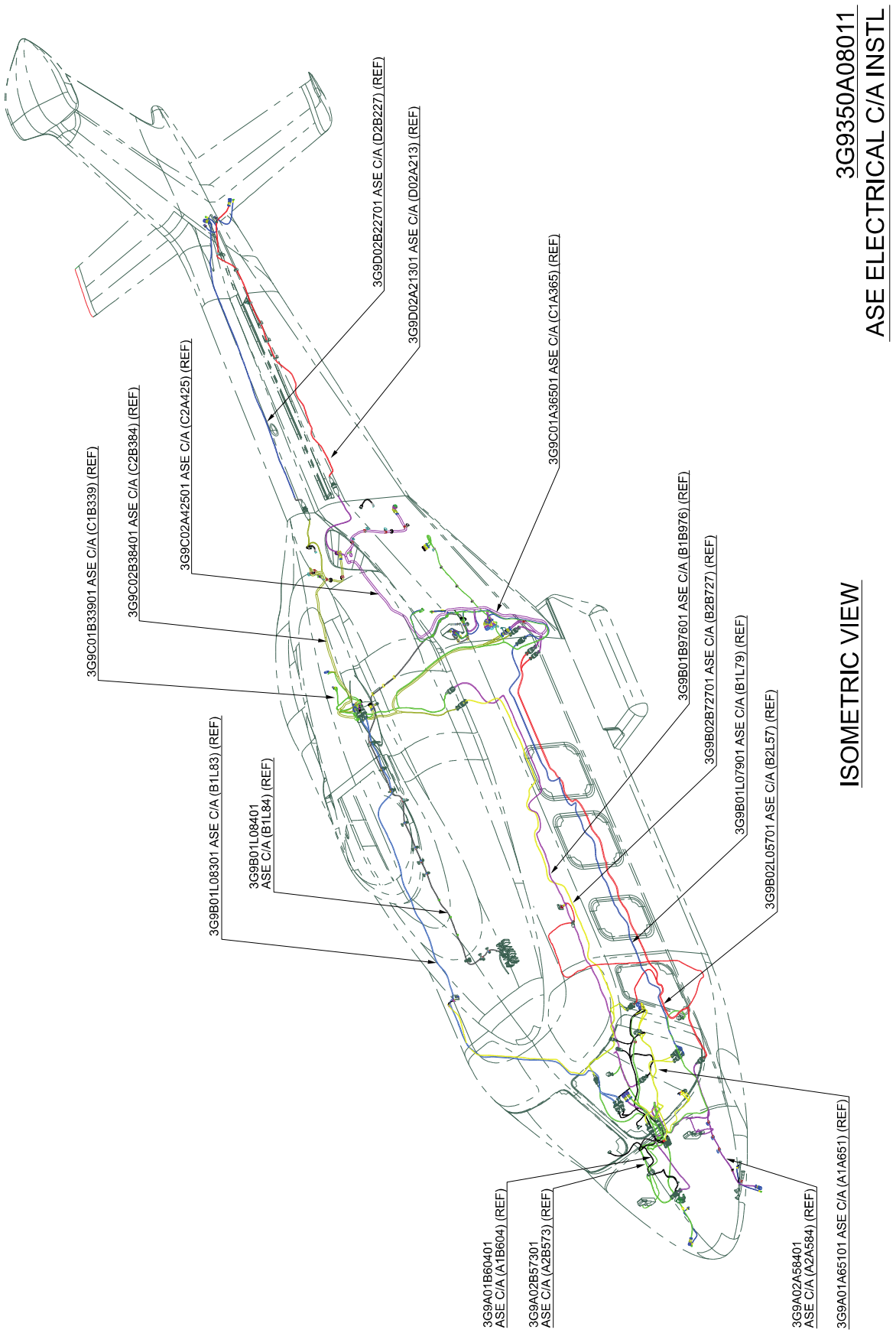

3G9350A08011
ASE ELECTRICAL C/A INSTL
ISOMETRIC VIEW
3G9D02B22701 ASE C/A (D2B227) (REF)
3G9D02A21301 ASE C/A (D02A213) (REF)
3G9C01A36501 ASE C/A (C1A365) (REF)
3G9C02A42501 ASE C/A (C2A425) (REF)
3G9C02B38401 ASE C/A (C2B384) (REF)
3G9C01B33901 ASE C/A (C1B339) (REF)
3G9B01B97601 ASE C/A (B1B976) (REF)
3G9B02B72701 ASE C/A (B2B727) (REF)
3G9B01L07901 ASE C/A (B1L79) (REF)
3G9B02L05701 ASE C/A (B2L57) (REF)
3G9B01L08301 ASE C/A (B1L83) (REF)
3G9B01L08401
ASE C/A (B1L84) (REF)
3G9A01B60401
ASE C/A (A1B604) (REF)
3G9A02B57301
ASE C/A (A2B573) (REF)
3G9A02A58401
ASE C/A (A2A584) (REF)
3G9A01A65101 ASE C/A (A1A651) (REF)

Figure 43

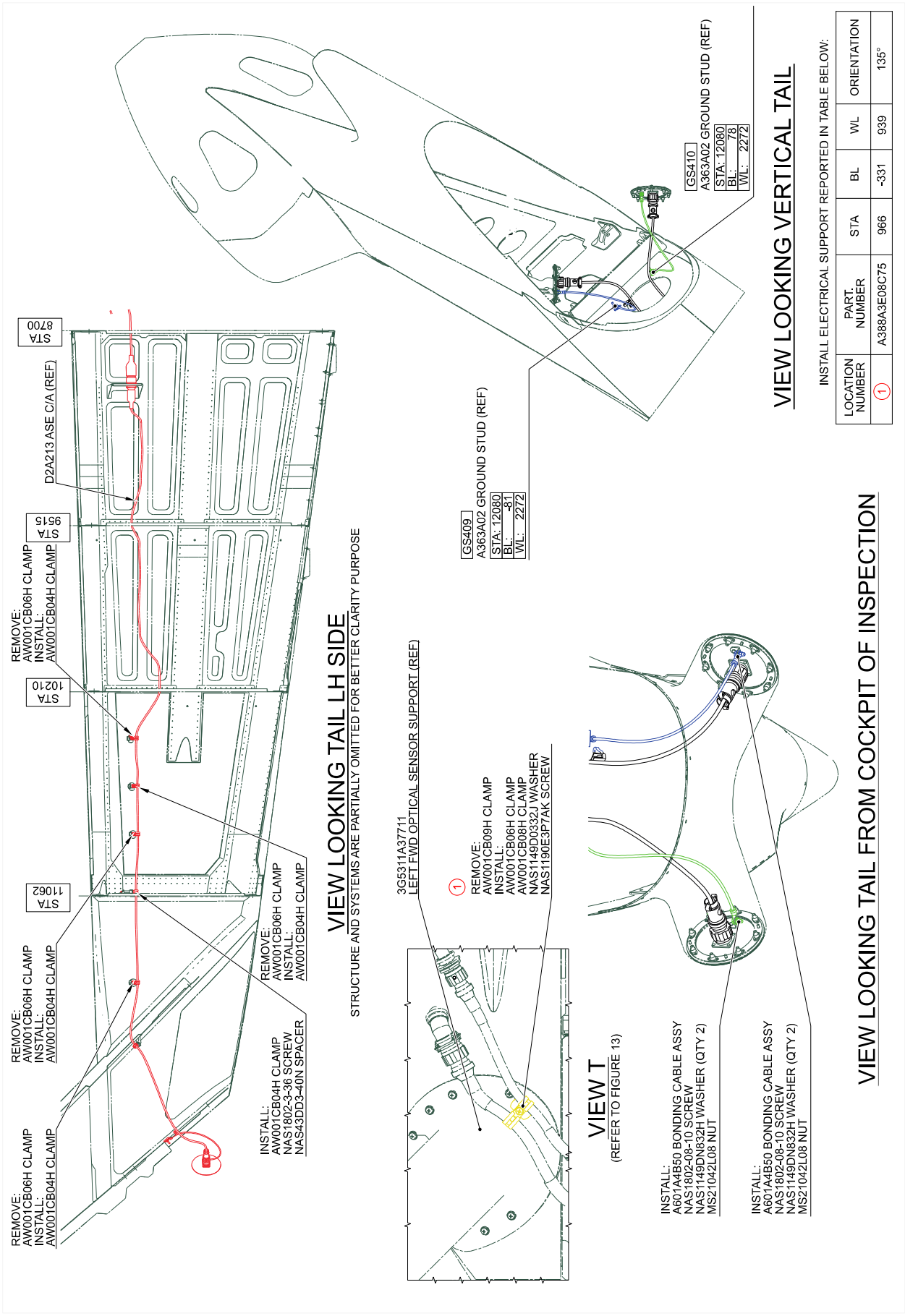

VIEW LOOKING TAIL LH SIDE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
STA 8700
STA 9515
STA 10210
STA 11062
D2A213 ASE C/A (REF)
REMOVE: AW001CB06H CLAMP
INSTALL: AW001CB04H CLAMP
REMOVE: AW001CB06H CLAMP
INSTALL: AW001CB04H CLAMP
REMOVE: AW001CB06H CLAMP
INSTALL: AW001CB04H CLAMP
REMOVE: AW001CB06H CLAMP
INSTALL: AW001CB04H CLAMP
INSTALL: AW001CB04H CLAMP NAS1802-3-36 SCREW NAS43DD3-40N SPACER
GS409 A363A02 GROUND STUD (REF) STA: 12080 BL: -81 WL: 2272
VIEW LOOKING VERTICAL TAIL
GS410 A363A02 GROUND STUD (REF) STA: 12080 BL: 78 WL: 2272
INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:
LOCATION NUMBER | PART NUMBER | STA | BL | WL | ORIENTATION
1 | A388A3E08C75 | 966 | -331 | 939 | 135°
3G5311A37711 LEFT FWD OPTICAL SENSOR SUPPORT (REF)
1 REMOVE: AW001CB09H CLAMP
INSTALL: AW001CB06H CLAMP AW001CB08H CLAMP NAS1149D0332J WASHER NAS1190E3P7AK SCREW
VIEW T
(REFER TO FIGURE 13)
INSTALL: A601A4B50 BONDING CABLE ASSY NAS1802-08-10 SCREW NAS1149DN832H WASHER (QTY 2) MS21042L08 NUT
INSTALL: A601A4B50 BONDING CABLE ASSY NAS1802-08-10 SCREW NAS1149DN832H WASHER (QTY 2) MS21042L08 NUT
VIEW LOOKING TAIL FROM COCKPIT OF INSPECTION

Figure 44

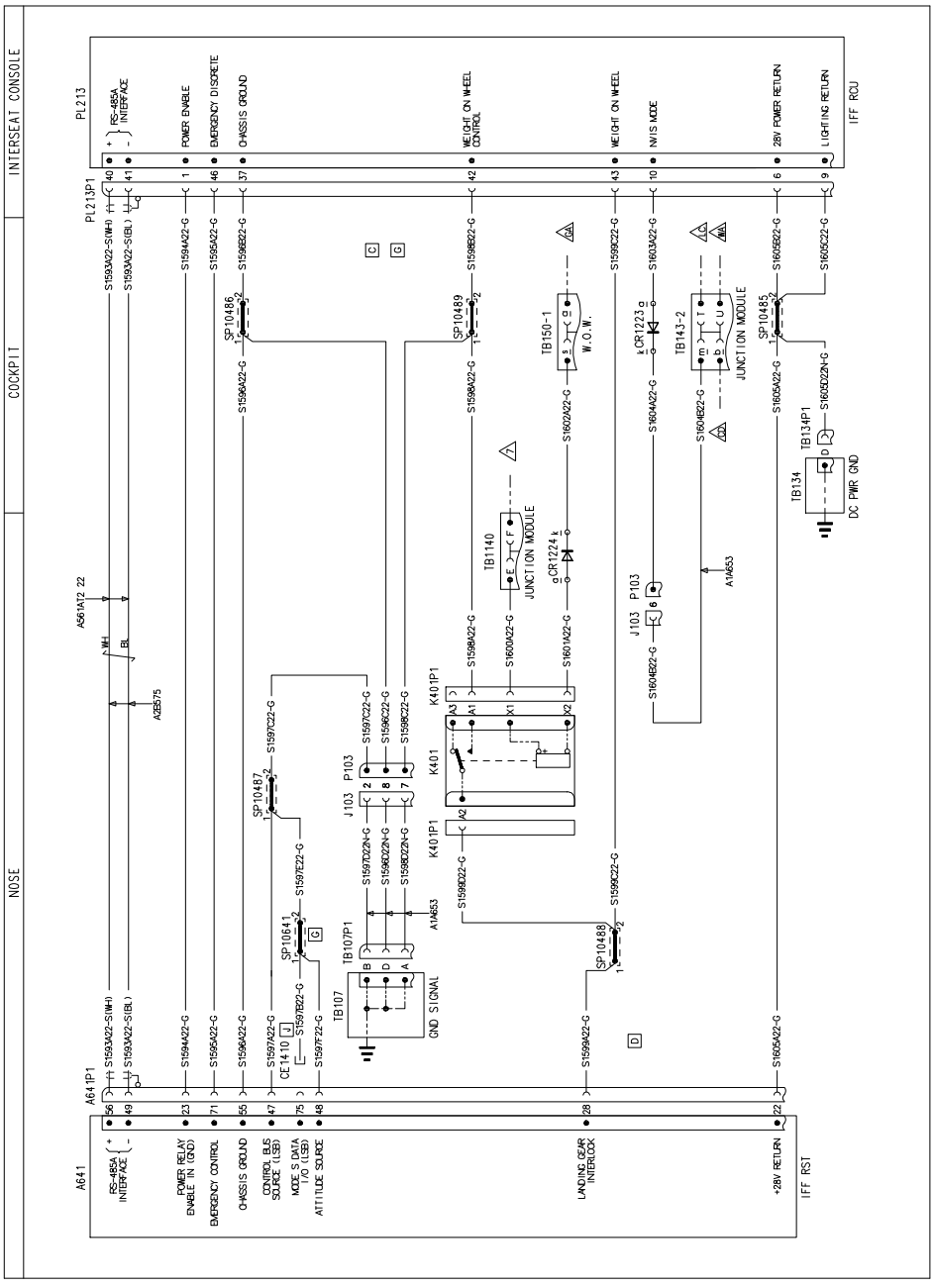

NOSE
COCKPIT
INTERSEAT CONSOLE
A641
A641P1
P1213
P1213P1
RS-485A INTERFACE
POWER RELAY ENABLE IN (GND)
EMERGENCY CONTROL
CHASSIS GROUND
CONTROL BUS SOURCE (LSB)
MODE S DATA I/O (LSB)
ATTITUDE SOURCE
LANDING GEAR INTERLOCK
+28V RETURN
IFF RST
POWER ENABLE
EMERGENCY DISCRETE
CHASSIS GROUND
WEIGHT ON WHEEL CONTROL
WEIGHT ON WHEEL
NAVIS MODE
28V POWER RETURN
LIGHTING RETURN
IFF RCU
TB107
TB107P1
GND SIGNAL
K401
K401P1
TB1140
JUNCTION MODULE
TB150-1
W.O.W.
CR1224
CR1223
TB143-2
JUNCTION MODULE
TB134
TB134P1
DC PWR GND
J103 P103
SP10485
SP10486
SP10487
SP10488
SP10489
SP10541
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A39007 UNLESS SPECIFIED.
ALL CABLES ARE OF TYPE AS5441 22 UNLESS SPECIFIED

Figure 45

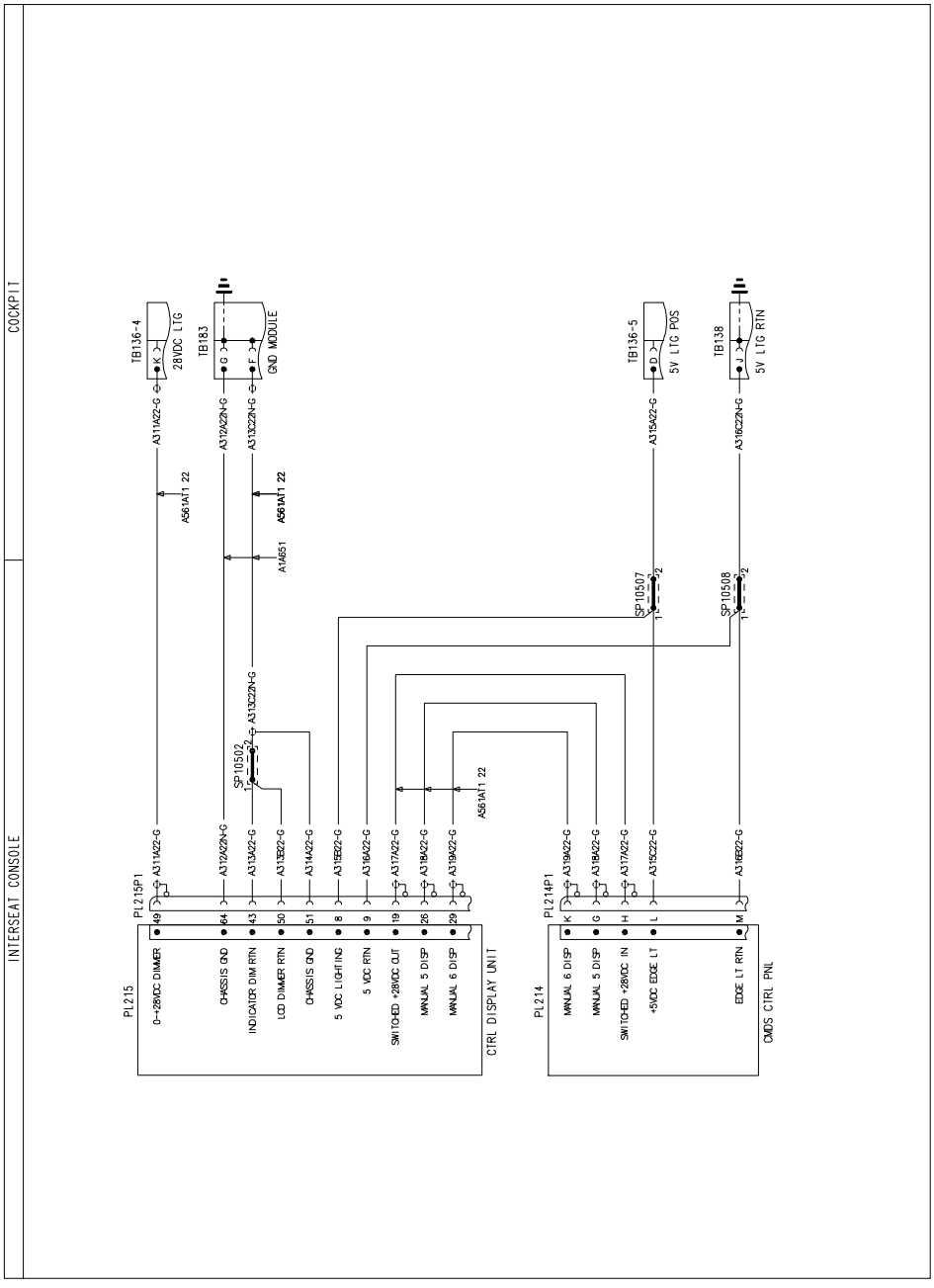

COCKPIT
INTERSEAT CONSOLE
TB136-4
28VDC LTG
TB183
GND MODULE
TB136-5
5V LTG POS
TB138
5V LTG RTN
SP10502
SP10507
SP10508
PL215P1
PL215
0-28VDC DIMMER
CHASSIS GND
INDICATOR DIM RTN
LCD DIMMER RTN
CHASSIS GND
5 VDC LIGHTING
5 VDC RTN
SWITCHED +28VDC OUT
MANUAL 5 DISP
MANUAL 6 DISP
CTRL DISPLAY UNIT
PL214P1
PL214
MANUAL 6 DISP
MANUAL 5 DISP
SWITCHED +28VDC IN
+5VDC EDGE LT
EDGE LT RTN
CMDS CTRL PNL
A561A11 22
A561A11 22
A561A11 22
A1A651
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A19604 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A5568A1 22 UNLESS SPECIFIED

Figure 46

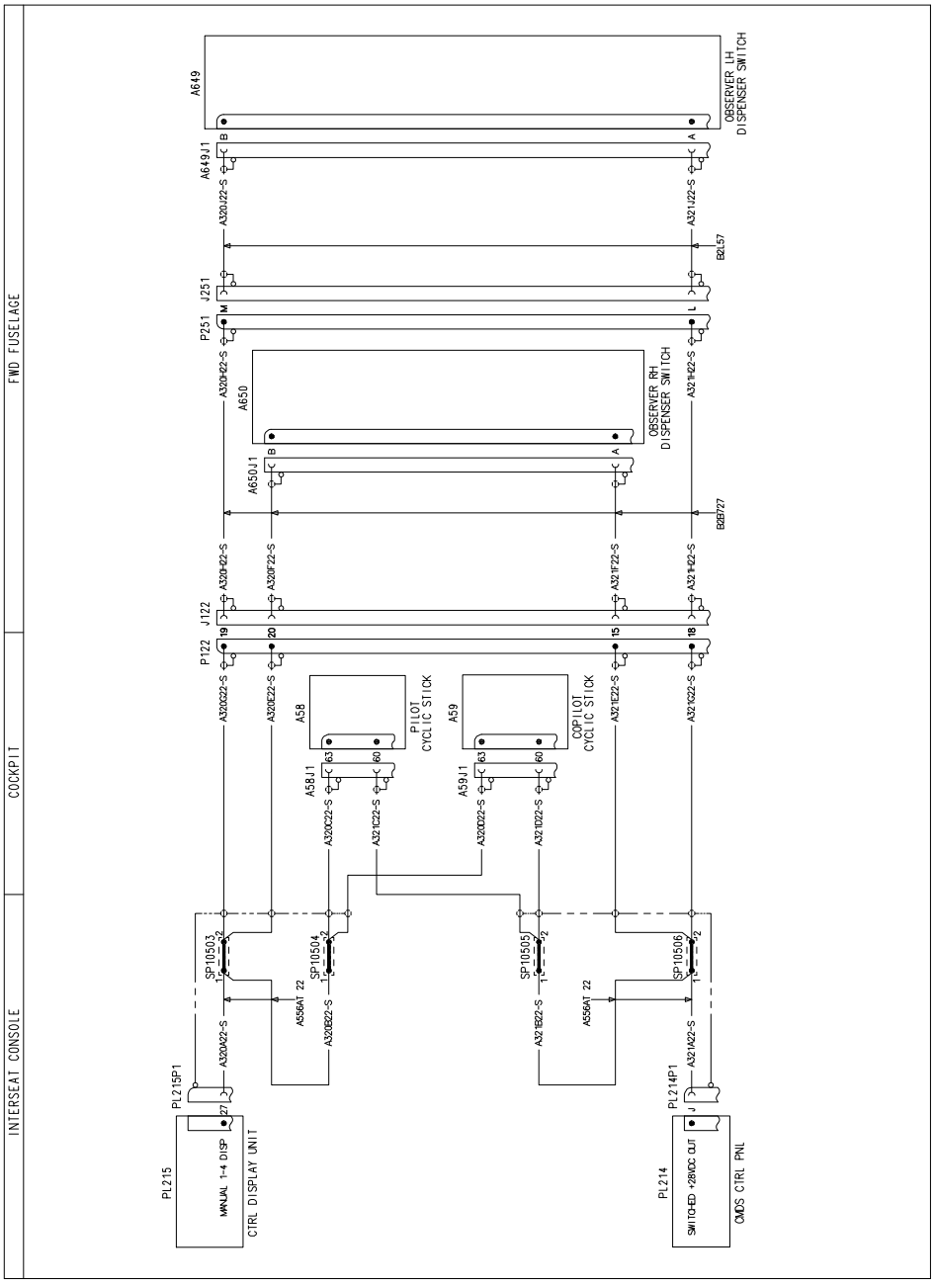

INTERSEAT CONSOLE
COCKPIT
FWD FUSELAGE
PL215
MANUAL 1-4 DISP
CTRL DISPLAY UNIT
PL215P1
J27
A320A22-S
SP10503
A556AT 22
A320B22-S
SP10504
A320C22-S
A58J1
A58
PILOT
CYCLIC STICK
A320D22-S
A320E22-S
P122
J122
19
20
A320F22-S
A320H22-S
A650J1
A650
OBSERVER RH
DISPENSER SWITCH
A320J22-S
P251
J251
M
A650J1
A320K22-S
A320L22-S
A649
OBSERVER LH
DISPENSER SWITCH
A649J1
A320M22-S
A320N22-S
B20727
B20L57
A59J1
A59
COPILOT
CYCLIC STICK
A321C22-S
A321D22-S
SP10505
A321E22-S
A556AT 22
A321F22-S
SP10506
A321G22-S
A321H22-S
15
18
PL214P1
J
A321A22-S
PL214
SWITCHED +28VDC OUT
OMDS CTRL PNL
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A28573 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE AS50A11 22 UNLESS SPECIFIED

Figure 47

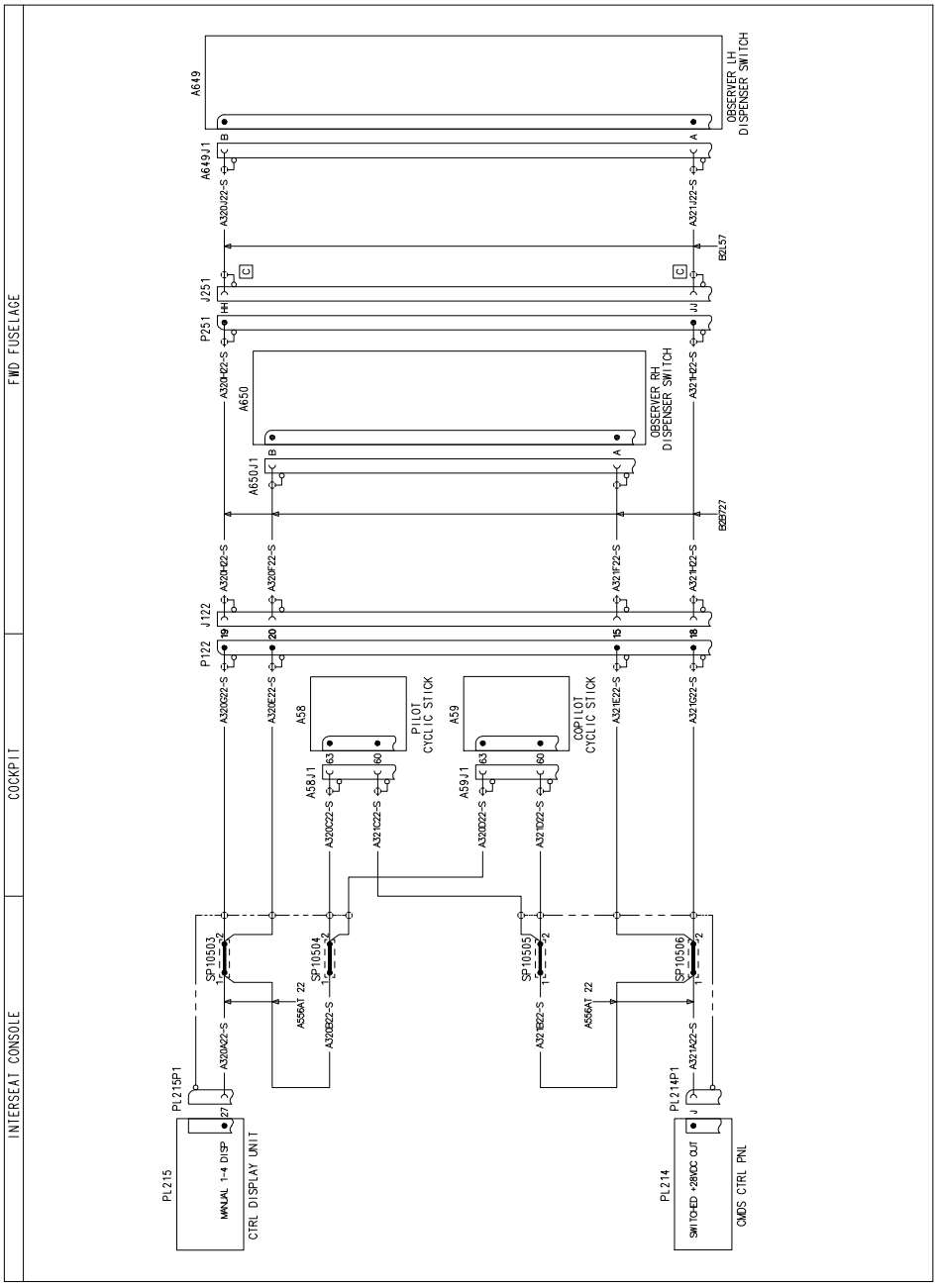

INTERSEAT CONSOLE
COCKPIT
FWD FUSELAGE
A649
OBSERVER LH
DISPENSER SWITCH
A649J1
A320J22-S
A321J22-S
B2157
P251
J251
A320H22-S
A650
OBSERVER RH
DISPENSER SWITCH
A321H22-S
A650J1
B2727
P122
J122
A320G22-S
A320E22-S
A320F22-S
A321F22-S
A321G22-S
A58
PILOT
CYCLIC STICK
A59
COPILOT
CYCLIC STICK
A321E22-S
A58J1
A59J1
A320C22-S
A321C22-S
A320D22-S
A321D22-S
SP10503
SP10504
SP10505
SP10506
A556A1 22
A320B22-S
A321B22-S
PL215P1
PL215
MANUAL 1-4 DISP
CTRL DISPLAY UNIT
A320A22-S
A321A22-S
PL214P1
PL214
SWITCHED +28VDC OUT
OMDS CTRL PNL
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A556T1 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556A11 22 UNLESS SPECIFIED

Figure 48

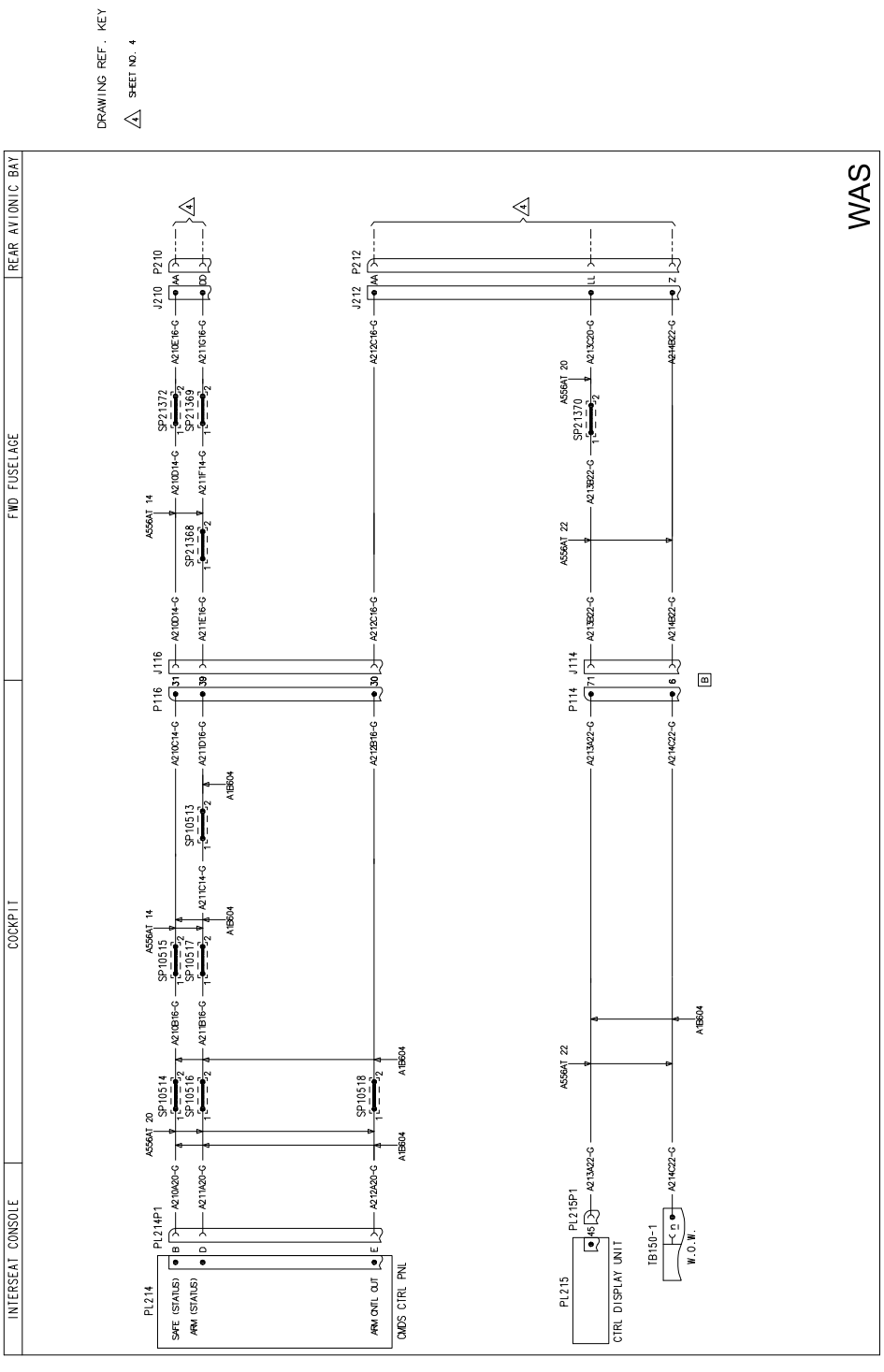

WAS
INTERSEAT CONSOLE
COCKPIT
FWD FUSELAGE
REAR AVIONIC BAY
DRAWING REF. KEY
SHEET NO. 4
CMDS CTRL PNL
CTRL DISPLAY UNIT
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM B11083 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE AS50A1 16 UNLESS SPECIFIED

Figure 49

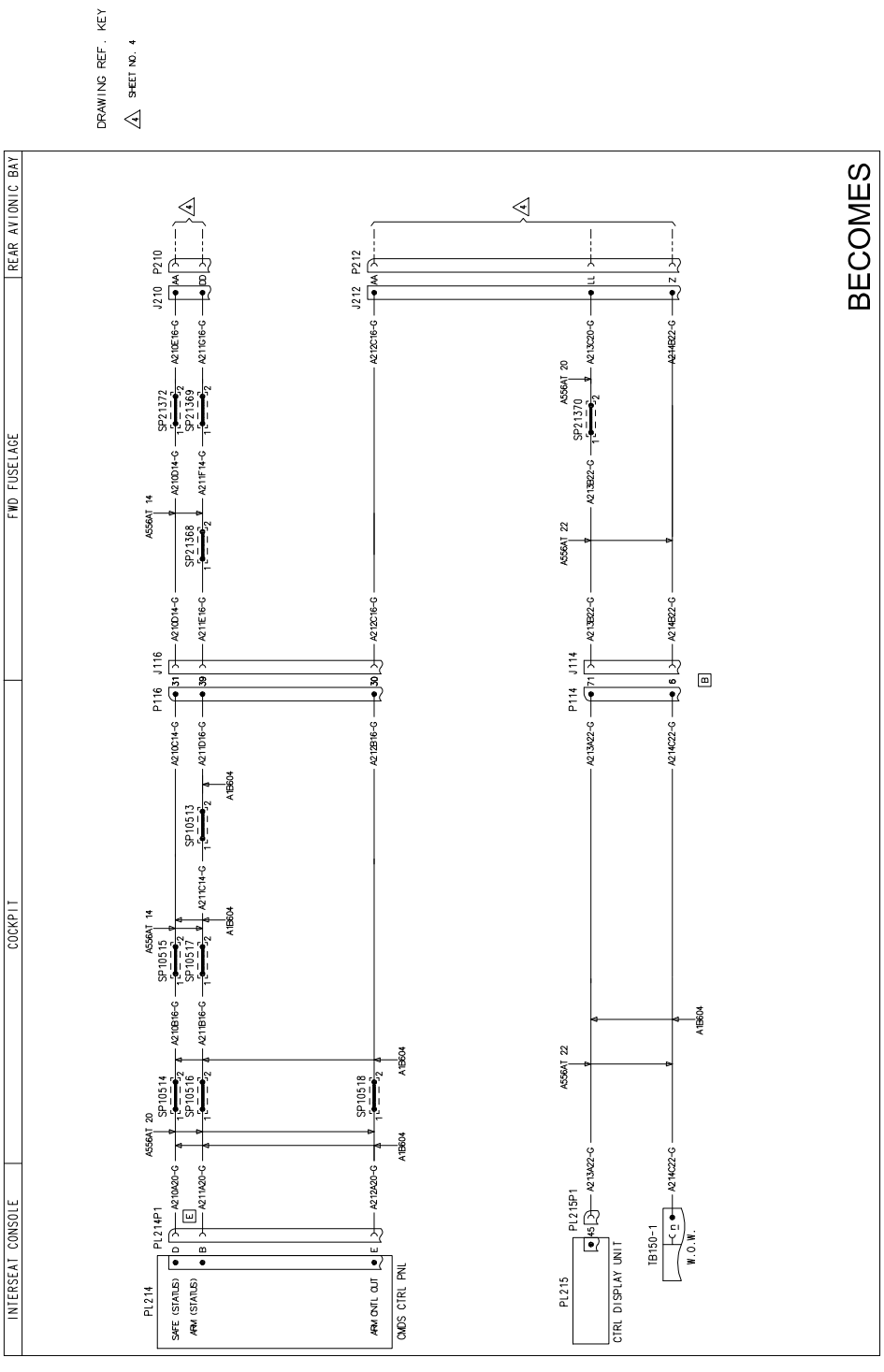
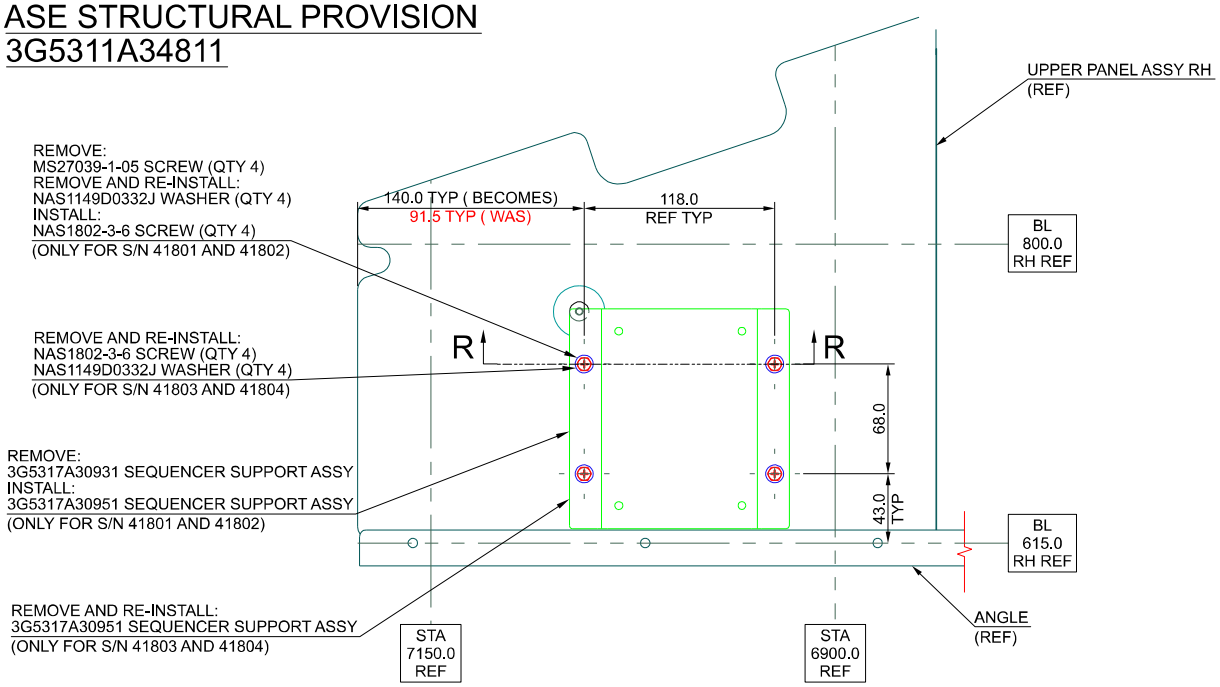
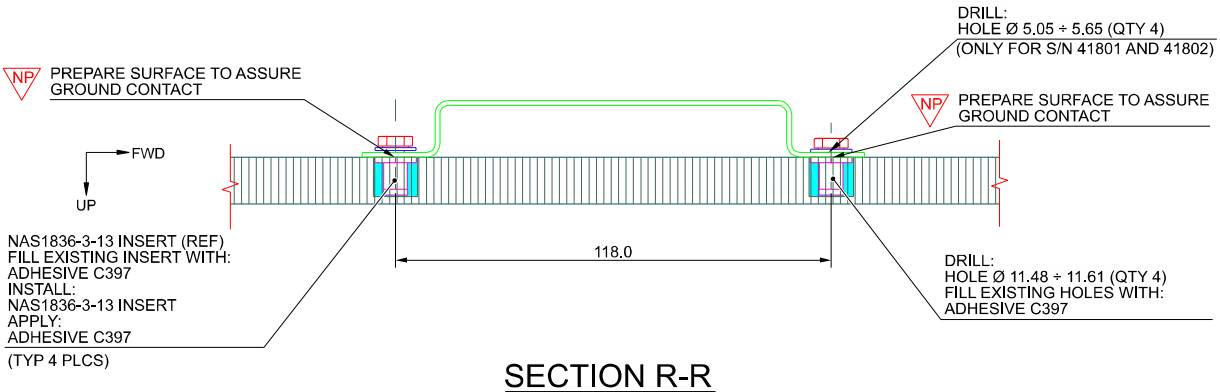

INTERSEAT CONSOLE
COCKPIT
FWD FUSELAGE
REAR AVIONIC BAY
DRAWING REF. KEY
SHEET NO. 4
BECOMES
P1214
P1214P1
SAFE (STATUS)
ARM (STATUS)
ARM CNTL OUT
OMDS CTRL PNL
P1215
P1215P1
CTRL DISPLAY UNIT
TB150-1
W.O.W.
P116
J116
P114
J114
J210
P210
J212
P212
A556A7 20
A556AT 14
A556AT 22
SP10513
SP10514
SP10515
SP10516
SP10517
SP10518
SP21368
SP21369
SP21370
SP21372
A1B604
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM B1L083 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 16 UNLESS SPECIFIED

Figure 50



VIEW P

APPLICABLE ONLY FOR S/N 41801 THRU S/N 41804 EXCEPT WHERE INDICATED
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 39)

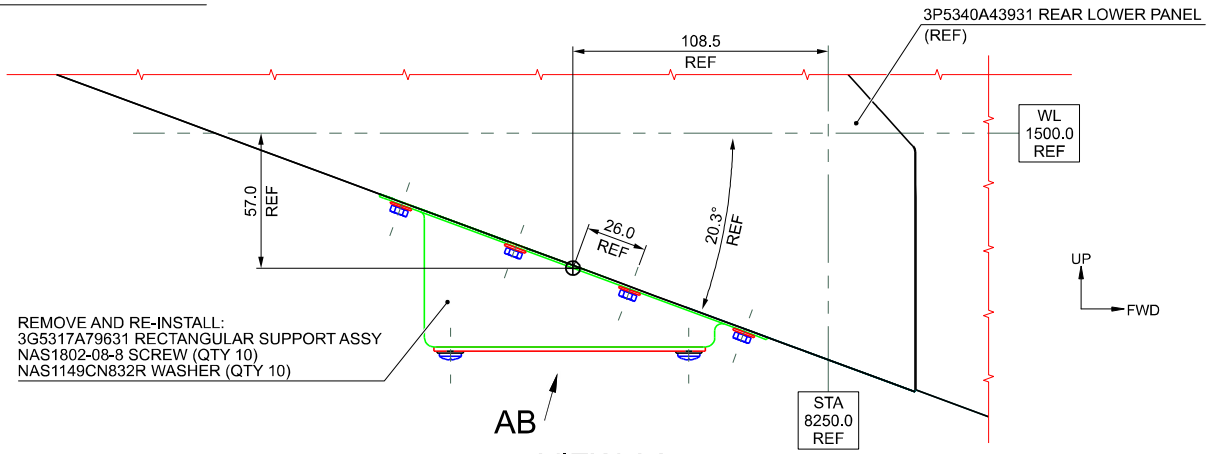


SECTION R-R

APPLICABLE ONLY FOR S/N 41801 THRU S/N 41804 EXCEPT WHERE INDICATED

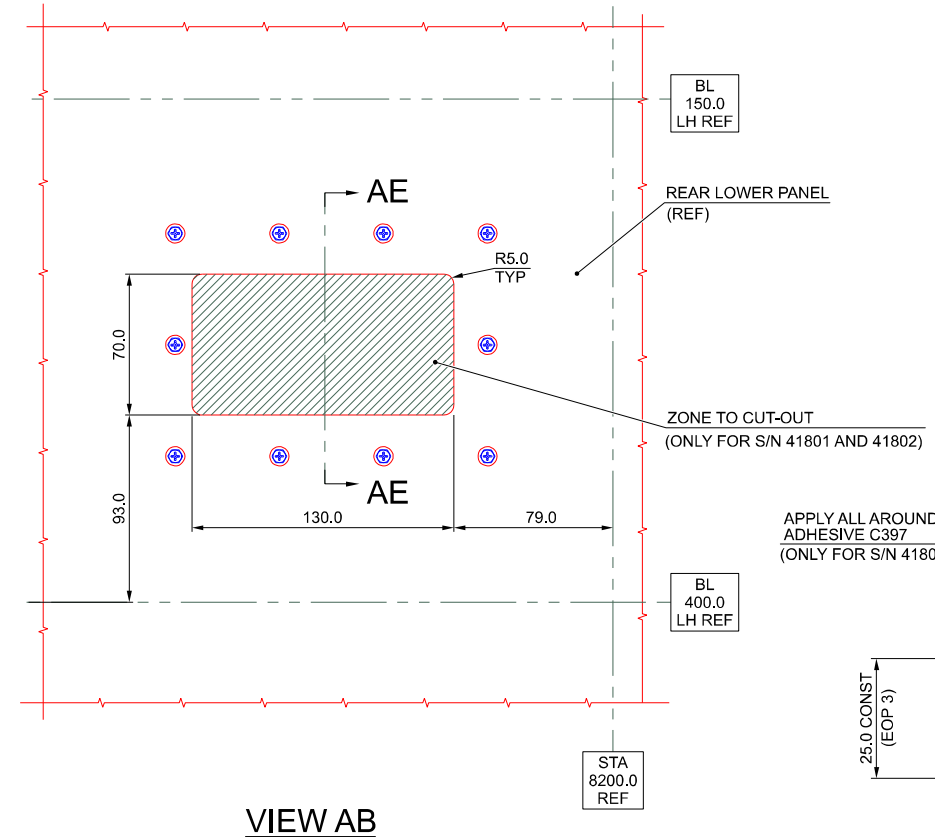
Figure 51

ASE STRUCTURAL PROVISION
3G5311A34811



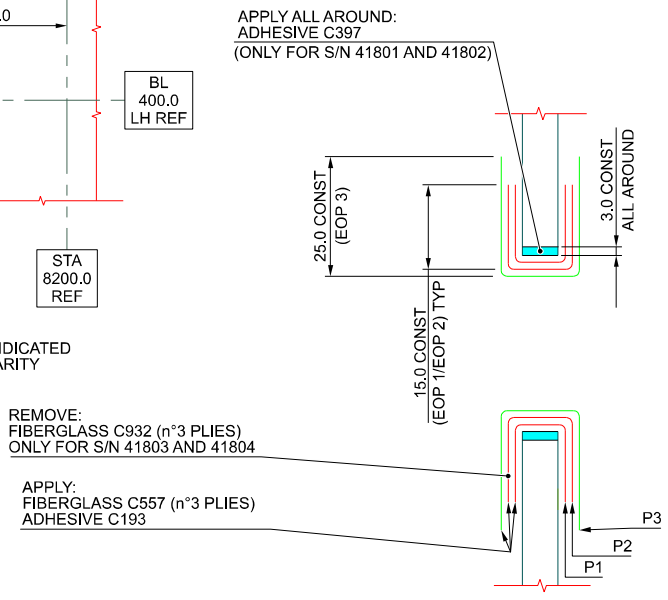
VIEW AA

APPLICABLE ONLY FOR S/N 41801 THRU S/N 41804 EXCEPT WHERE INDICATED
LH SHOWN (RH OPPOSITE)
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 39)



VIEW AB

APPLICABLE ONLY FOR S/N 41801 THRU S/N 41804 EXCEPT WHERE INDICATED
3G5317A79631 RECTANGULAR SUPPORT ASSY OMITTED FOR CLARITY

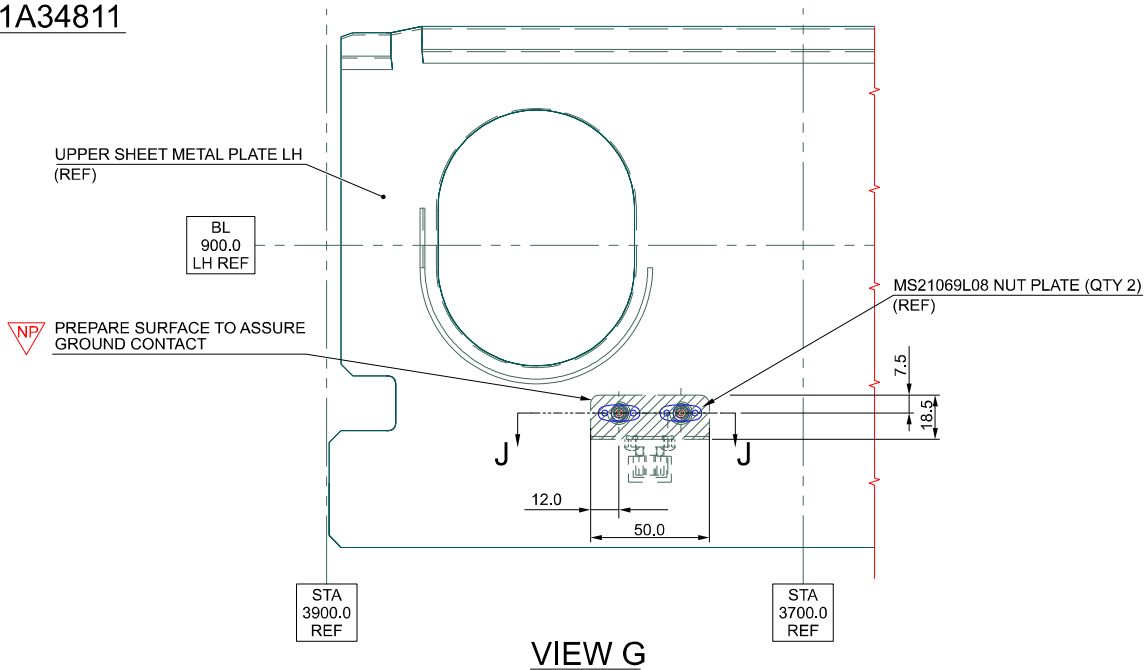


SCHEMATIC SECTION AE-AE

APPLICABLE ONLY FOR S/N 41801 THRU S/N 41804 EXCEPT WHERE INDICATED

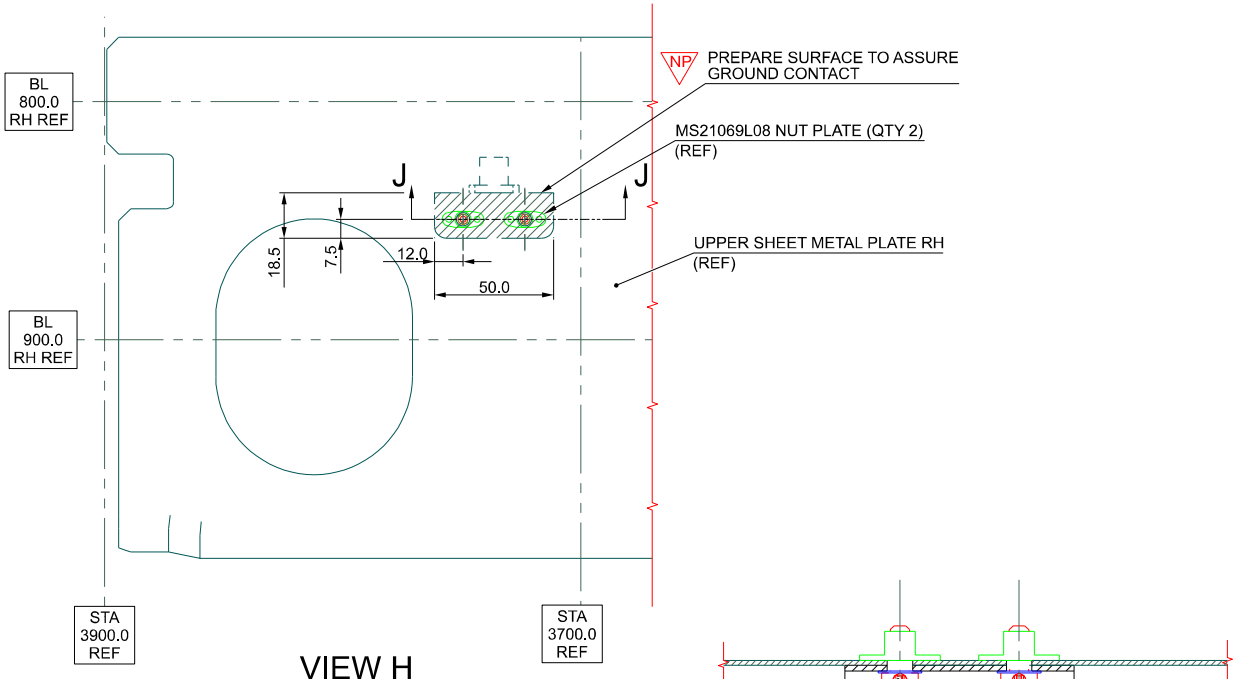
Figure 52

ASE STRUCTURAL PROVISION
3G5311A34811



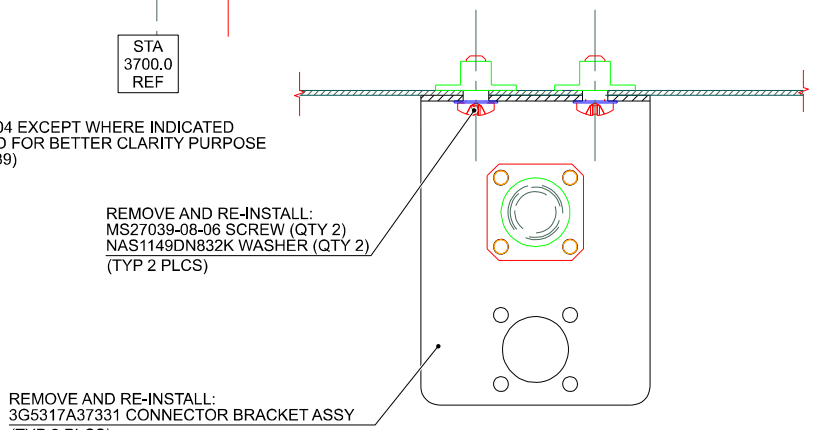
VIEW G

APPLICABLE ONLY FOR S/N 41801 THRU S/N 41804 EXCEPT WHERE INDICATED
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 39)



VIEW H

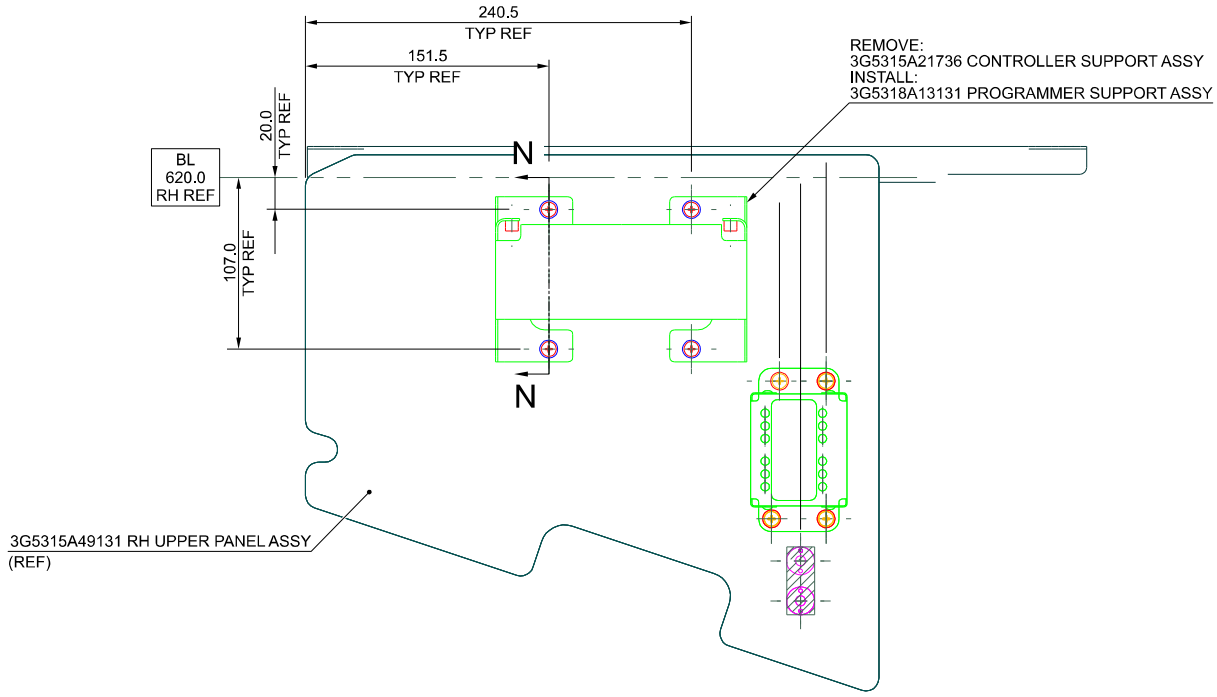
APPLICABLE ONLY FOR S/N 41801 THRU S/N 41804 EXCEPT WHERE INDICATED
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 39)



SECTION J-J

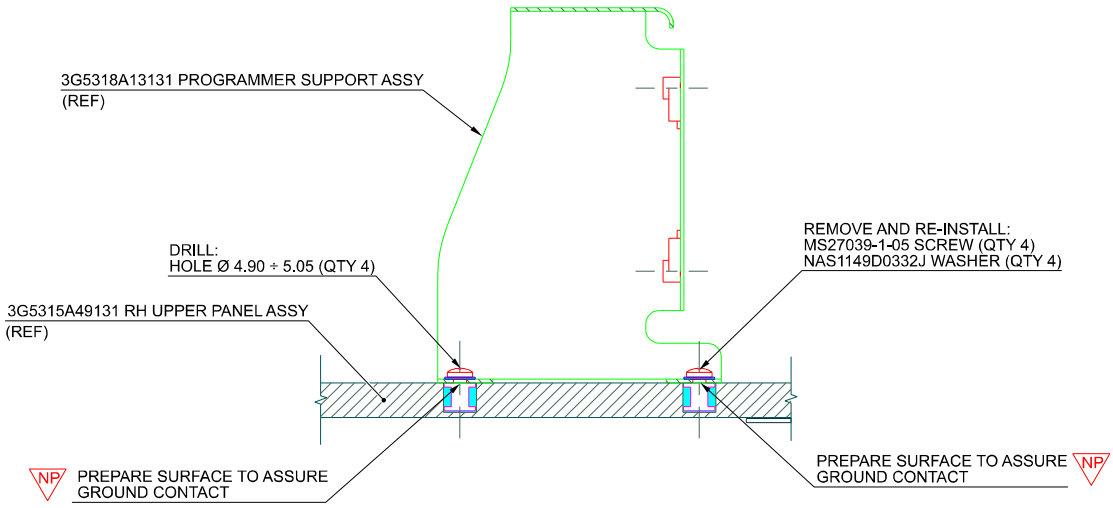
APPLICABLE ONLY FOR S/N 41801 THRU S/N 41804 EXCEPT WHERE INDICATED

Figure 53



VIEW K

APPLICABLE ONLY FOR S/N 41801 THRU S/N 41804 EXCEPT WHERE INDICATED
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 39)



SECTION N-N

APPLICABLE ONLY FOR S/N 41801 THRU S/N 41804 EXCEPT WHERE INDICATED
ROTATED 90° CW

Figure 54

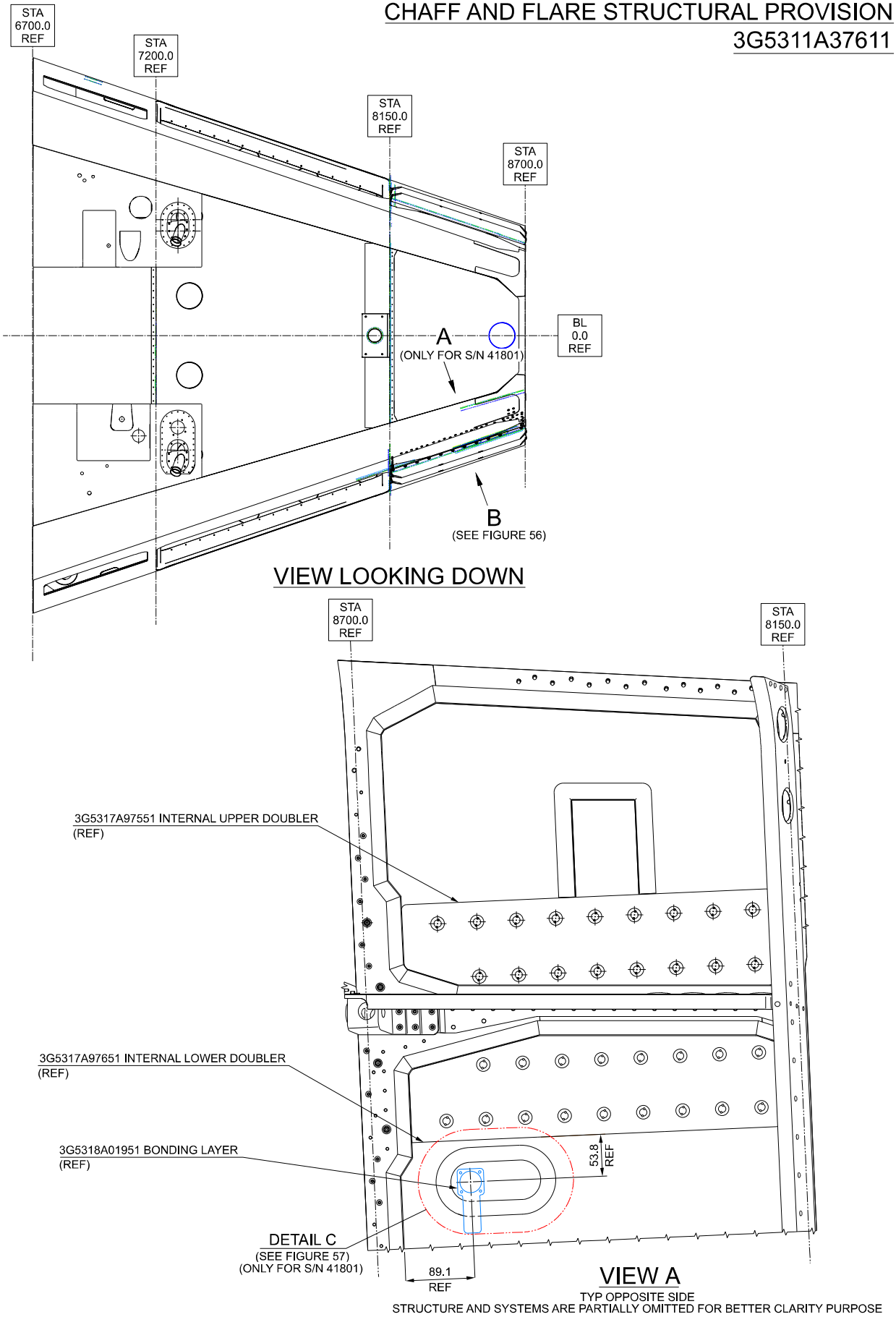

STA 6700.0 REF
STA 7200.0 REF
STA 8150.0 REF
STA 8700.0 REF
BL 0.0 REF
A
(ONLY FOR S/N 41801)
B
(SEE FIGURE 56)
VIEW LOOKING DOWN
STA 8700.0 REF
STA 8150.0 REF
3G5317A97551 INTERNAL UPPER DOUBLER (REF)
3G5317A97651 INTERNAL LOWER DOUBLER (REF)
3G5318A01951 BONDING LAYER (REF)
53.8 REF
DETAIL C
(SEE FIGURE 57)
(ONLY FOR S/N 41801)
89.1 REF
VIEW A
TYP OPPOSITE SIDE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 55

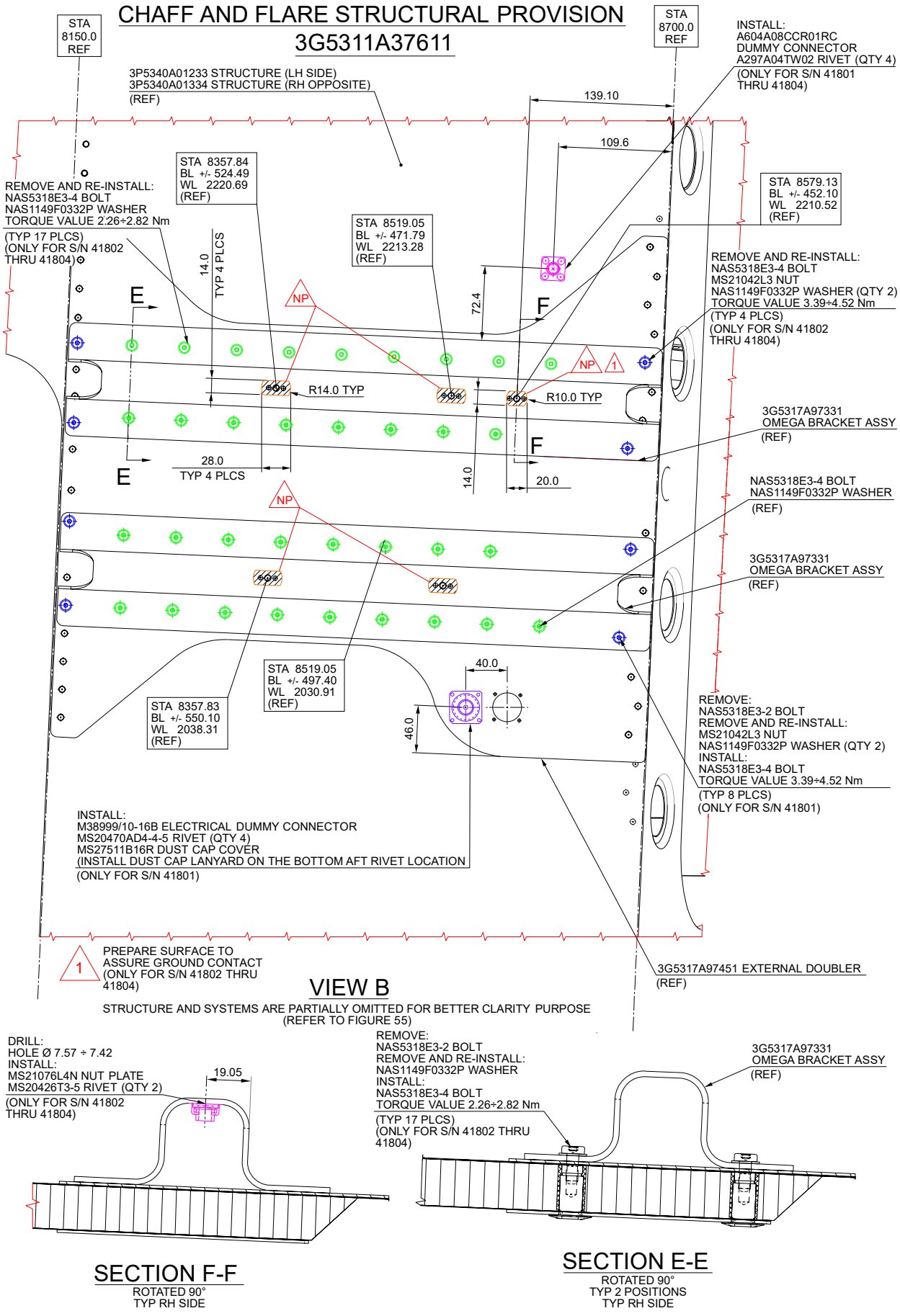
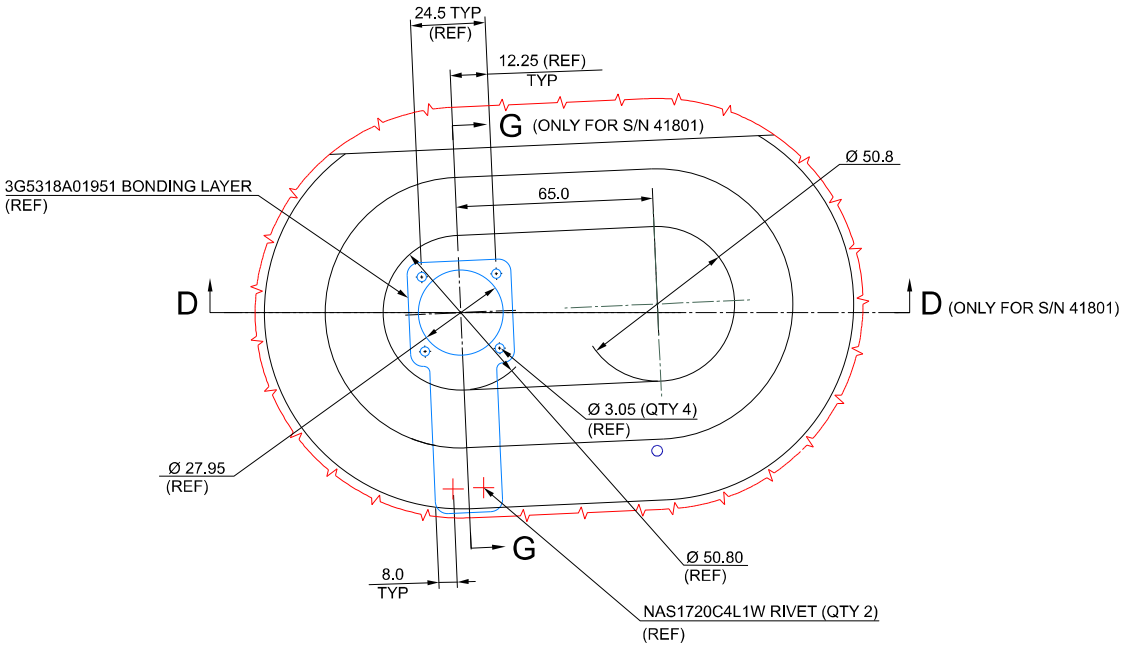
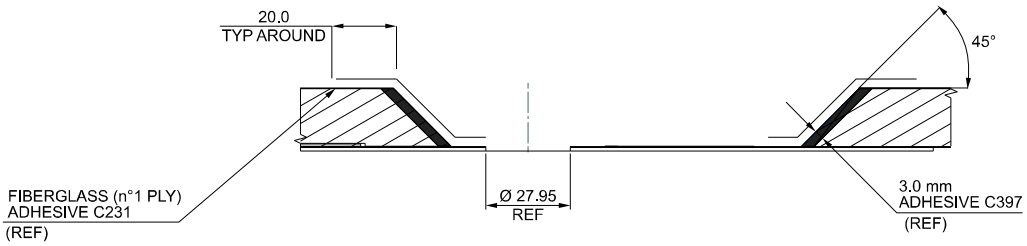

CHAFF AND FLARE STRUCTURAL PROVISION
3G5311A37611
STA 8150.0 REF
STA 8700.0 REF
3P5340A01233 STRUCTURE (LH SIDE)
3P5340A01334 STRUCTURE (RH OPPOSITE)
(REF)
139.10
109.6
INSTALL:
A604A08CCR01RC
DUMMY CONNECTOR
A297A04TW02 RIVET (QTY 4)
(ONLY FOR S/N 41801 THRU 41804)
STA 8357.84
BL +/- 524.49
WL 2220.69
(REF)
STA 8579.13
BL +/- 452.10
WL 2210.52
(REF)
REMOVE AND RE-INSTALL:
NAS5318E3-4 BOLT
NAS1149F0332P WASHER
TORQUE VALUE 2.26÷2.82 Nm
(TYP 17 PLCS)
(ONLY FOR S/N 41802 THRU 41804)
STA 8519.05
BL +/- 471.79
WL 2213.28
(REF)
14.0
TYP 4 PLCS
72.4
E
F
NP
1
R14.0 TYP
R10.0 TYP
REMOVE AND RE-INSTALL:
NAS5318E3-4 BOLT
MS21042L3 NUT
NAS1149F0332P WASHER (QTY 2)
TORQUE VALUE 3.39÷4.52 Nm
(TYP 4 PLCS)
(ONLY FOR S/N 41802 THRU 41804)
3G5317A97331
OMEGA BRACKET ASSY
(REF)
28.0
TYP 4 PLCS
14.0
20.0
NAS5318E3-4 BOLT
NAS1149F0332P WASHER
(REF)
3G5317A97331
OMEGA BRACKET ASSY
(REF)
STA 8519.05
BL +/- 497.40
WL 2030.91
(REF)
40.0
46.0
STA 8357.83
BL +/- 550.10
WL 2038.31
(REF)
REMOVE:
NAS5318E3-2 BOLT
REMOVE AND RE-INSTALL:
MS21042L3 NUT
NAS1149F0332P WASHER (QTY 2)
INSTALL:
NAS5318E3-4 BOLT
TORQUE VALUE 3.39÷4.52 Nm
(TYP 8 PLCS)
(ONLY FOR S/N 41801)
INSTALL:
M38999/10-16B ELECTRICAL DUMMY CONNECTOR
MS20470AD4-4-5 RIVET (QTY 4)
MS27511B16R DUST CAP COVER
(INSTALL DUST CAP LANYARD ON THE BOTTOM AFT RIVET LOCATION
(ONLY FOR S/N 41801)
1
PREPARE SURFACE TO ASSURE GROUND CONTACT
(ONLY FOR S/N 41802 THRU 41804)
3G5317A97451 EXTERNAL DOUBLER
(REF)
VIEW B
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 55)
DRILL:
HOLE Ø 7.57 ÷ 7.42
INSTALL:
MS21076L4N NUT PLATE
MS20426T3-5 RIVET (QTY 2)
(ONLY FOR S/N 41802 THRU 41804)
19.05
REMOVE:
NAS5318E3-2 BOLT
REMOVE AND RE-INSTALL:
NAS1149F0332P WASHER
INSTALL:
NAS5318E3-4 BOLT
TORQUE VALUE 2.26÷2.82 Nm
(TYP 17 PLCS)
(ONLY FOR S/N 41802 THRU 41804)
3G5317A97331
OMEGA BRACKET ASSY
(REF)
SECTION F-F
ROTATED 90°
TYP RH SIDE
SECTION E-E
ROTATED 90°
TYP 2 POSITIONS
TYP RH SIDE

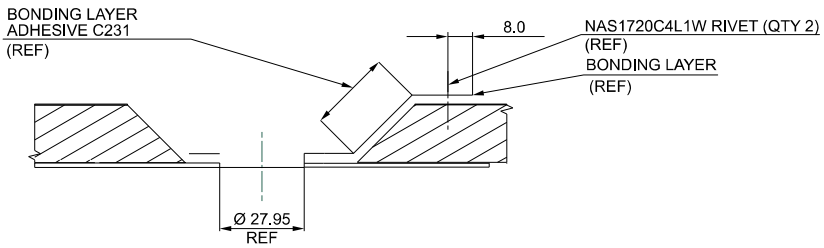
Figure 56



DETAIL C BECOMES
ONLY FOR REFERENCE PURPOSE
TYP OPPOSITE SIDE
(REFER TO FIGURE 55)



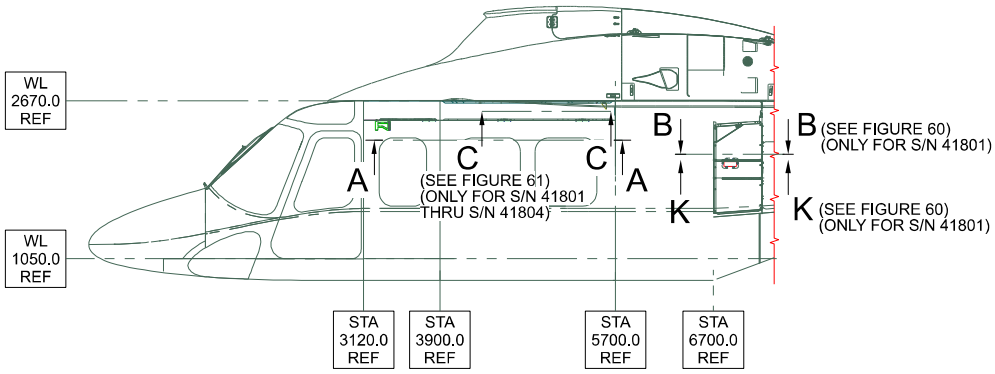
SECTION D-D
ONLY FOR REFERENCE PURPOSE



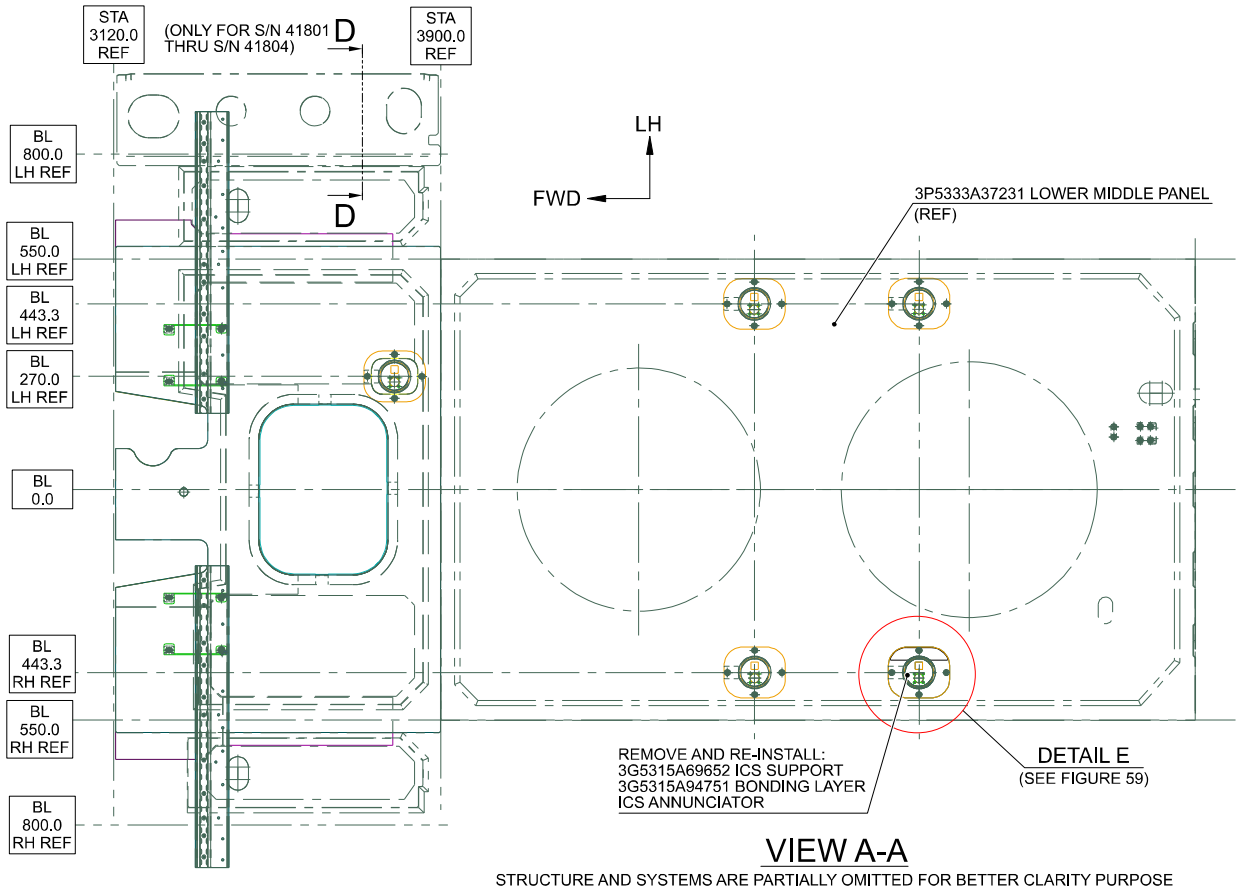
SECTION G-G
ONLY FOR REFERENCE PURPOSE

Figure 57

ICS AUDIO CUSTOMIZATION STRUCT PROVISION
3G5311A35211

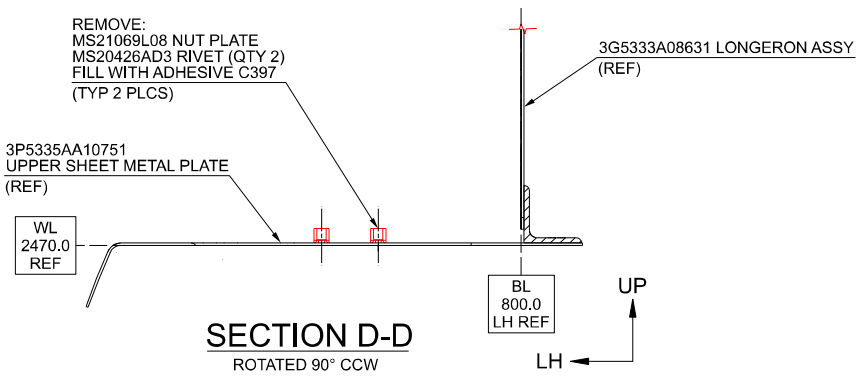


VIEW LOOKING INBOARD LEFT SIDE



VIEW A-A

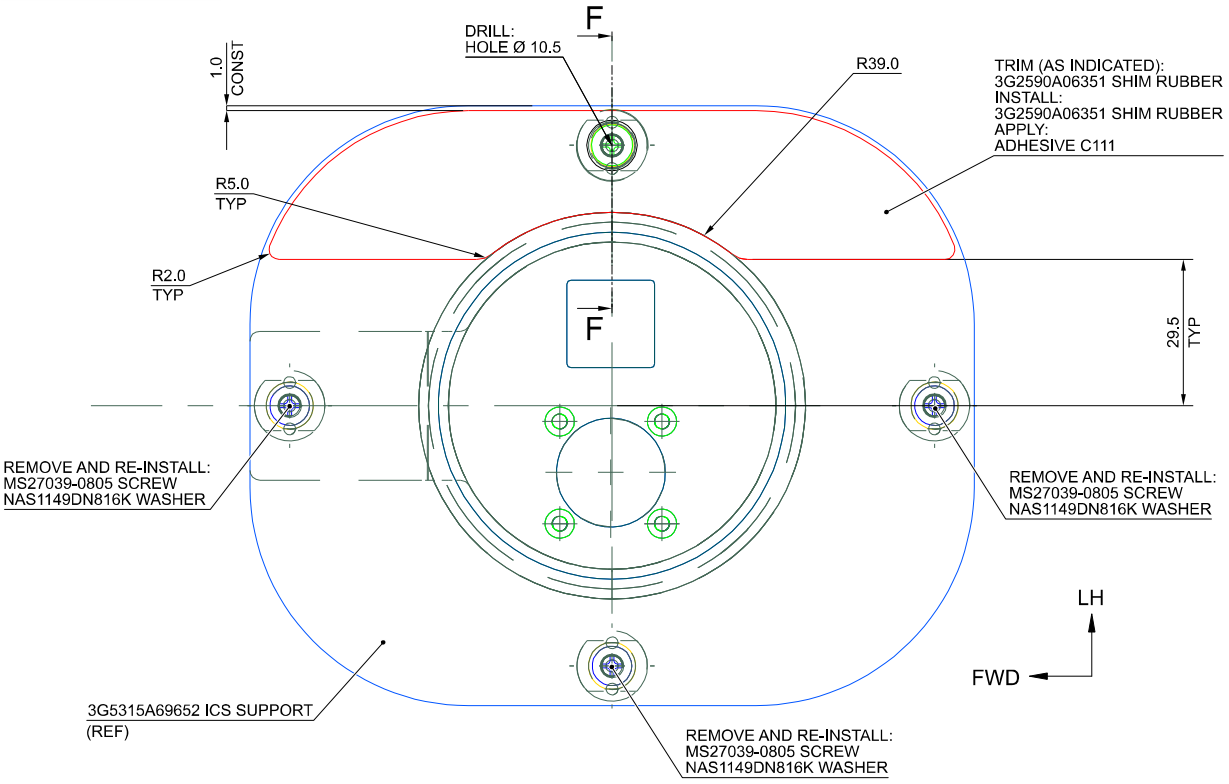
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



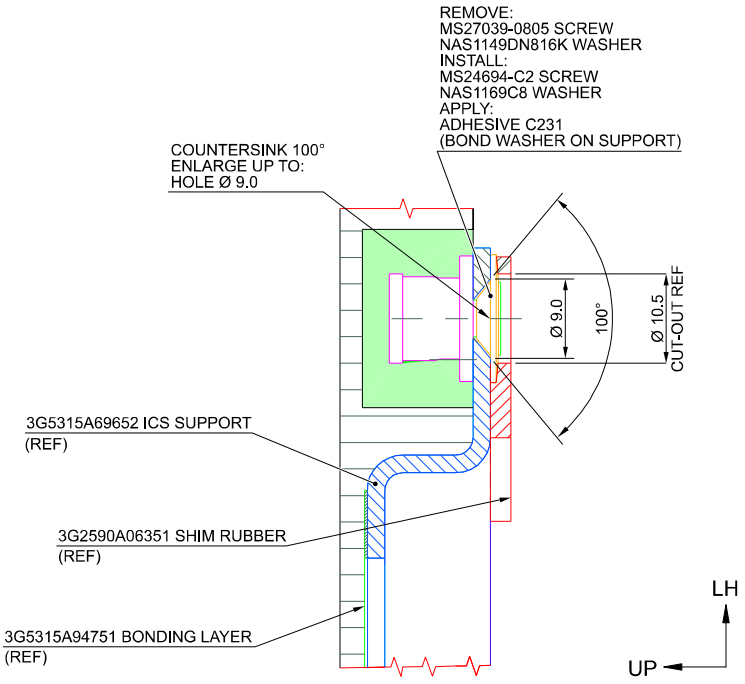
SECTION D-D

ROTATED 90° CCW

Figure 58



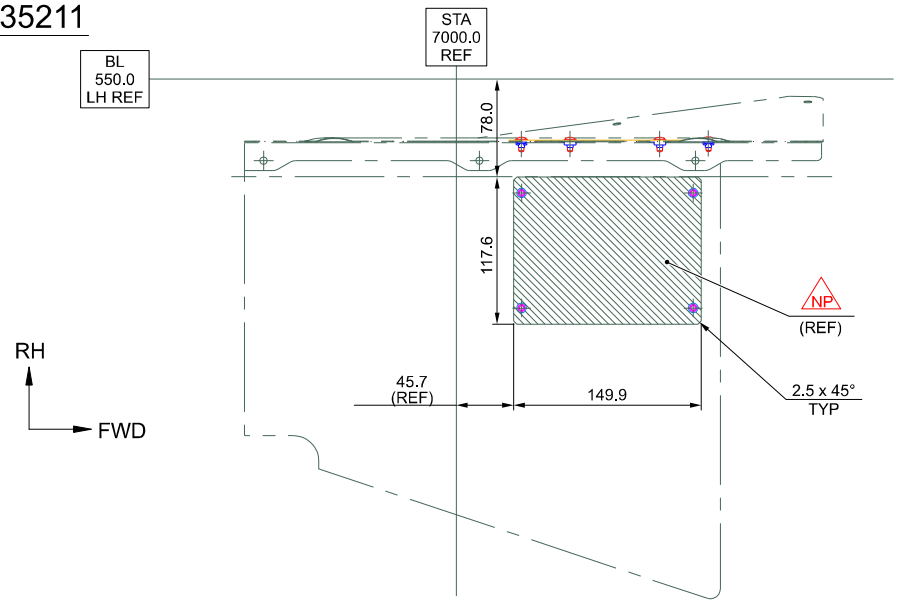
DETAIL E
(REFER TO FIGURE 58)



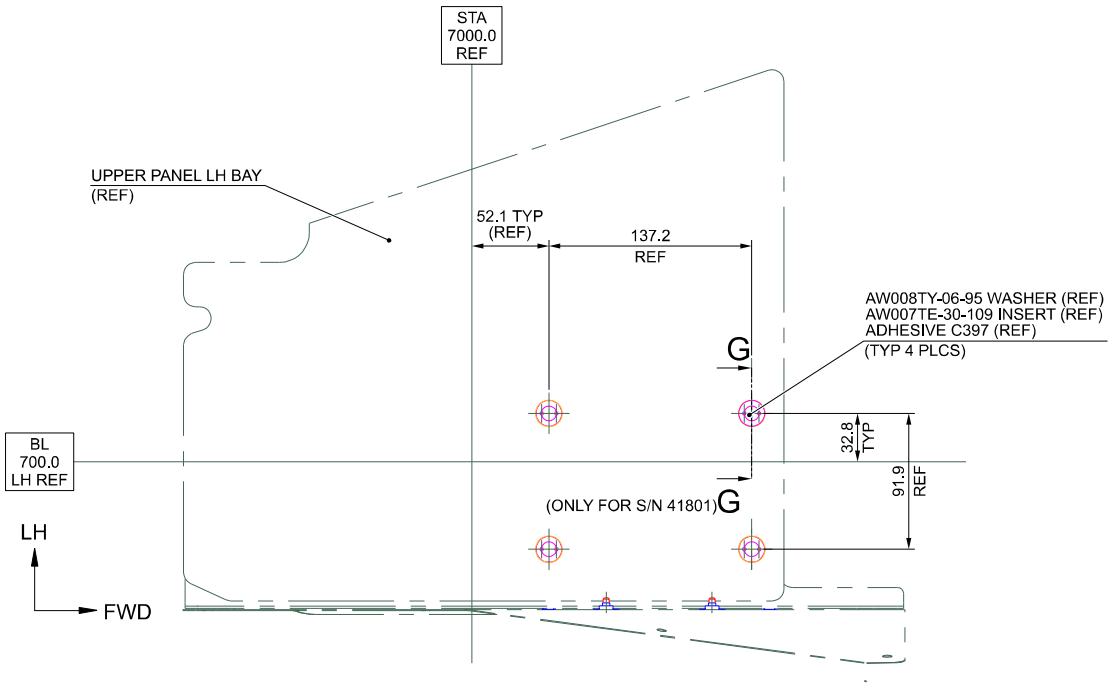
SECTION F-F

Figure 59

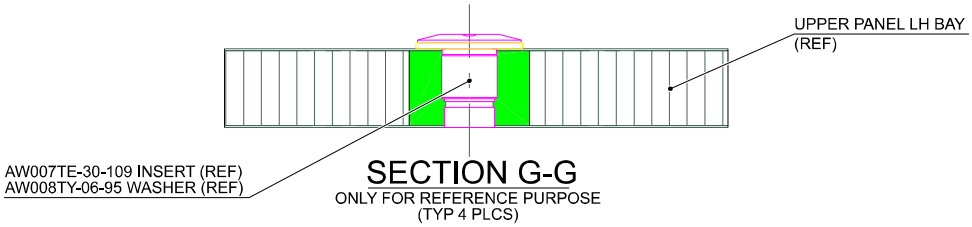
ICS AUDIO CUSTOMIZATION STRUCT PROVISION
3G5311A35211



SECTION K-K
ONLY FOR REFERENCE PURPOSE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 58)



SECTION B-B
ONLY FOR REFERENCE PURPOSE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 58)



SECTION G-G
ONLY FOR REFERENCE PURPOSE
(TYP 4 PLCS)

Figure 60

ICS AUDIO CUSTOMIZATION STRUCT PROVISION
3G5311A35211

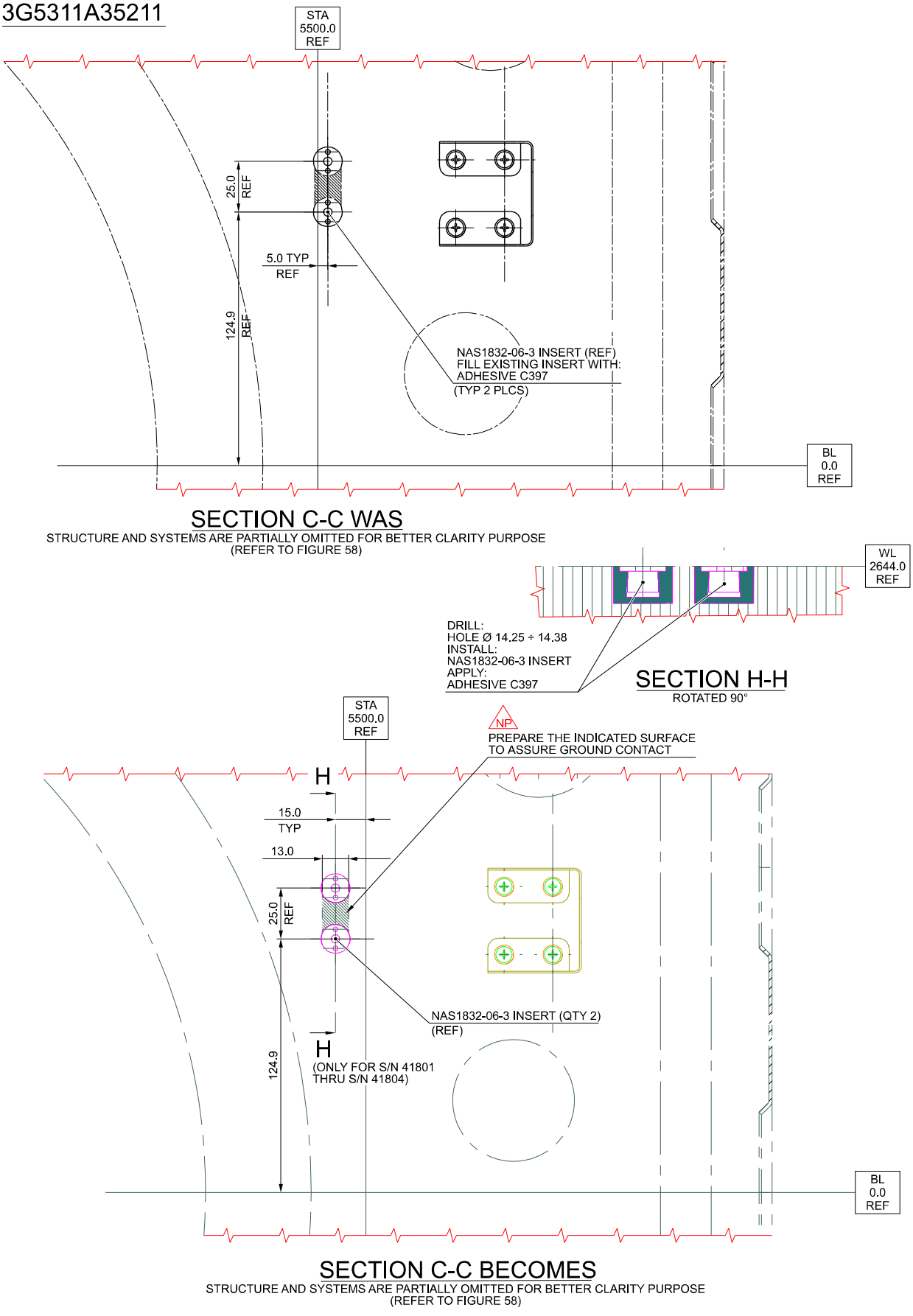
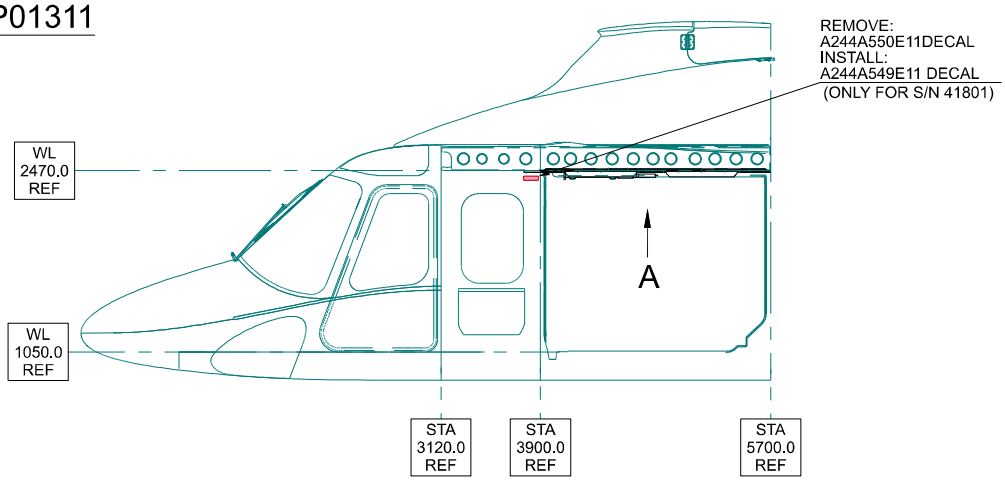
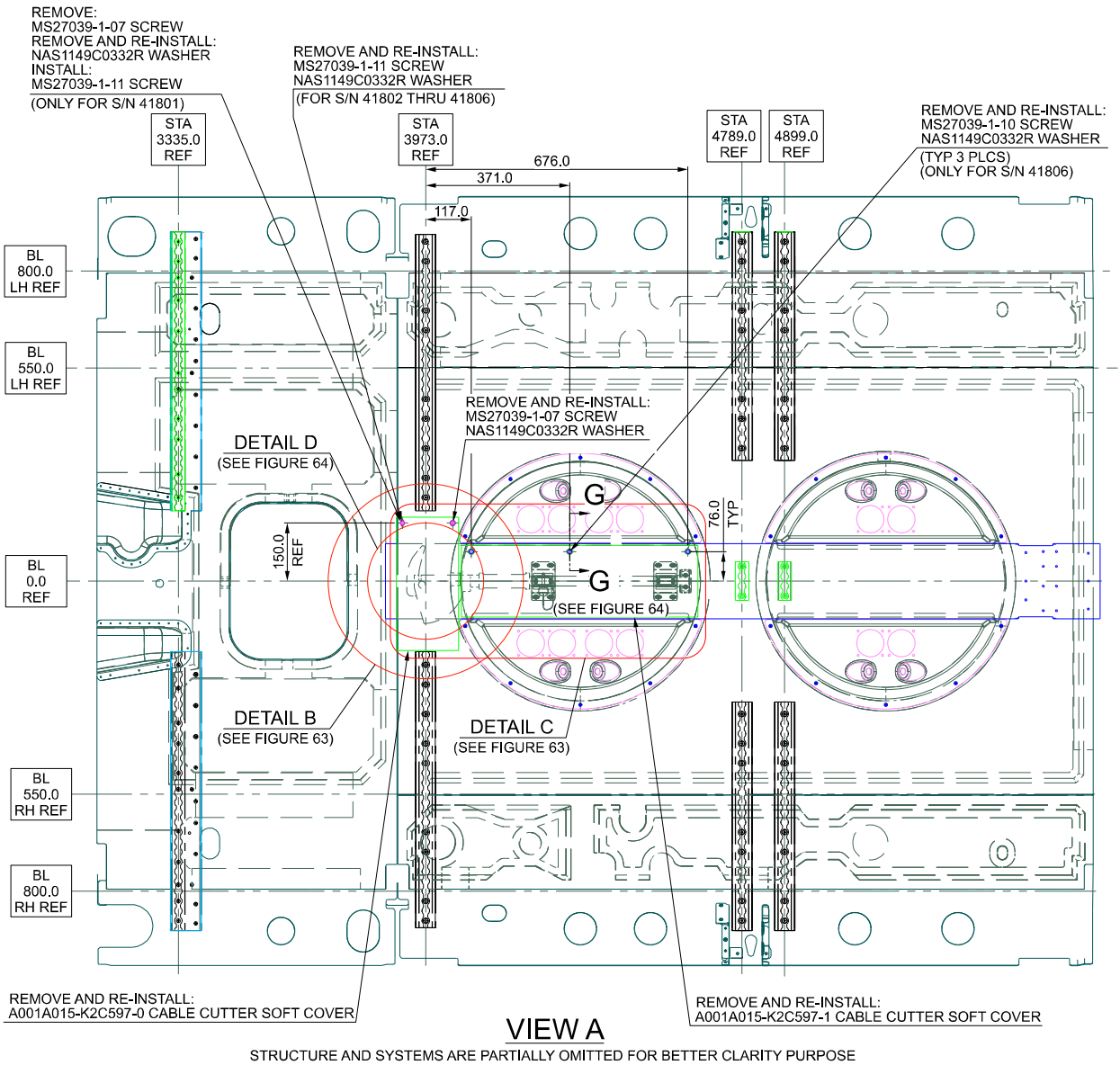


Figure 61

CABLE CUTTER INSTL VARIANT
3G2560P01311



VIEW LOOKING OUTBOARD RIGHT SIDE



VIEW A

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 62

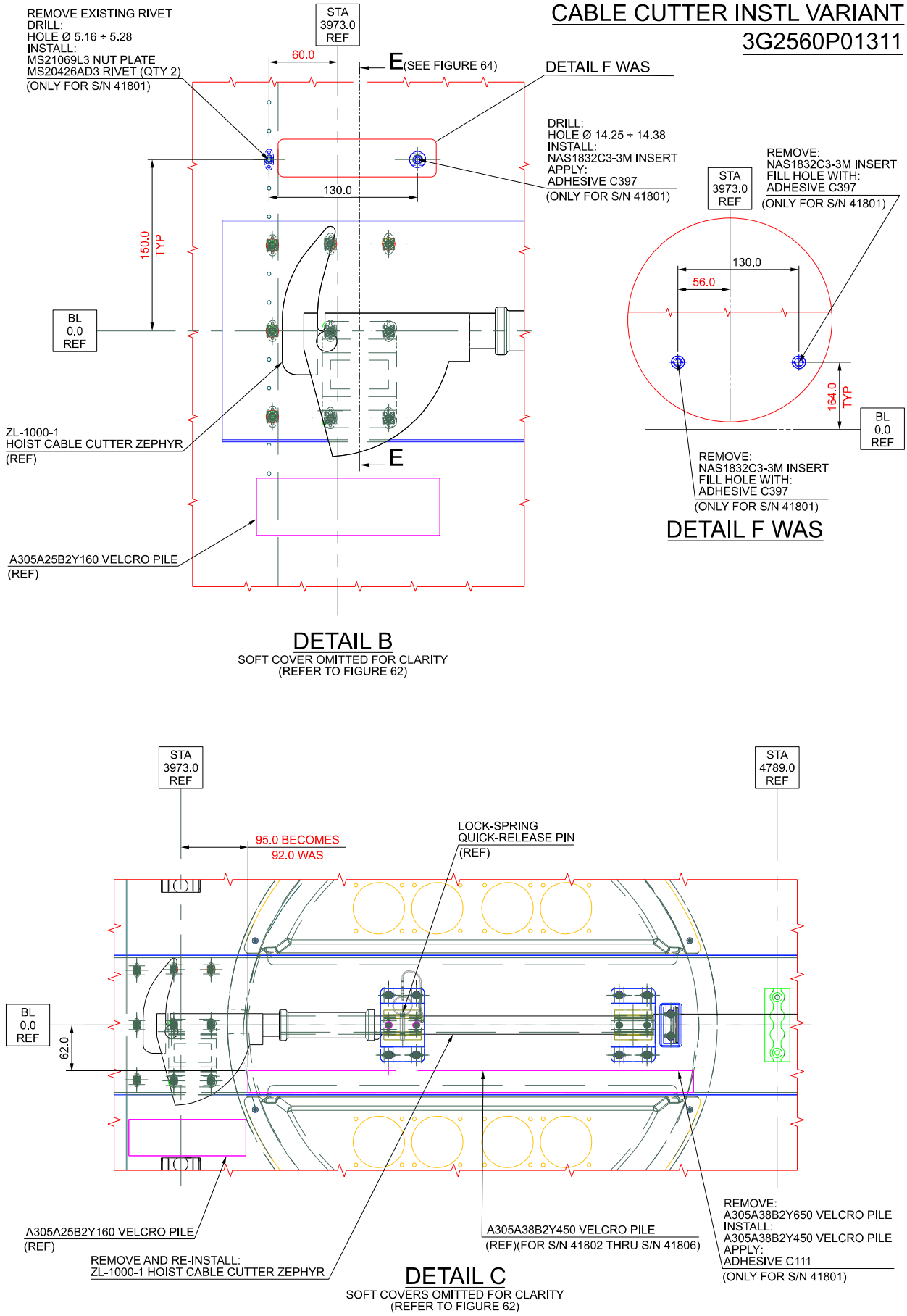

CABLE CUTTER INSTL VARIANT
3G2560P01311
REMOVE EXISTING RIVET
DRILL:
HOLE Ø 5.16 ÷ 5.28
INSTALL:
MS21069L3 NUT PLATE
MS20426AD3 RIVET (QTY 2)
(ONLY FOR S/N 41801)
STA 3973.0 REF
60.0
E (SEE FIGURE 64)
DETAIL F WAS
DRILL:
HOLE Ø 14.25 ÷ 14.38
INSTALL:
NAS1832C3-3M INSERT
APPLY:
ADHESIVE C397
(ONLY FOR S/N 41801)
130.0
150.0 TYP
BL 0.0 REF
ZL-1000-1
HOIST CABLE CUTTER ZEPHYR
(REF)
E
A305A25B2Y160 VELCRO PILE
(REF)
DETAIL B
SOFT COVER OMITTED FOR CLARITY
(REFER TO FIGURE 62)
STA 3973.0 REF
REMOVE:
NAS1832C3-3M INSERT
FILL HOLE WITH:
ADHESIVE C397
(ONLY FOR S/N 41801)
130.0
56.0
164.0 TYP
BL 0.0 REF
REMOVE:
NAS1832C3-3M INSERT
FILL HOLE WITH:
ADHESIVE C397
(ONLY FOR S/N 41801)
DETAIL F WAS
STA 3973.0 REF
STA 4789.0 REF
95.0 BECOMES
92.0 WAS
LOCK-SPRING
QUICK-RELEASE PIN
(REF)
BL 0.0 REF
62.0
A305A25B2Y160 VELCRO PILE
(REF)
REMOVE AND RE-INSTALL:
ZL-1000-1 HOIST CABLE CUTTER ZEPHYR
A305A38B2Y450 VELCRO PILE
(REF)(FOR S/N 41802 THRU S/N 41806)
REMOVE:
A305A38B2Y650 VELCRO PILE
INSTALL:
A305A38B2Y450 VELCRO PILE
APPLY:
ADHESIVE C111
(ONLY FOR S/N 41801)
DETAIL C
SOFT COVERS OMITTED FOR CLARITY
(REFER TO FIGURE 62)

Figure 63

CABLE CUTTER INSTL VARIANT
3G2560P01311

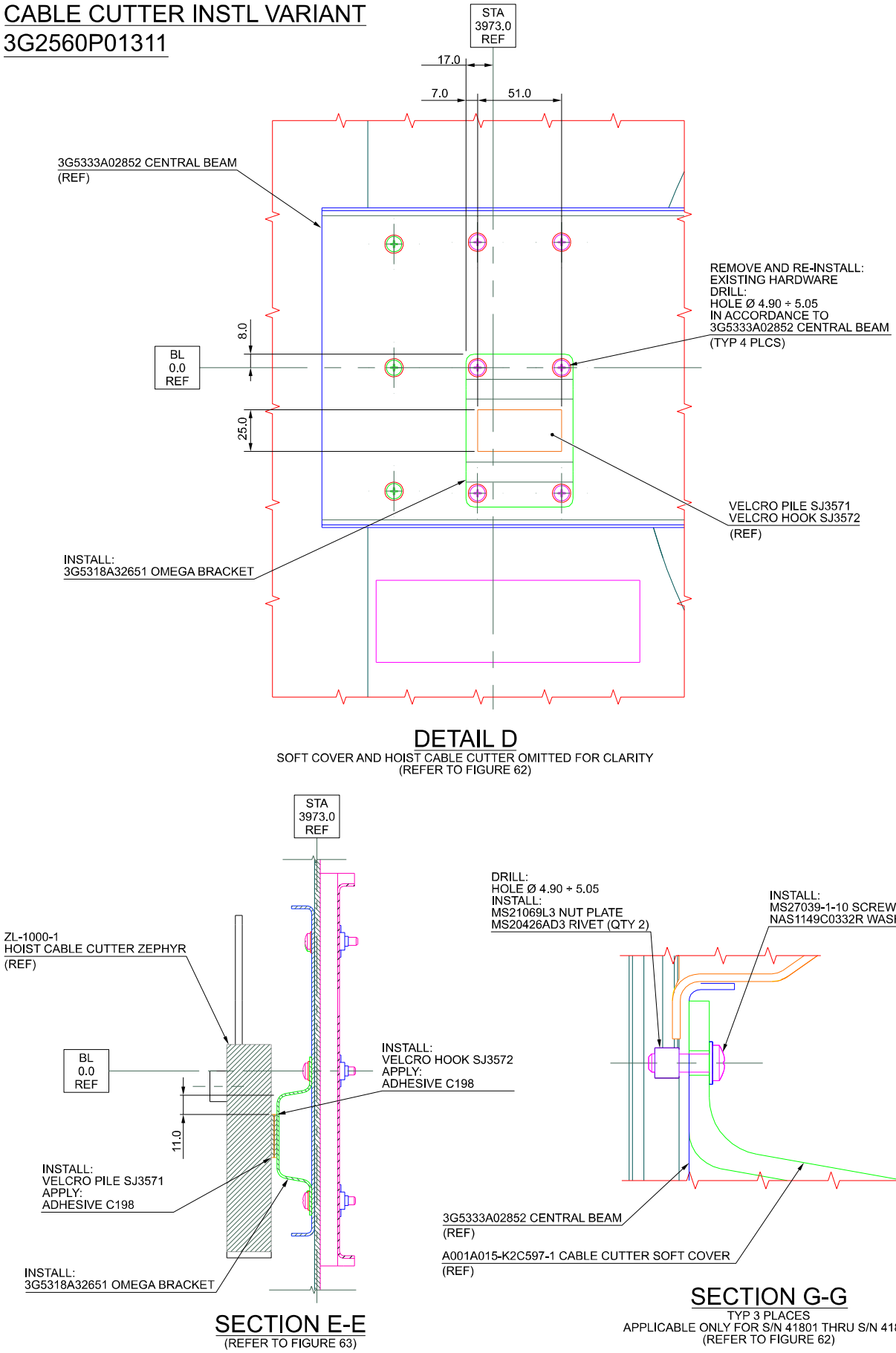
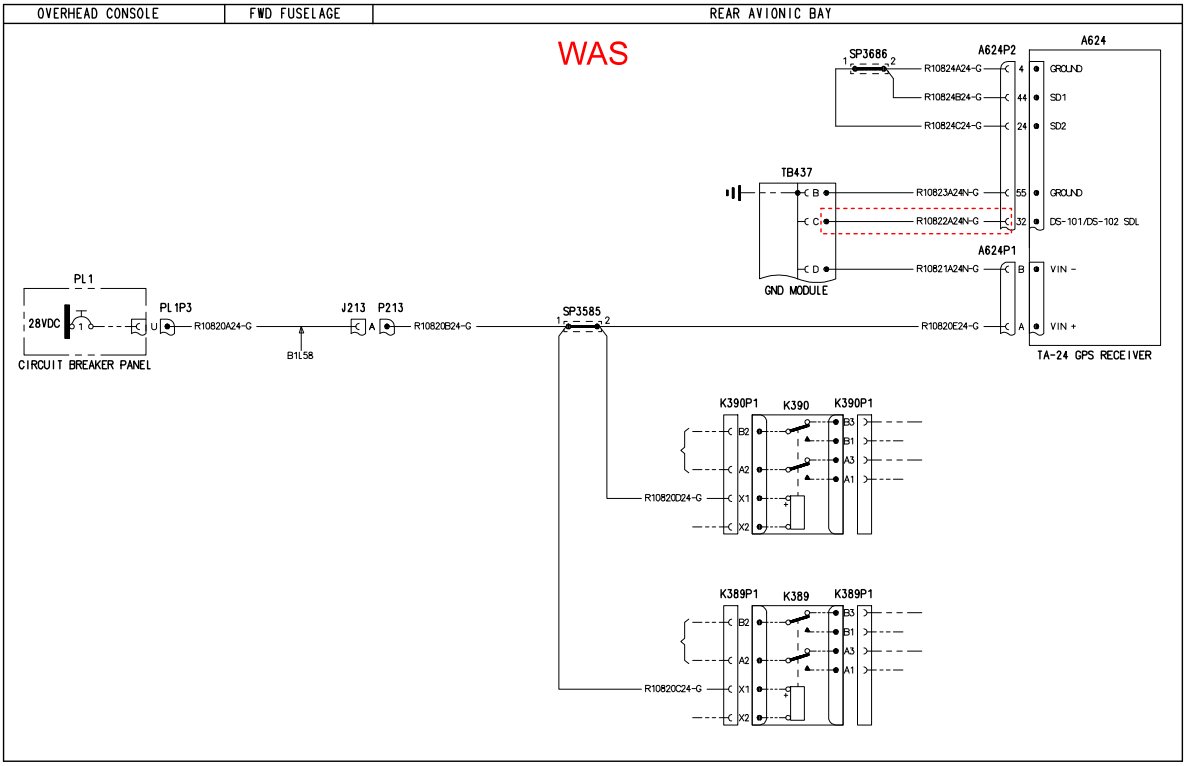
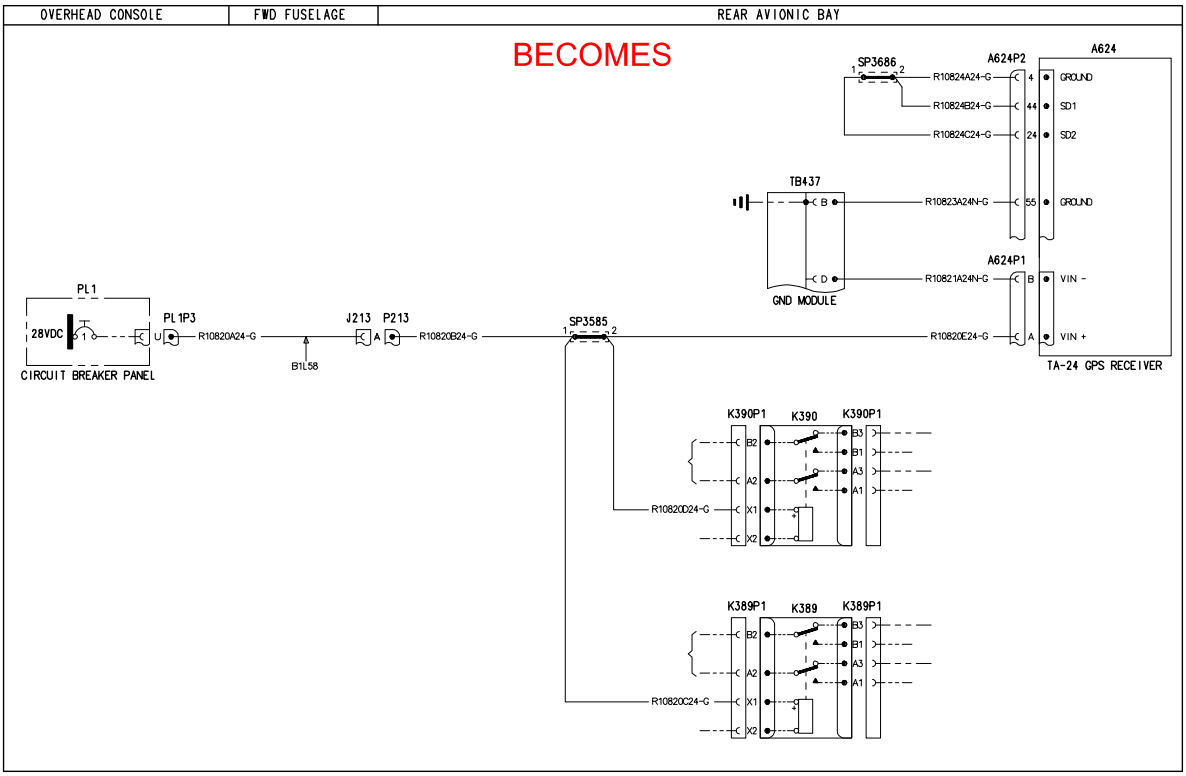


Figure 64



FUNCTIONAL NOTES

ALL CABLES ARE IN LOOM C1A362 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 24 UNLESS SPECIFIED



FUNCTIONAL NOTES

ALL CABLES ARE IN LOOM C1A362 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 24 UNLESS SPECIFIED

3G3450W04811
WIRING DIAGRAM TA-24 GPS MILITARY

Figure 65

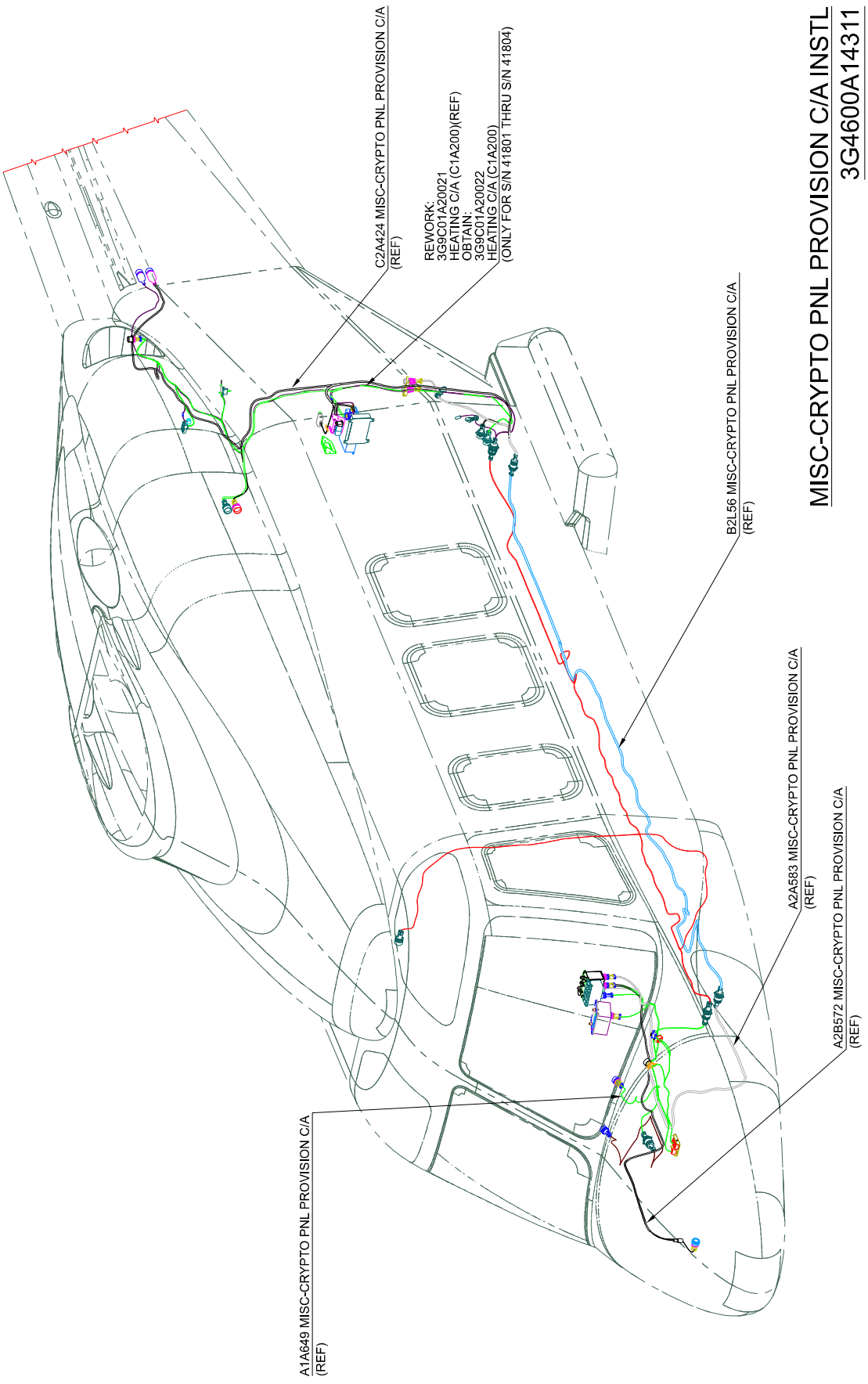

MISC-CRYPTO PNL PROVISION C/A INSTL
3G4600A14311
C2A424 MISC-CRYPTO PNL PROVISION C/A
(REF)
REWORK:
3G9C01A20021
HEATING C/A (C1A200)(REF
OBTAIN:
3G9C01A20022
HEATING C/A (C1A200)
(ONLY FOR S/N 41801 THRU S/N 41804)
B2L56 MISC-CRYPTO PNL PROVISION C/A
(REF)
A2A583 MISC-CRYPTO PNL PROVISION C/A
(REF)
A2B572 MISC-CRYPTO PNL PROVISION C/A
(REF)
A1A649 MISC-CRYPTO PNL PROVISION C/A
(REF)

Figure 66

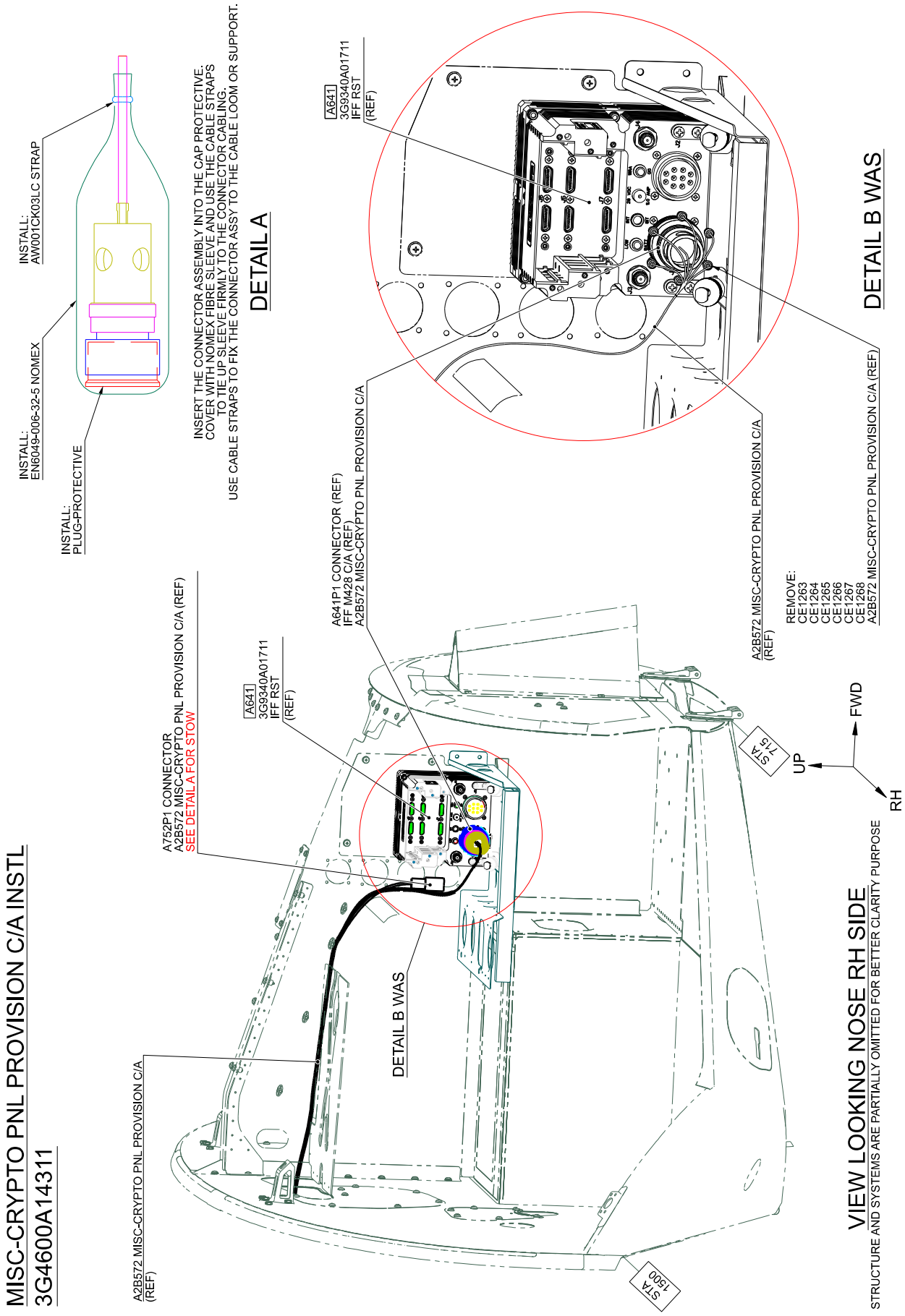

MISC-CRYPTO PNL PROVISION C/A INSTL
3G4600A14311
INSTALL:
AW001CK03LC STRAP
INSTALL:
EN6049-006-32-5 NOMEX
INSTALL:
PLUG-PROTECTIVE
INSERT THE CONNECTOR ASSEMBLY INTO THE CAP PROTECTIVE.
COVER WITH NOMEX FIBRE SLEEVE AND USE THE CABLE STRAPS
TO TIE UP SLEEVE FIRMLY TO THE CONNECTOR CABLING.
USE CABLE STRAPS TO FIX THE CONNECTOR ASSY TO THE CABLE LOOM OR SUPPORT.
DETAIL A
A641
3G9340A01711
IFF RST
(REF)
A641P1 CONNECTOR (REF)
IFF M428 C/A (REF)
A2B572 MISC-CRYPTO PNL PROVISION C/A
A752P1 CONNECTOR
A2B572 MISC-CRYPTO PNL PROVISION C/A (REF)
SEE DETAIL A FOR STOW
A2B572 MISC-CRYPTO PNL PROVISION C/A
(REF)
DETAIL B WAS
A2B572 MISC-CRYPTO PNL PROVISION C/A
(REF)
REMOVE:
CE1263
CE1264
CE1265
CE1266
CE1267
CE1268
A2B572 MISC-CRYPTO PNL PROVISION C/A (REF)
DETAIL B WAS
STA 715
STA 1500
UP
FWD
RH
VIEW LOOKING NOSE RH SIDE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 67

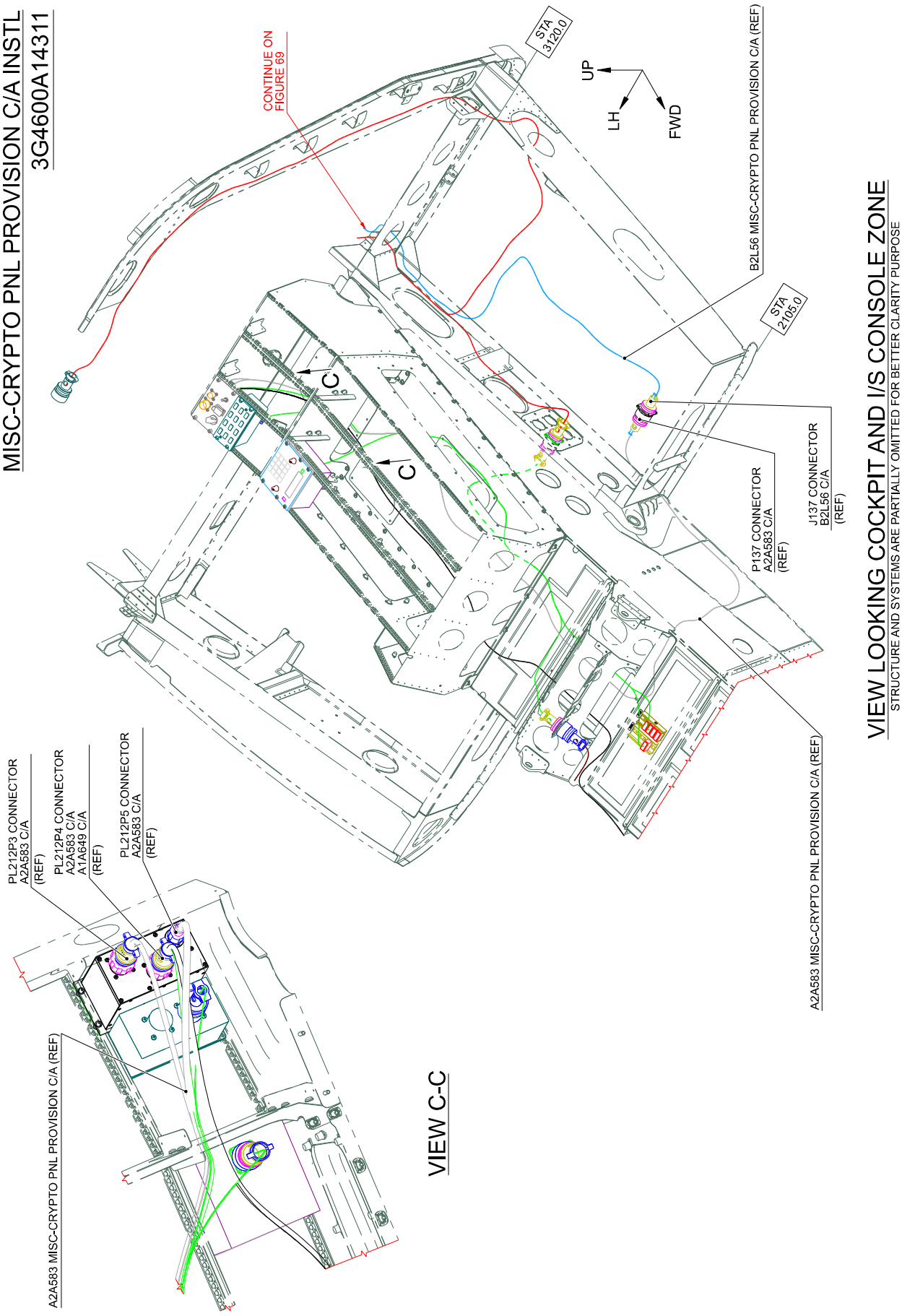

MISC-CRYPTO PNL PROVISION C/A INSTL
3G4600A14311
CONTINUE ON FIGURE 69
STA 3120.0
UP
LH
FWD
B2L56 MISC-CRYPTO PNL PROVISION C/A (REF)
STA 2105.0
C
C
P137 CONNECTOR A2A583 C/A (REF)
J137 CONNECTOR B2L56 C/A (REF)
A2A583 MISC-CRYPTO PNL PROVISION C/A (REF)
VIEW LOOKING COCKPIT AND I/S CONSOLE ZONE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
PL212P3 CONNECTOR A2A583 C/A (REF)
PL212P4 CONNECTOR A2A583 C/A A1A649 C/A (REF)
PL212P5 CONNECTOR A2A583 C/A (REF)
A2A583 MISC-CRYPTO PNL PROVISION C/A (REF)
VIEW C-C

Figure 68

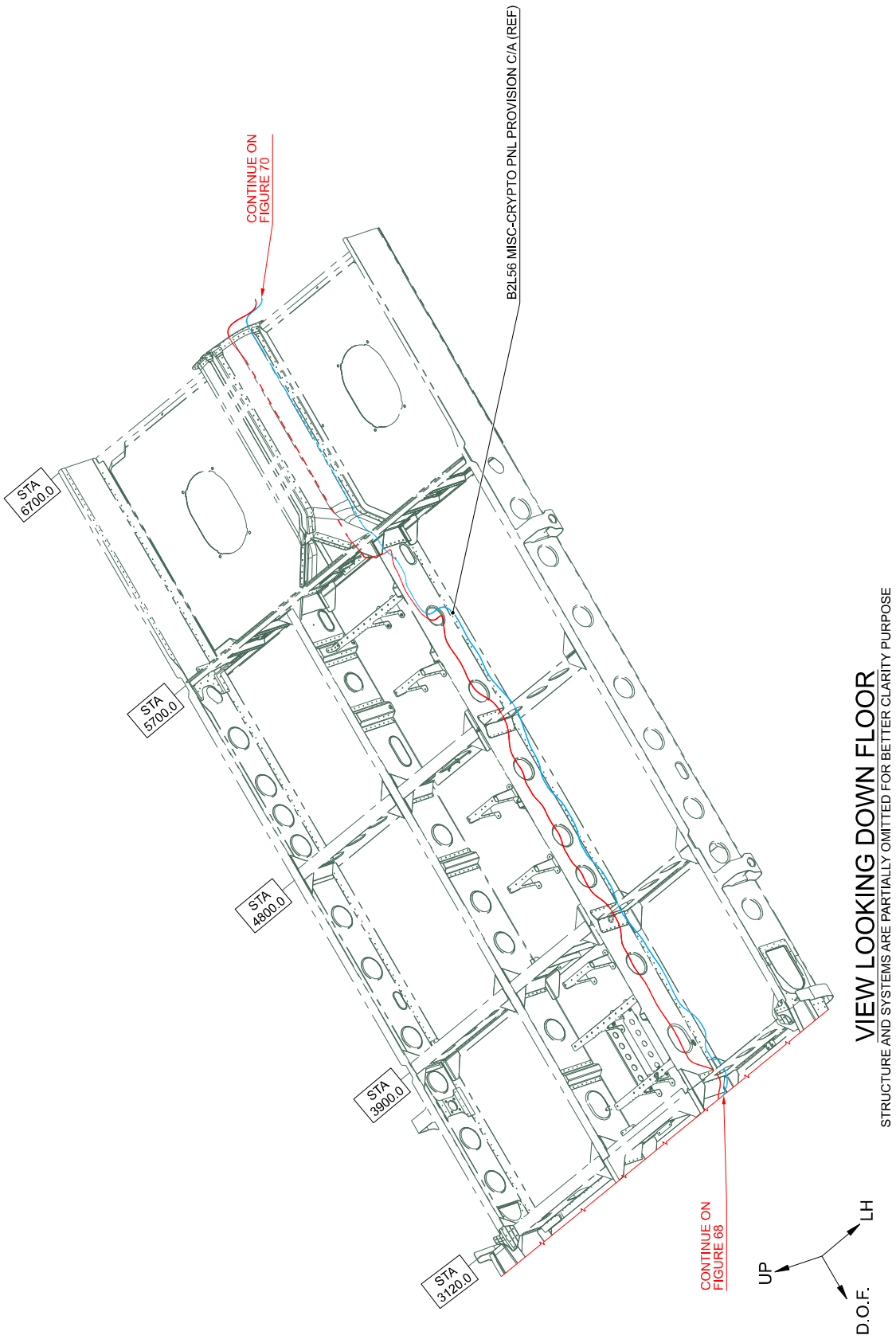

B2L56 MISC-CRYPTO PNL PROVISION C/A (REF)
CONTINUE ON FIGURE 70
STA 6700.0
STA 5700.0
STA 4800.0
STA 3900.0
STA 3120.0
CONTINUE ON FIGURE 68
VIEW LOOKING DOWN FLOOR
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
UP
LH
D.O.F.

Figure 69

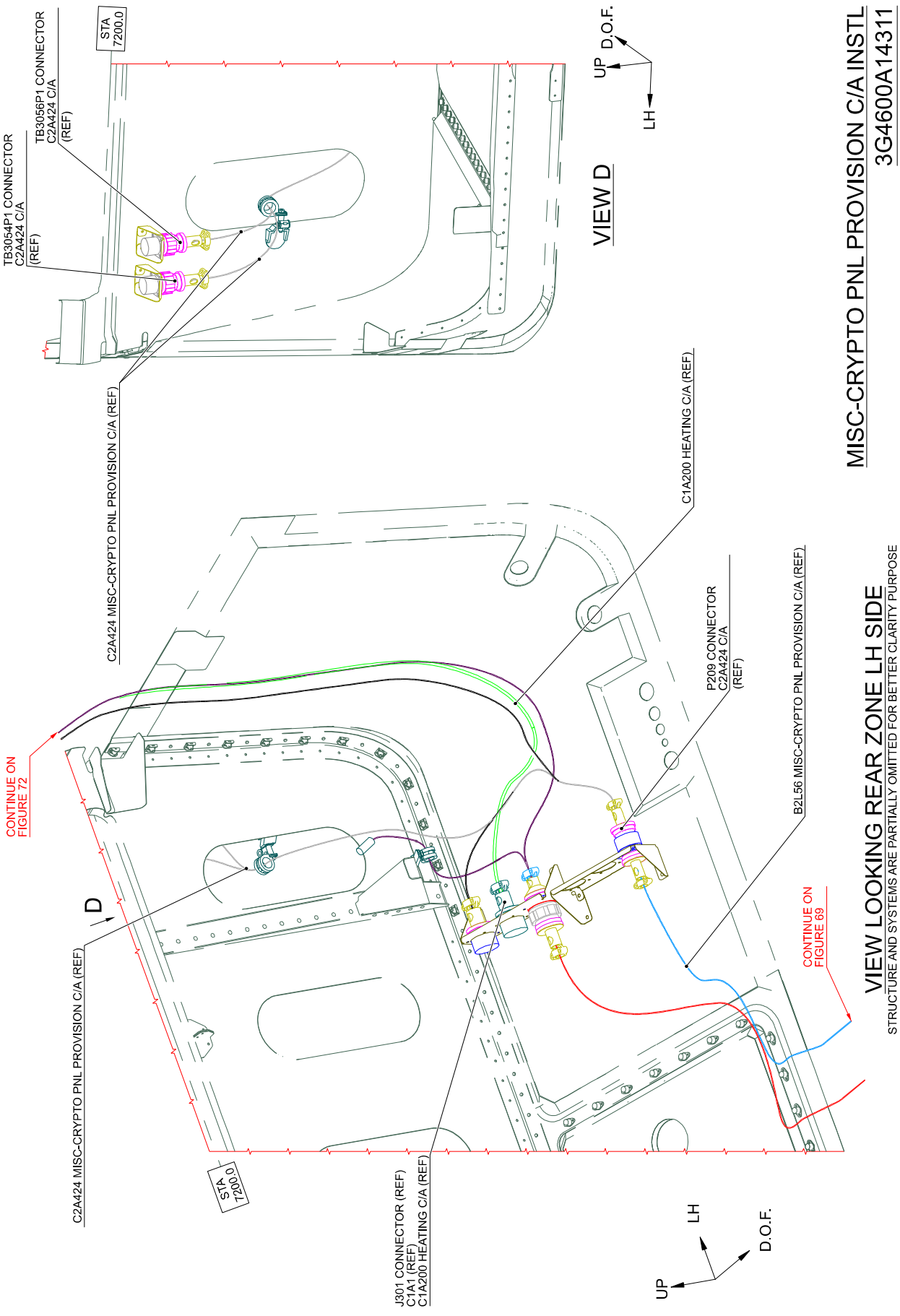

MISC-CRYPTO PNL PROVISION C/A INSTL
3G4600A14311
VIEW LOOKING REAR ZONE LH SIDE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
VIEW D
UP
D.O.F.
LH
TB3054P1 CONNECTOR
C2A424 C/A
(REF)
TB3056P1 CONNECTOR
C2A424 C/A
(REF)
STA
7200.0
C2A424 MISC-CRYPTO PNL PROVISION C/A (REF)
C1A200 HEATING C/A (REF)
P209 CONNECTOR
C2A424 C/A
(REF)
B2L56 MISC-CRYPTO PNL PROVISION C/A (REF)
CONTINUE ON
FIGURE 72
CONTINUE ON
FIGURE 69
D
J301 CONNECTOR (REF)
C1A1 (REF)
C1A200 HEATING C/A (REF)

Figure 70

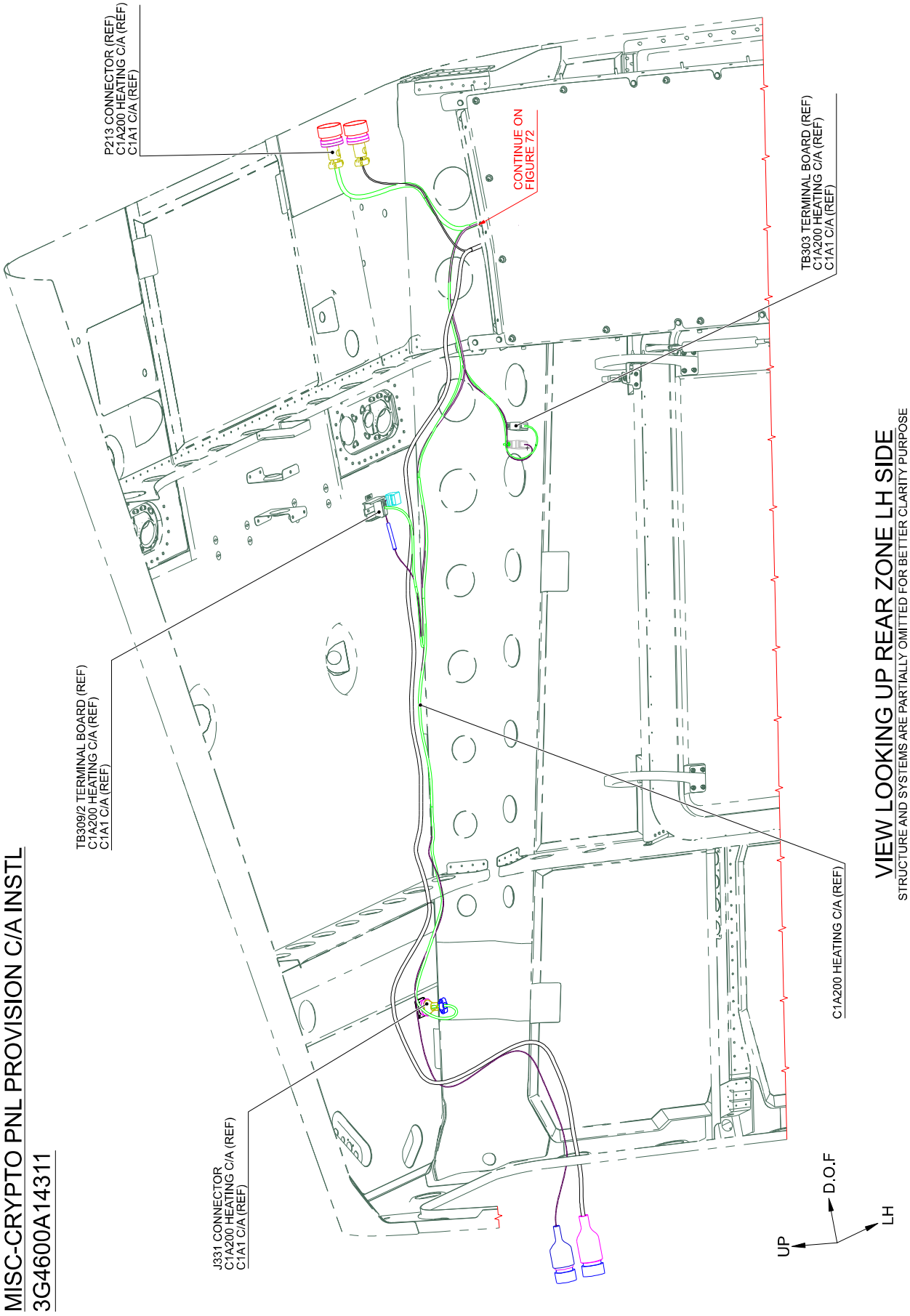

MISC-CRYPTO PNL PROVISION C/A INSTL
3G4600A14311
P213 CONNECTOR (REF)
C1A200 HEATING C/A (REF)
C1A1 C/A (REF)
CONTINUE ON FIGURE 72
TB303 TERMINAL BOARD (REF)
C1A200 HEATING C/A (REF)
C1A1 C/A (REF)
TB309/2 TERMINAL BOARD (REF)
C1A200 HEATING C/A (REF)
C1A1 C/A (REF)
C1A200 HEATING C/A (REF)
J331 CONNECTOR
C1A200 HEATING C/A (REF)
C1A1 C/A (REF)
VIEW LOOKING UP REAR ZONE LH SIDE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
UP
D.O.F
LH

Figure 71

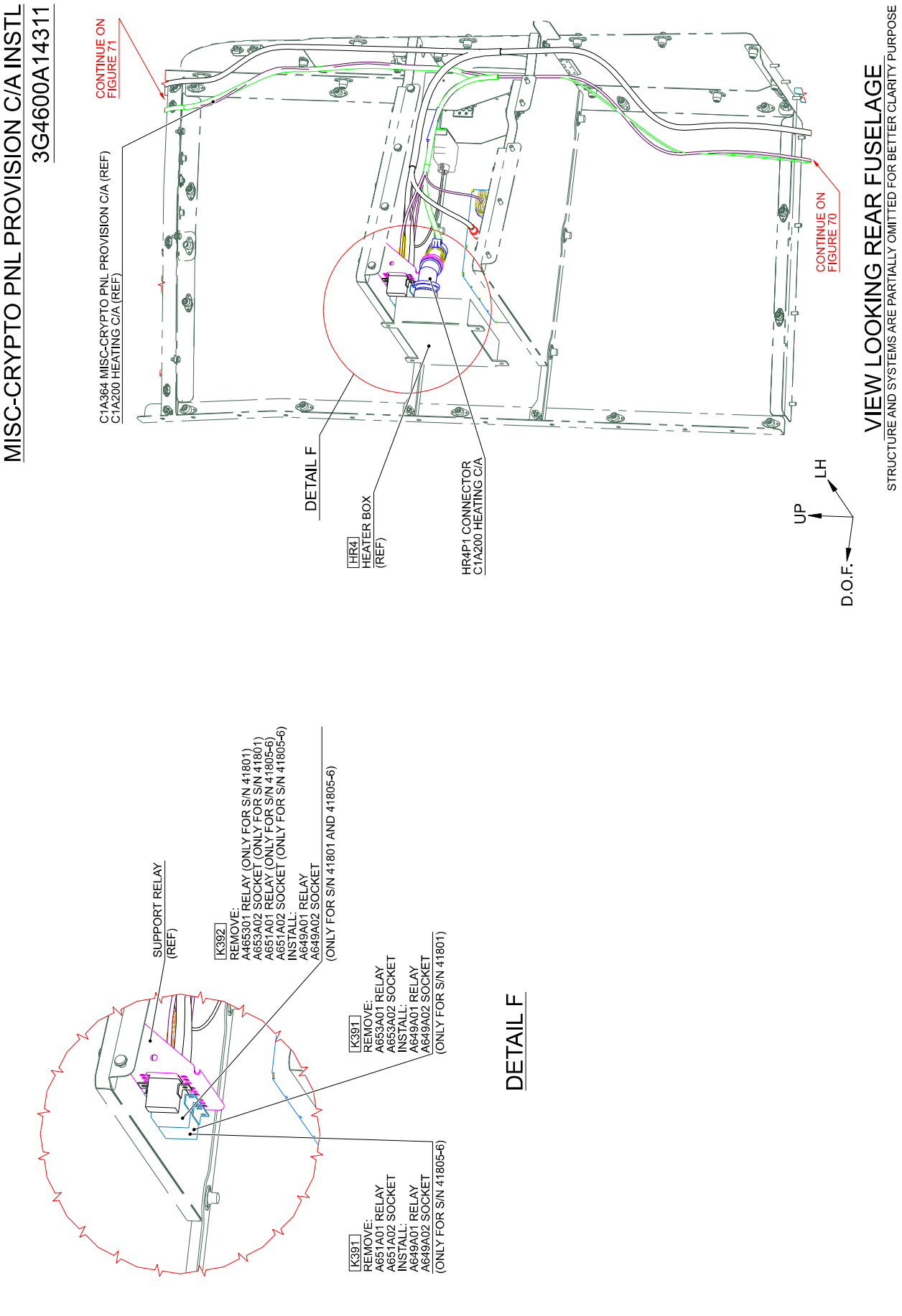

MISC-CRYPTO PNL PROVISION C/A INSTL
3G4600A14311
CONTINUE ON FIGURE 71
C1A364 MISC-CRYPTO PNL PROVISION C/A (REF)
C1A200 HEATING C/A (REF)
DETAIL F
HR4
HEATER BOX
(REF)
HR4P1 CONNECTOR
C1A200 HEATING C/A
CONTINUE ON FIGURE 70
UP
LH
D.O.F.
VIEW LOOKING REAR FUSELAGE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
SUPPORT RELAY
(REF)
K392
REMOVE:
A465301 RELAY (ONLY FOR S/N 41801)
A653A02 SOCKET (ONLY FOR S/N 41801)
A651A01 RELAY (ONLY FOR S/N 41805-6)
A651A02 SOCKET (ONLY FOR S/N 41805-6)
INSTALL:
A649A01 RELAY
A649A02 SOCKET
(ONLY FOR S/N 41801 AND 41805-6)
K391
REMOVE:
A653A01 RELAY
A653A02 SOCKET
INSTALL:
A649A01 RELAY
A649A02 SOCKET
(ONLY FOR S/N 41801)
K391
REMOVE:
A651A01 RELAY
A651A02 SOCKET
INSTALL:
A649A01 RELAY
A649A02 SOCKET
(ONLY FOR S/N 41805-6)
DETAIL F

Figure 72

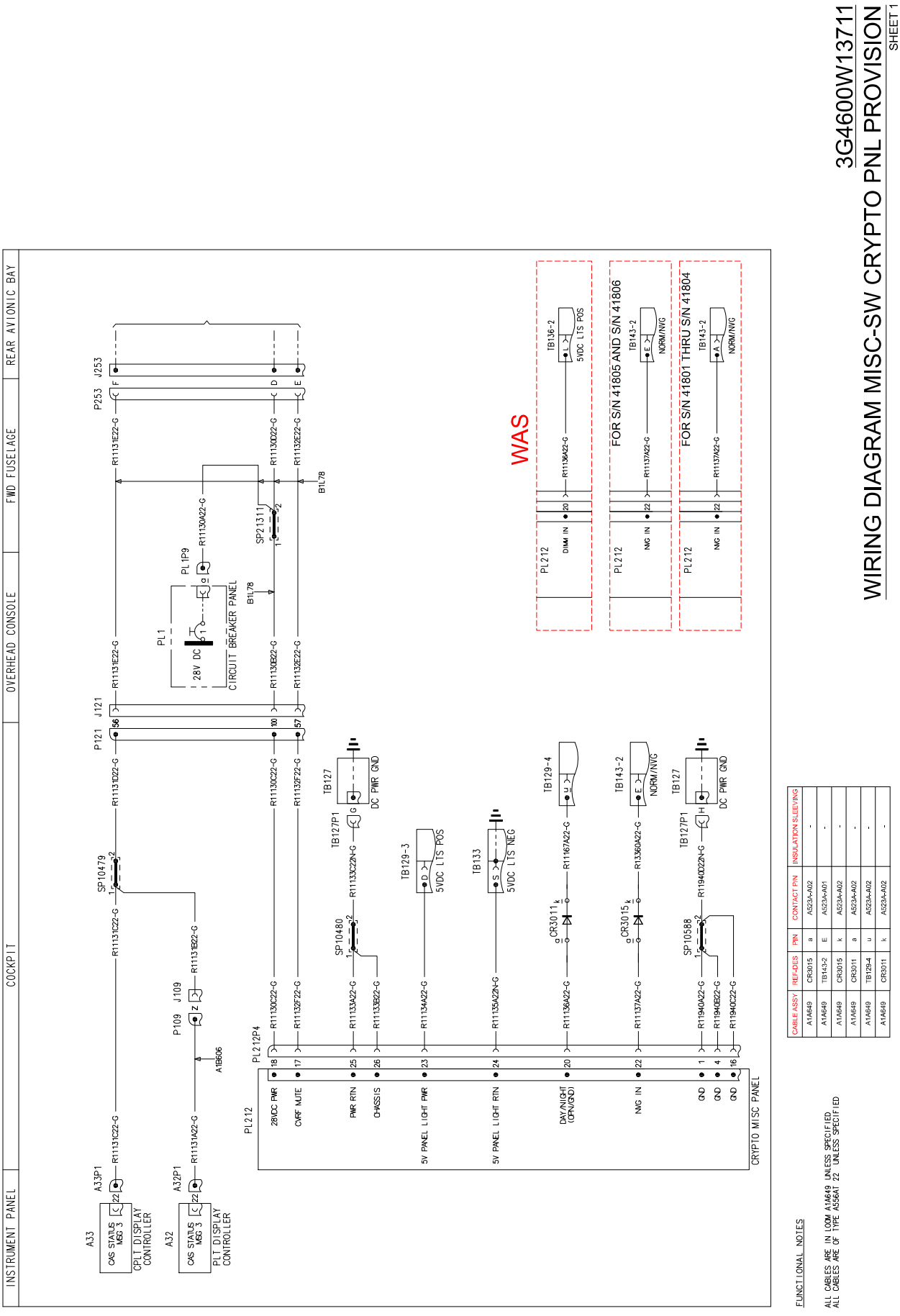

3G4600W13711
WIRING DIAGRAM MISC-SW CRYPTO PNL PROVISION
SHEET 1
INSTRUMENT PANEL
COCKPIT
OVERHEAD CONSOLE
FWD FUSELAGE
REAR AVIONIC BAY
WAS
FOR S/N 41805 AND S/N 41806
FOR S/N 41801 THRU S/N 41804
CRYPTO MISC PANEL
CPLT DISPLAY CONTROLLER
PLT DISPLAY CONTROLLER
CIRCUIT BREAKER PANEL
28V DC
5VDC LTS POS
5VDC LTS NEG
DC PWR GND
NORM/NVG
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1A649 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

Figure 73

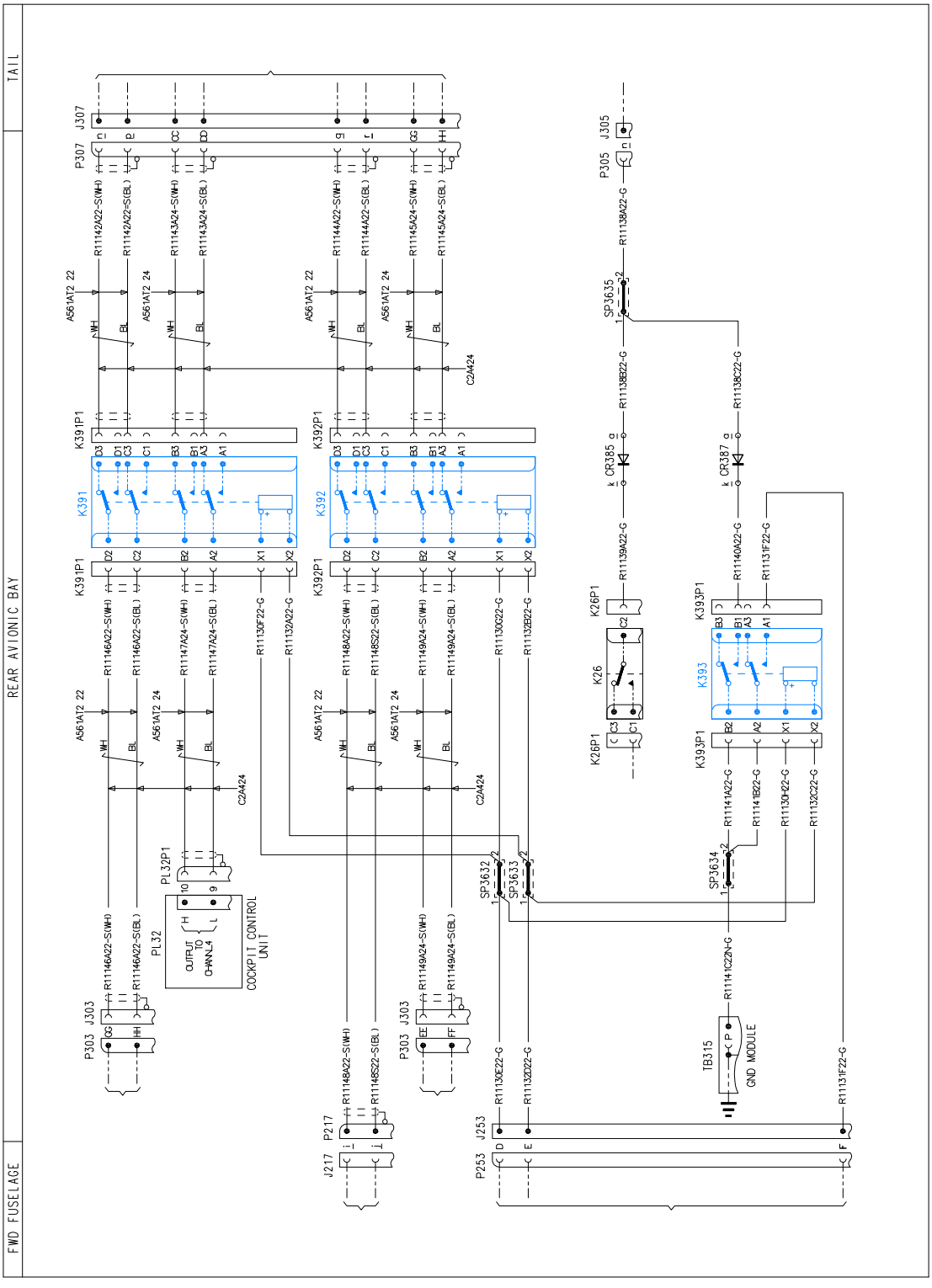

FWD FUSELAGE
REAR AVIONIC BAY
TAIL
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM C1A364 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED
COCKPIT CONTROL UNIT
GND MODULE

Figure 74

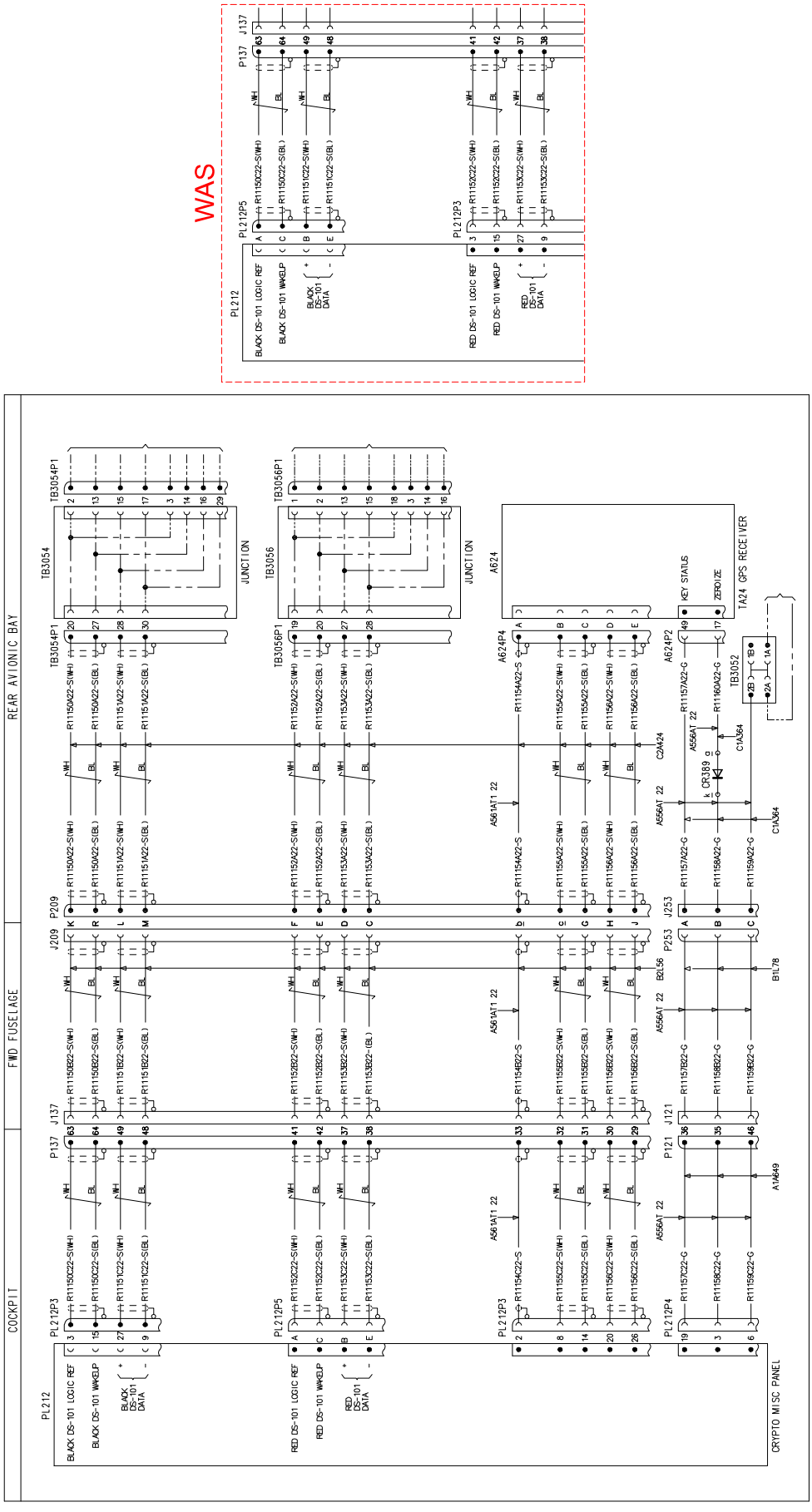
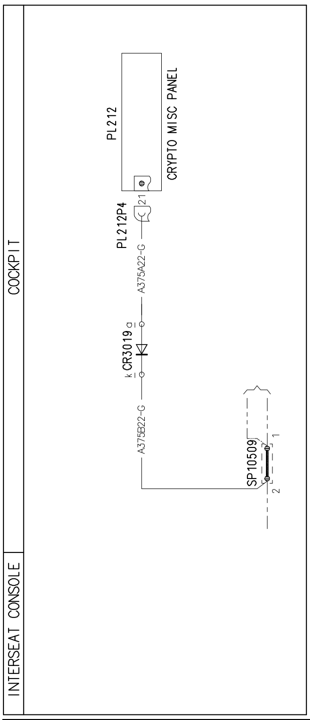

WAS
COCKPIT
FWD FUSELAGE
REAR AVIONIC BAY
CRYPTO MISC PANEL
JUNCTION
TA24 GPS RECEIVER
KEY STATUS
ZEROIZE
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A04A81 UNLESS SPECIFIED.
ALL CABLES ARE OF TYPE AS61A1 22 UNLESS SPECIFIED

Figure 75

Figure 76

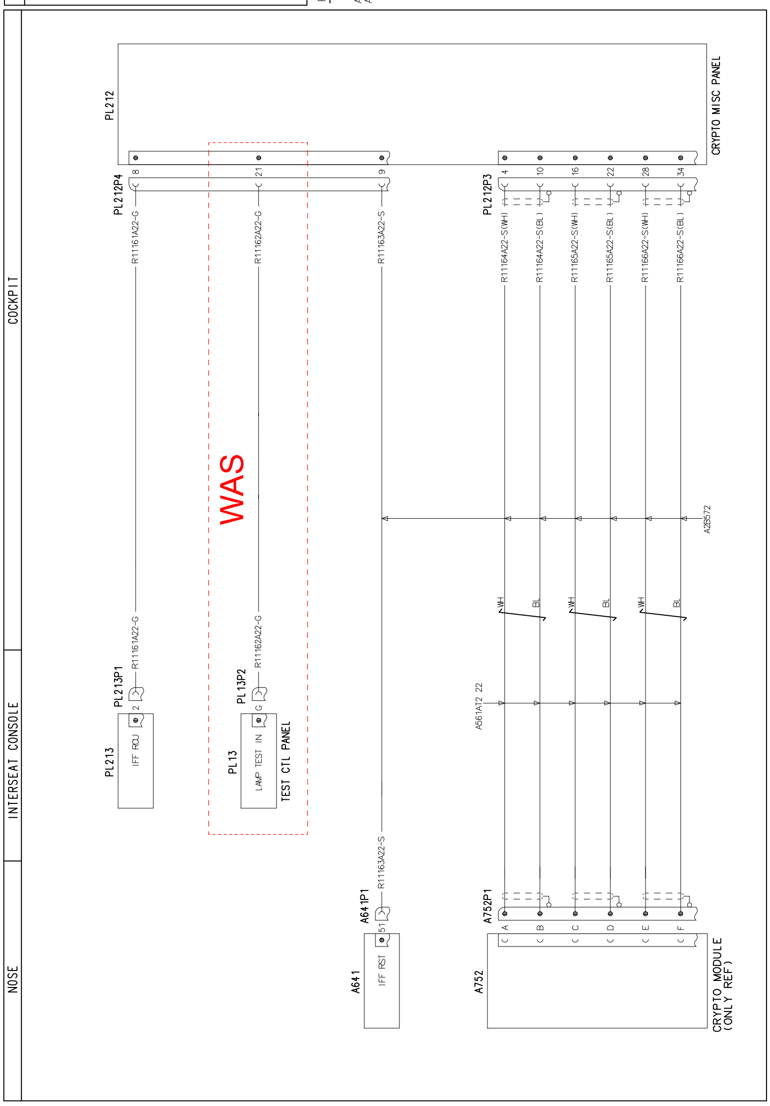


FUNCTIONAL NOTES

ALL CABLES ARE IN LOOM A1A694 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

3G4600W15611
W/D SYSTEM CUSTOMIZATION MH139
SHEET 3

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A1A694	CR3019	a	A523A-A02	-
A1A694	CR3019	k	A523A-A02	-
A2B572	A752P1	A	-	M23053/8-004-C
A2B572	A752P1	B	-	M23053/8-004-C
A2B572	A752P1	C	-	M23053/8-004-C
A2B572	A752P1	D	-	M23053/8-004-C
A2B572	A752P1	E	-	M23053/8-004-C
A2B572	A752P1	F	-	M23053/8-004-C



FUNCTIONAL NOTES

ALL CABLES ARE IN LOOM A1A649 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

3G4600W13711
WIRING DIAGRAM MISC-SW CRYPTO PNL PROVISION
SHEET 5

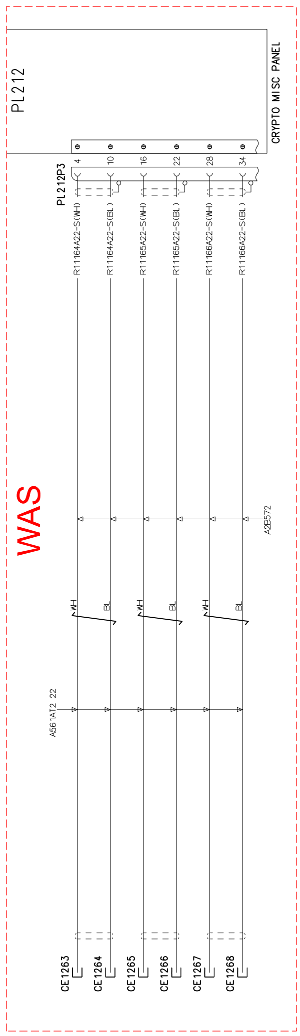


Figure 77

CABLE ASSY	REF-DES	PIN	CONNECT P/N (REF)	INSULATION SLEEVING
C1A200	HR4P1	8	M39029/56-348	-
C1A200	HR4P1	9	M39029/56-348	-
C1A200	HR4P1	45	M39029/56-348	-
C1A200	HR4P1	28	M39029/56-348	-
C1A200	HR4P1	46	M39029/56-348	-
C1A200	HR4P1	7	M39029/56-348	M2305308-004-C
C1A200	HR4P1	12	M39029/56-348	M2305308-004-C
C1A200	HR4P1	11	M39029/56-348	M2305308-004-C
C1A200	HR4P1	48	M39029/56-348	-
C1A200	HR4P1	49	M39029/56-348	-
C1A200	HR4P1	14	M39029/56-348	-
C1A200	HR4P1	15	M39029/56-348	-
C1A200	HR4P1	34	M39029/56-348	-
C1A200	HR4P1	40	M39029/56-348	-
C1A200	HR4P1	44	M39029/56-348	-

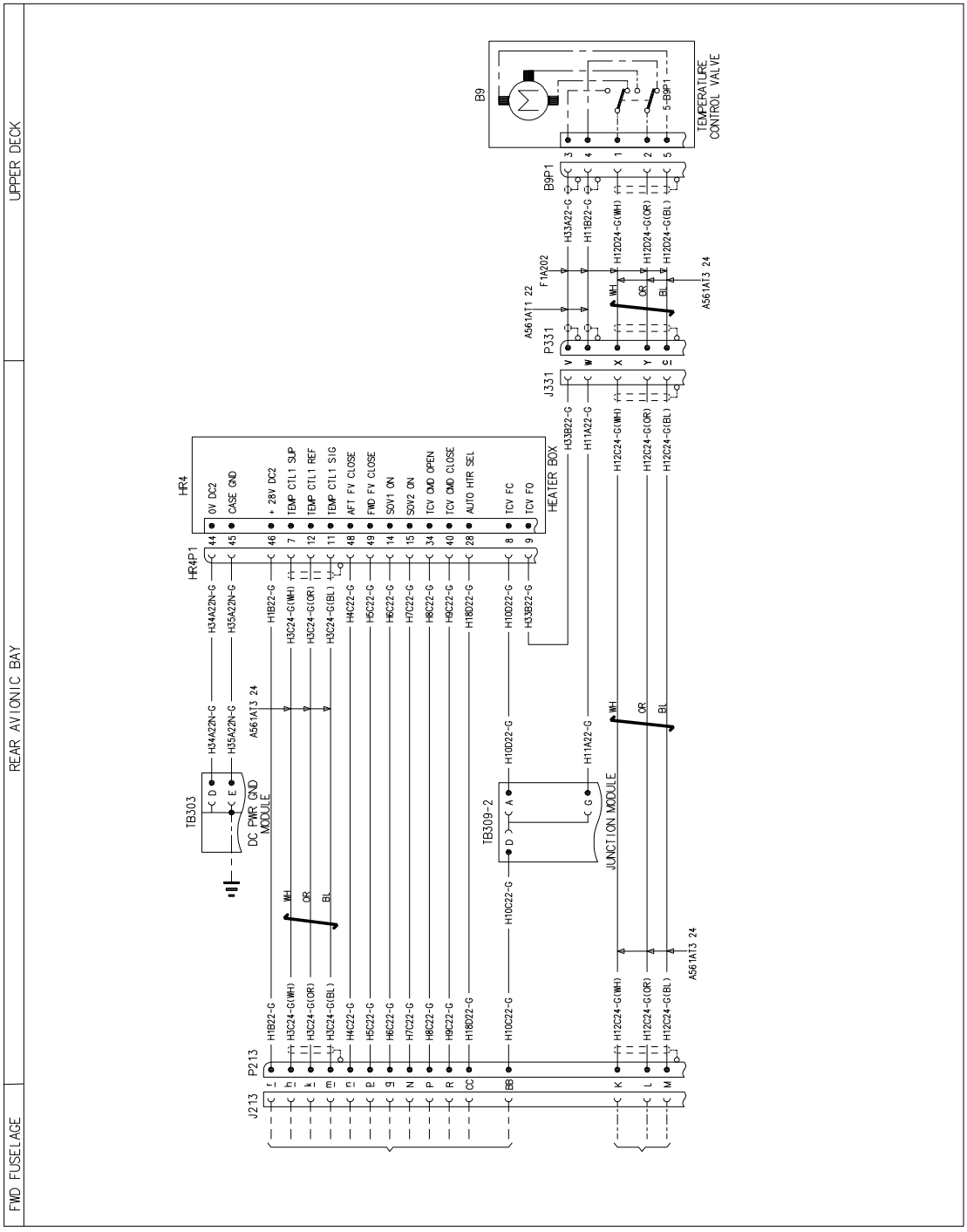


Figure 78

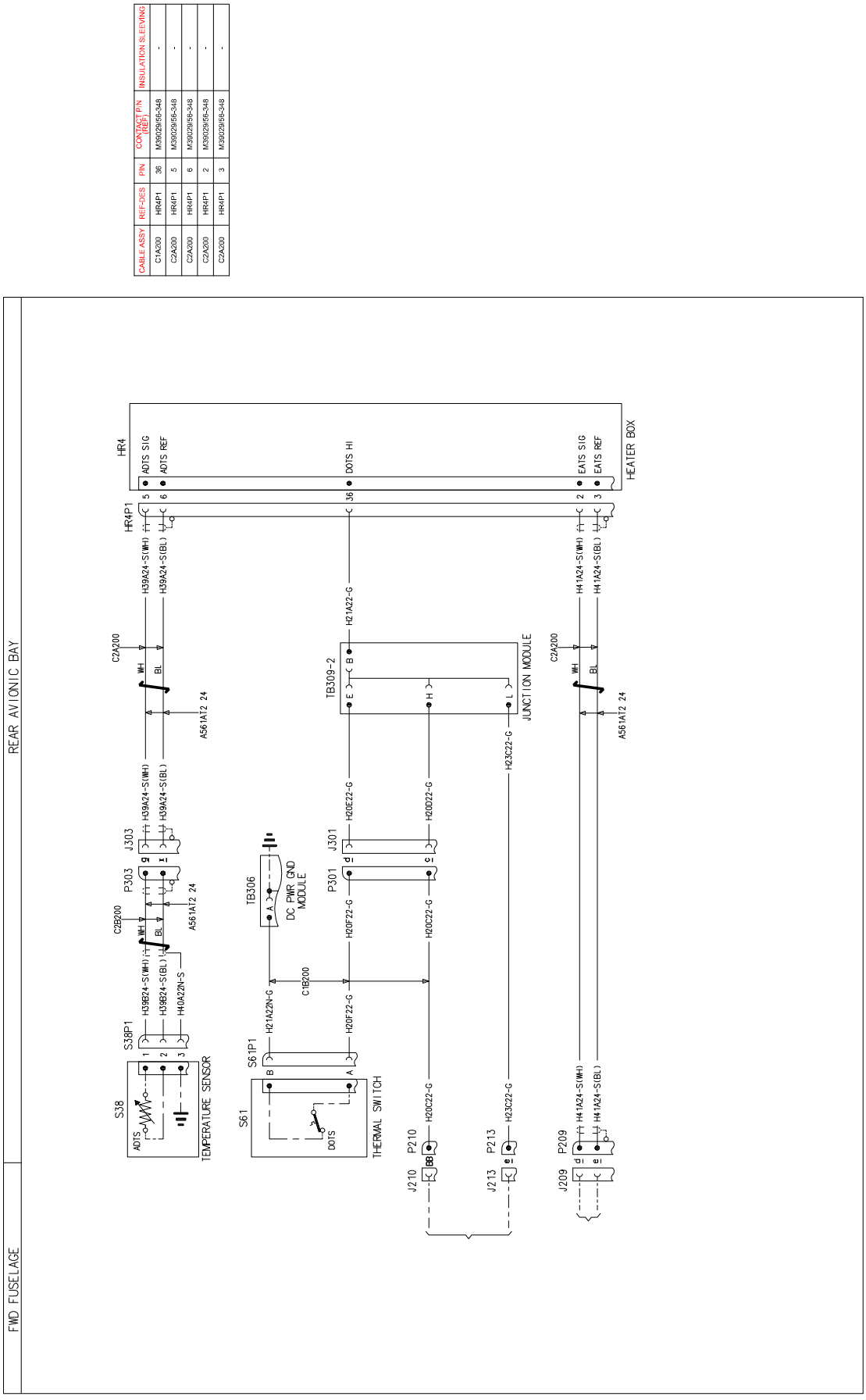
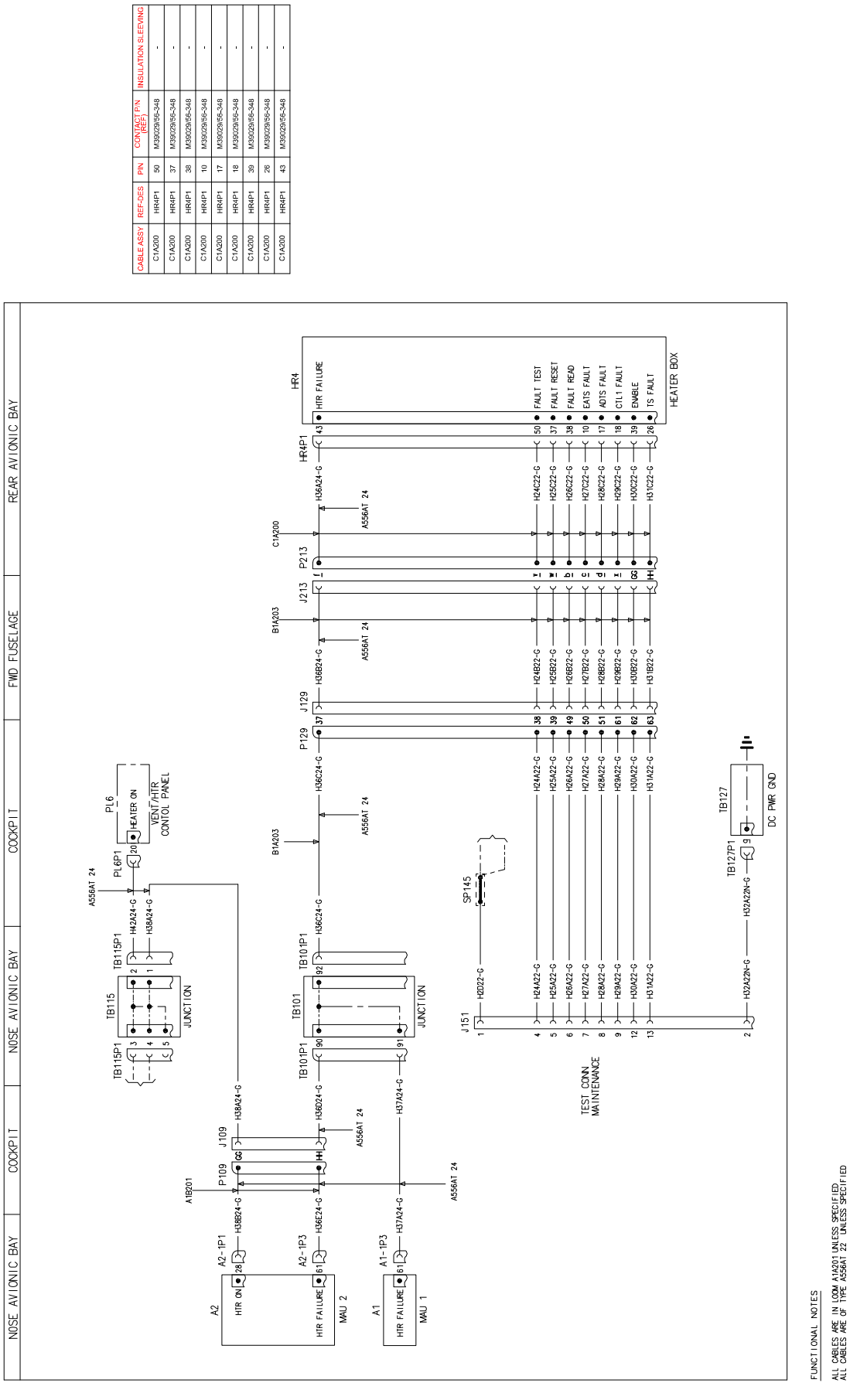

CABLE ASSY | REF-DES | PIN | CONTACT P/N (REF.) | INSULATION SLEEVING
C1A200 | HR4P1 | 36 | M39029/56-348 | -
C2A200 | HR4P1 | 5 | M39029/56-348 | -
C2A200 | HR4P1 | 6 | M39029/56-348 | -
C2A200 | HR4P1 | 2 | M39029/56-348 | -
C2A200 | HR4P1 | 3 | M39029/56-348 | -
FWD FUSELAGE
REAR AVIONIC BAY
HEATER BOX
HR4
HR4P1
ADTS SIG
ADTS REF
DOTS HI
EATS SIG
EATS REF
C2A200
C2B200
C1B200
P303
J303
P301
J301
TB309-2
JUNCTION MODULE
TB306
DC PWR GND MODULE
S38
S38P1
TEMPERATURE SENSOR
S61
S61P1
THERMAL SWITCH
P210
J210
P213
J213
P209
J209
A561A12 24
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM C1A200 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

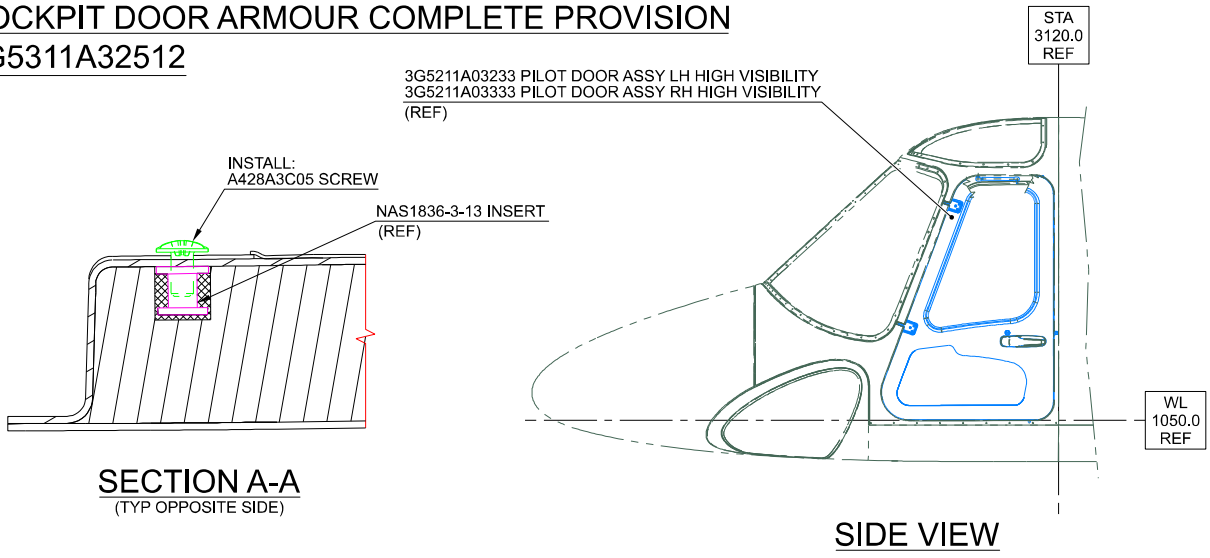
Figure 79



CABLE ASSY	REF-DES	PIN	CONNECT P/N REF	INSULATION SLEEVING
C1A200	HR4P1	50	M39029/56-348	-
C1A200	HR4P1	37	M39029/56-348	-
C1A200	HR4P1	38	M39029/56-348	-
C1A200	HR4P1	10	M39029/56-348	-
C1A200	HR4P1	17	M39029/56-348	-
C1A200	HR4P1	18	M39029/56-348	-
C1A200	HR4P1	39	M39029/56-348	-
C1A200	HR4P1	26	M39029/56-348	-
C1A200	HR4P1	43	M39029/56-348	-

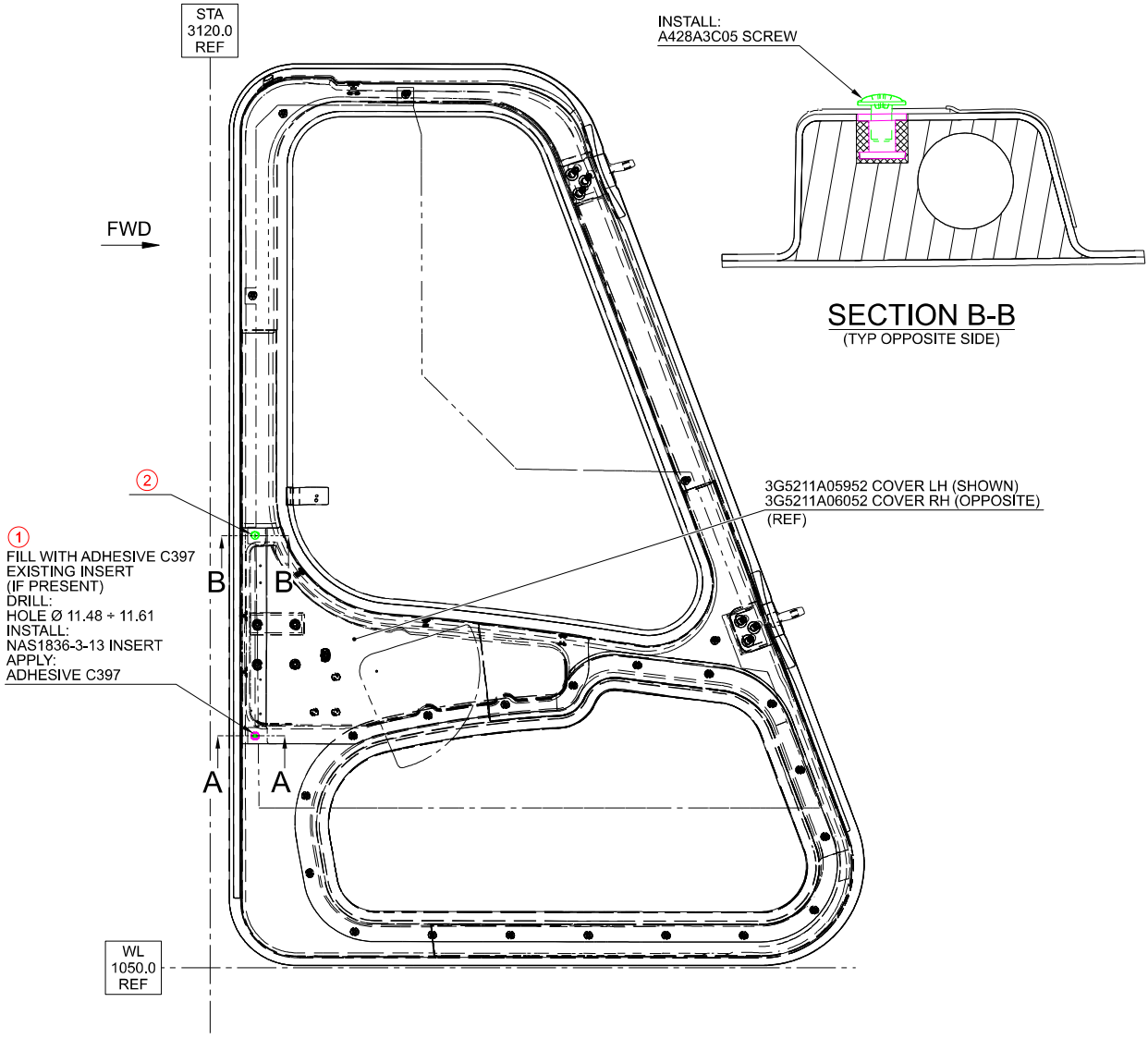
Figure 80

COCKPIT DOOR ARMOUR COMPLETE PROVISION 3G5311A32512



SECTION A-A
(TYP OPPOSITE SIDE)

SIDE VIEW



SECTION B-B
(TYP OPPOSITE SIDE)

INTERNAL VIEW PILOT DOOR LH SIDE
(TYP OPPOSITE SIDE)
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

LOCATION NUMBER	PART. NUMBER	STA	BL	WL
1	NAS1836-3-13	3054.77	±1076.0	1385.09
2	NAS1836-3-13 (REF)	3054.87	±1076.7	1675.08

Figure 81

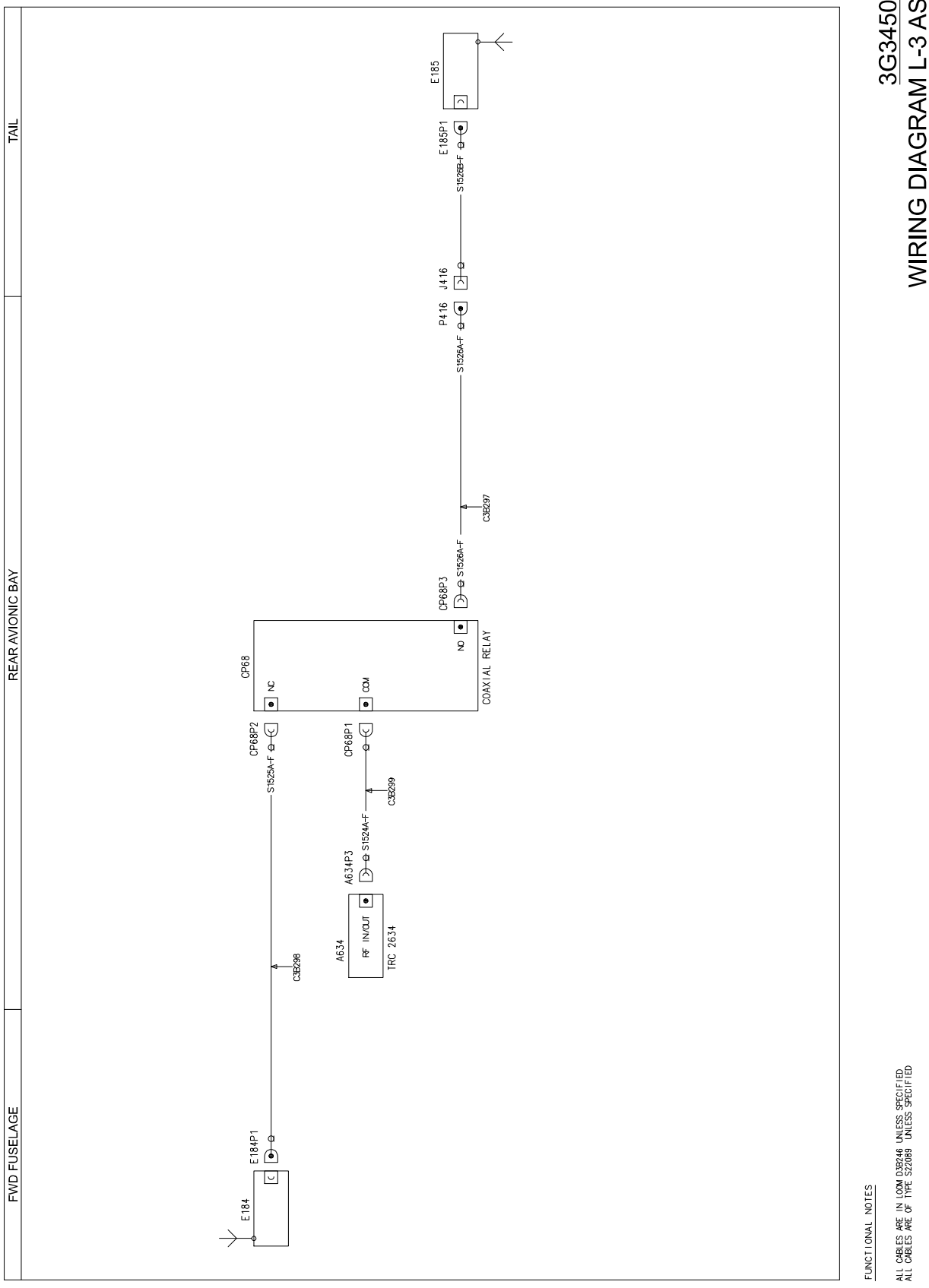
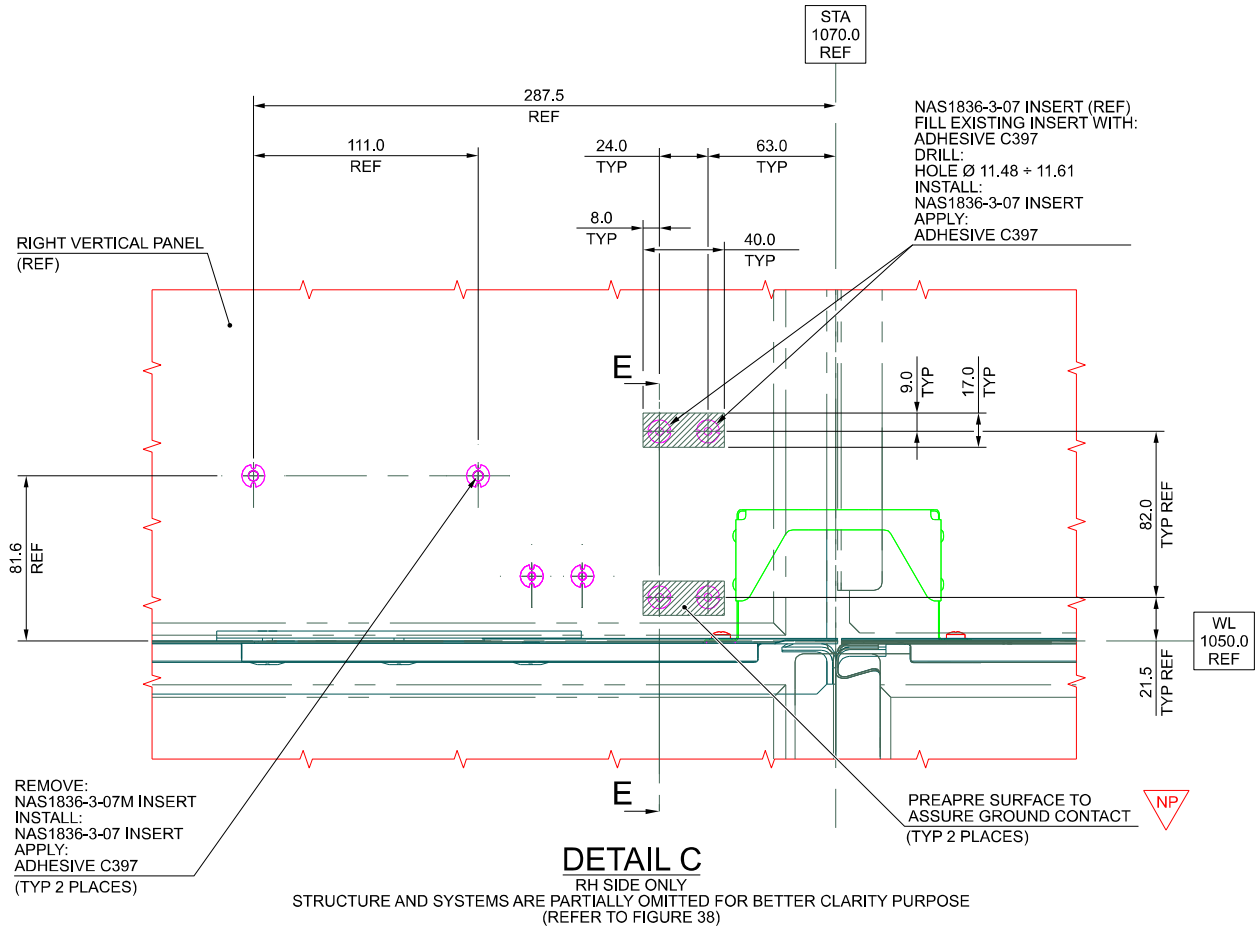

3G3450W04911
WIRING DIAGRAM L-3 AS TACAN
FWD FUSELAGE
REAR AVIONIC BAY
TAIL
E184
E184P1
C35208
S1525A-F
CP68P2
CP68
NC
COM
NO
COAXIAL RELAY
CP68P1
C35209
S1524A-F
A634P3
A634
RF IN/OUT
TRC 2634
CP68P3
S1526A-F
C35207
P416
J416
S1526A-F
E185P1
S1526A-F
E185
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM D35246 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE S22089 UNLESS SPECIFIED

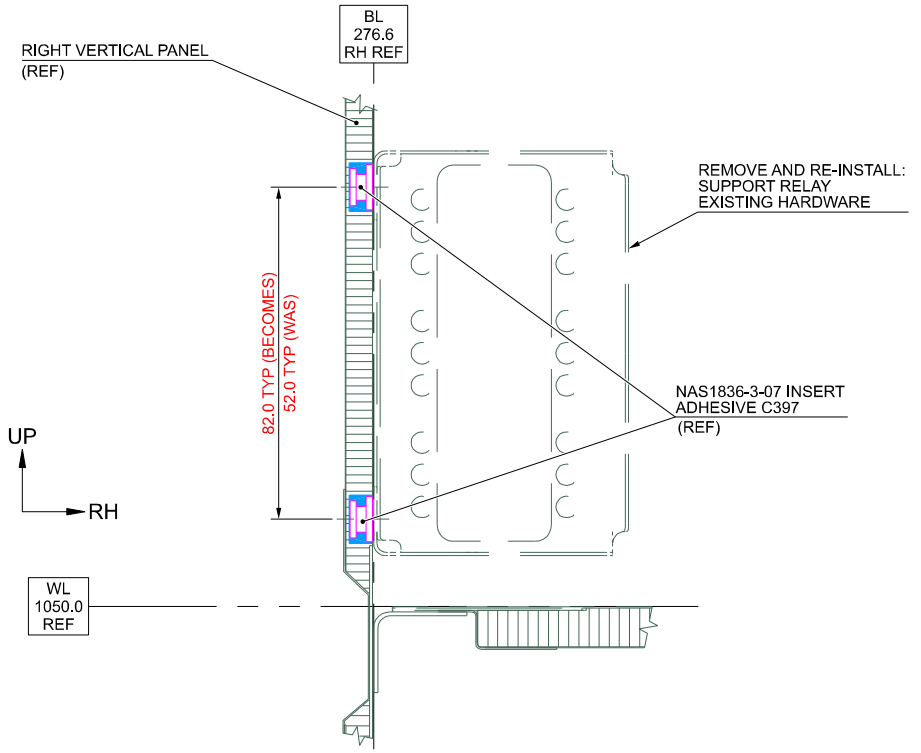
Figure 82



DETAIL C

RH SIDE ONLY

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 38)

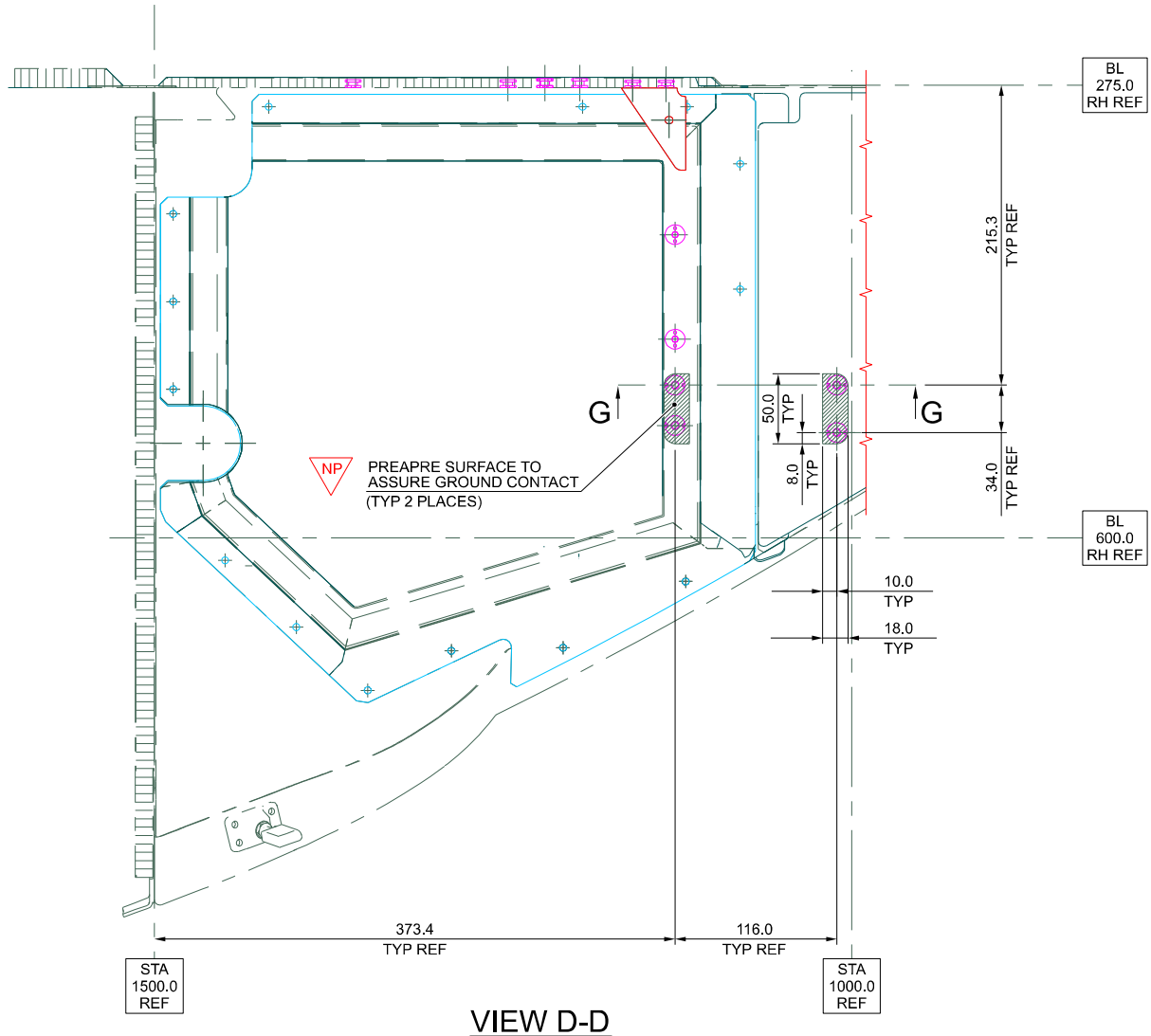


SECTION E-E

3G5311A34611

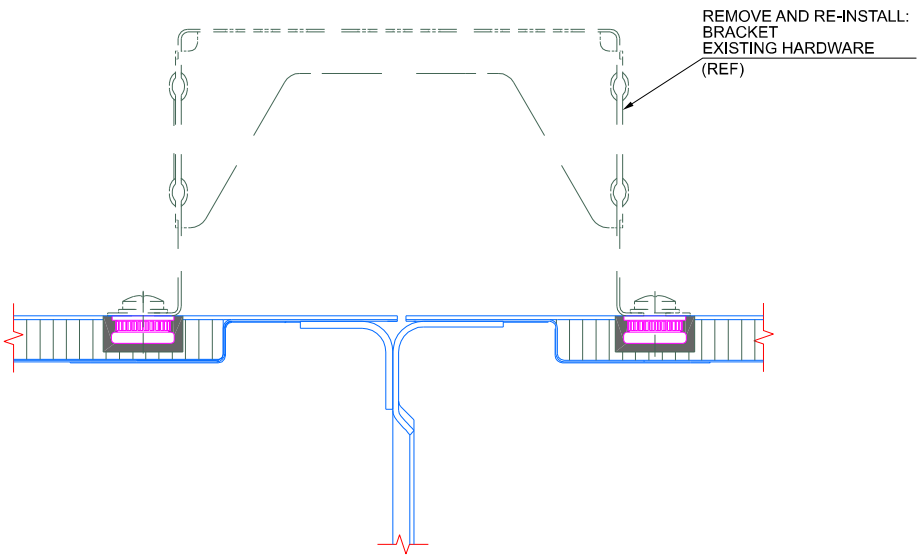
IFF BAE AN/DPX7 STRUCTURAL PROVISION

Figure 83



VIEW D-D

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 38)



SECTION G-G

3G5311A34611
IFF BAE AN/DPX7 STRUCTURAL PROVISION

Figure 84

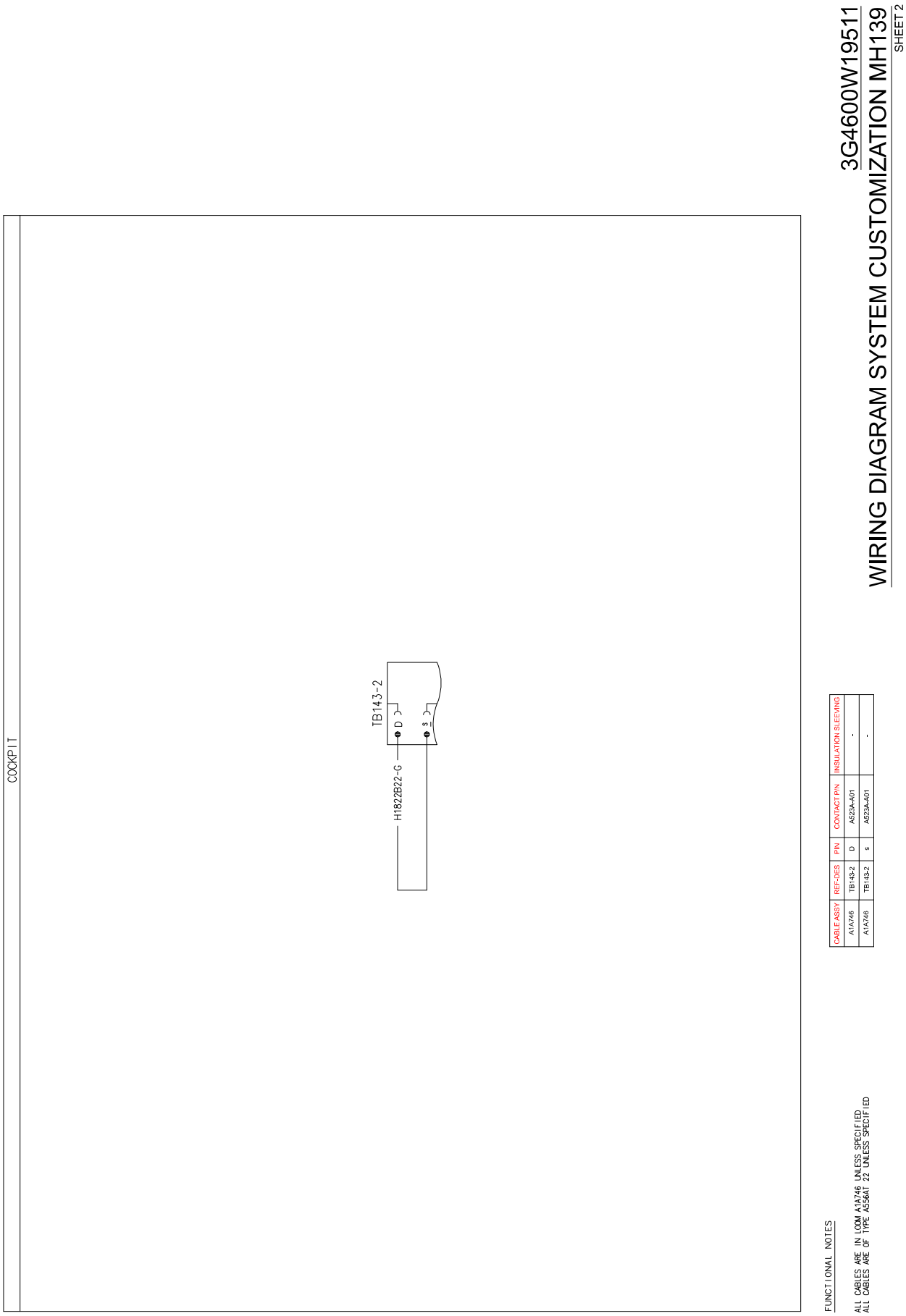
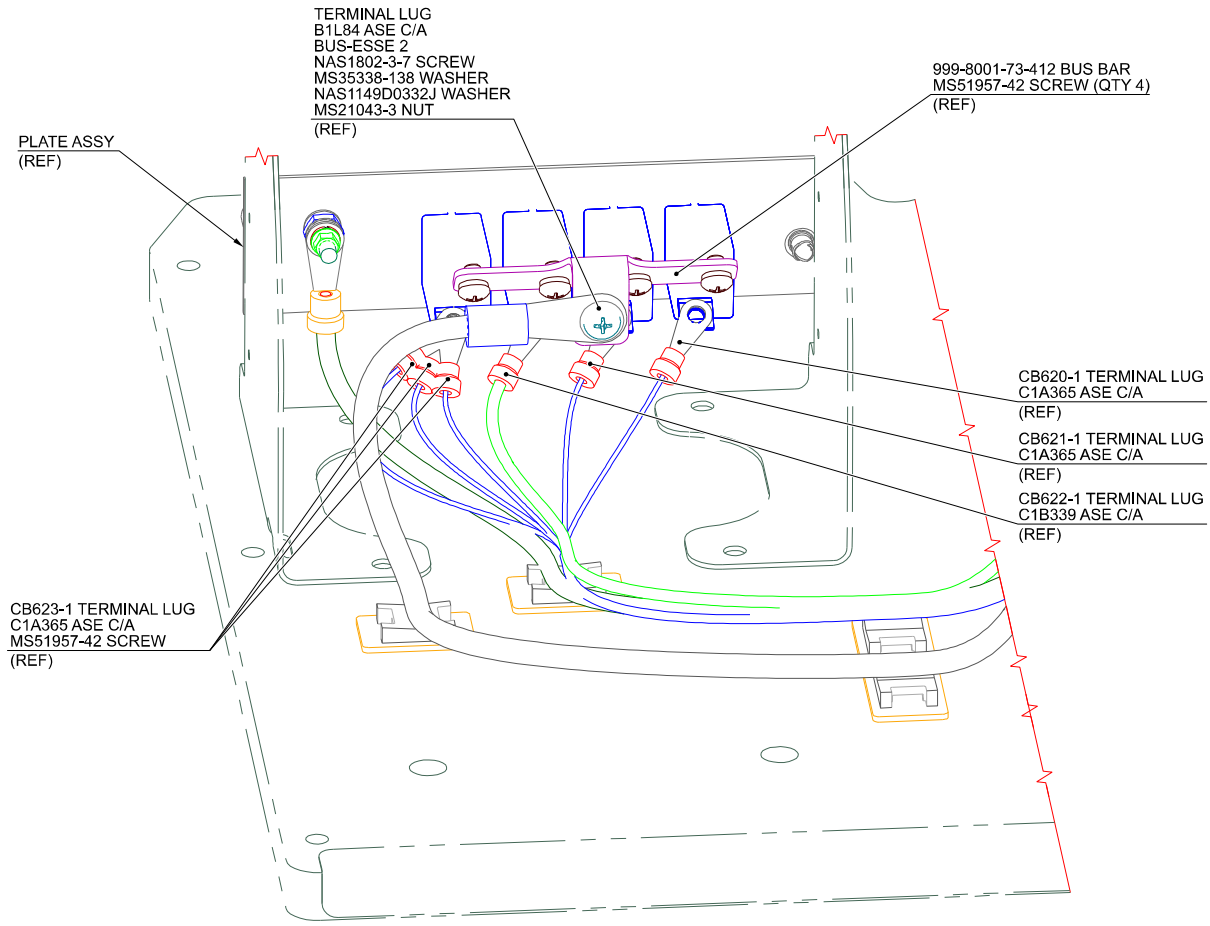

3G4600W19511
WIRING DIAGRAM SYSTEM CUSTOMIZATION MH139
SHEET 2
COCKPIT
TB143-2
D
S
H1822B22-G
CABLE ASSY | REF-DES | PIN | CONTACT P/N | INSULATION SLEEVING
A1A746 | TB143-2 | D | A523A-A01 | -
A1A746 | TB143-2 | S | A523A-A01 | -
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1A746 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE AS56AT 22 UNLESS SPECIFIED

Figure 85



VIEW LOOKING LH REAR AVIONIC BAY
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 86

ANNEX A

MISC-SW CRYPTO PANEL ACCEPTANCE TEST PROCEDURE

6 SYSTEM TEST

This section describes the TEST PROCEDURE to be applied, on ground, on Helicopters where the MISC SW Crypto Panel Provision 3G4600A14311 is installed.

6.1 TEST PREREQUISITES AND SAFETY PROVISION

- **During all ATPs Tests, disconnect if installed, the wires from the Fire extinguishing bottles and stow them properly (E1- MTR1 & MTR2, E2- MTR1 & MTR2).**
- If other Electro-Explosive Devices (EEDs) are fitted, ensure that they are electrically disconnected.
- When required, for continuity tests a low voltage tester may be used.
- When it is required testing pins and sockets of plug and receptacles connectors, contact is to be made by means of the correct mating socket or pin.
- Under no circumstances must be used any other form of probe.

ATTENTION: Do not handle and operate plug/receptacle connectors with voltage presence.

1. Visually verify the proper installation of all the components. Check the correct mechanical installation and fixing; Check the Electrical wires installation; Check that all the connectors are properly plugged and fastened. Use the drawing 3G4600W13711 as reference documents. ☐

   NOTE: If this test step is performed under Part 21 privileges, MISC-SW CRYPTO PANEL will not be installed. Check of the mechanical installation and electrical wiring will be limited to the provisions for the MISC-SW CRYPTO PANEL.

2. AW139 - AVIONICS ACCEPTANCE TEST PROCEDURE, 139G4600D001 successfully completed. ☐

3. Verify that the Primus Epic S/W Ph 7 is installed (refer to 139G4600M004). ☐

4. During the test with helicopter electrically powered, the “IGN #1/2” and “START #1/2” breakers shall be pulled out. ☐

5. Verify PRIMUS EPIC SW LOAD ACCEPTANCE TEST PROCEDURE FOR (refer to 139G0630D0009) has been successfully completed ☐

6.1.1 REQUIRED TOOLS

DC External Power Bench (28VDC). ☐

DC Voltmeter (range 0-32 VDC). ☐

Conductor Pins and Wire Extensions for troubleshooting operation. ☐

High Impedance Headset with extension for CVFDR control panel. ☐

WOW Switch ☐

INSTRUMENT PRECISION: +/- 2% MIN

6.1.2 ELECTRICAL SETTINGS

1. Verify that all the Electrical Power Distribution System Circuit Breakers are pushed in. ☐

2. Verify that all the Avionic Devices Circuit Breakers are pushed in. ☐

3. The helicopter external power port shall be connected to the External Power Bench set to 28 VDC output. Power up the External Power Bench before starting with the test procedure. ☐

6.2 TESTS TO BE PERFORMED

During these tests, the Crypto Panel shall not be installed: scope of this test is to verify the wiring and structural provision for the MISC-SW Crypto Panel.

6.2.1 PRELIMINARY CHECKS

6.2.1.1 CIRCUIT BREAKER'S CHECK

1. Verify the presence and the correct rating of the following CBs:

REF DES	LIMIT VALUE [A]	LOCATION
CB630	3	CB PANEL

6.2.1.2 INSTALLATION AND POWER SUPPLY CHECKS

1. Verify CB630 is pushed in.
2. Verify, the grounding of the following pins:
   - PL212P4-1
   - PL212P4-4
   - PL212P4-16
   - PL212P4-24
   - PL212P4-25
   - PL212P4-26.
3. Verify the 28VDC signal between the pins PL212P4-18(+) and PL212P4-25 (-).

6.2.1.3 ADDITIONAL ELECTRICAL CHECKS

1. Verify electrical continuity between the following pins:
   - PL212P4-19 and A624P2-49.
   - PL212P3-2 and A624P4-A.
   - PL212P3-8 and A624P4-B.
   - PL212P3-14 and A624P4-C.
   - PL212P3-20 and A624P4-D.
   - PL212P3-26 and A624P4-E.
   - PL212P4-8 and PL213P1-2.
   - PL212P4-9 and A641P1-51.
   - PL212P3-3 and A639P5-5.
   - PL212P3-3 and A637P5-5.
   - PL212P3-15 and A639P5-20.
   - PL212P3-15 and A637P5-20.
   - PL212P3-27 and A639P5-11.
   - PL212P3-27 and A637P5-11.
   - PL212P3-9 and A639P5-17.
   - PL212P3-9 and A637P5-17.
   - PL212P5-A and TB3056P1-19.
   - PL212P5-C and TB3056P1-20.
   - PL212P5-B and TB3056P1-27.
   - PL212P5-E and TB3056P1-28.
2. Perform a diode test between following pins:
   - PL212P4-6 and A639P7-8
   - PL212P4-6 and A637P7-8
   - A624P2-17 and PL212P4-3
   - PL212P4-21 and PL13P2-G
   - PL212P4-20 and TB129-4 pin u.
   - PL212P4-22 and TB143-2 pin E.

3. Enable NIGHT mode, rotating the Cockpit Dimming Console Knob and perform a diode test between the following pins

   - PL212P4-20 and GND

   Enable NVG mode via dedicated NVG switch and perform a diode test between the following pins

   - PL212P4-22 and GND

   Return to NORM mode and to DAY mode

4. Verify that, rotating the Cockpit Dimming Console Knob, the Voltage between the following pins swings between 0 and 5 VDC:

   - PL212P4-23 and PL212P4-24.

5. Verify, electrical continuity between the following pins:

   - PL212P3-4 and A752P1-A.
   - PL212P3-10 and A752P1-B.
   - PL212P3-16 and A752P1-C.
   - PL212P3-22 and A752P1-D.
   - PL212P3-28 and A752P1-E.
   - PL212P3-34 and A752P1-F

6.2.1.4 CVFDR MUTE FUNCTION CHECK

1.	Verify that FDR CB AND FDR AUX PWR CB "FDR" are pushed in.	☐
2.	Verify that connector PL212P4 is accessible.	☐
3.	Verify that the helicopter is electrically powered by external power.	☐
4.	Check that 1&2 "START" and "IGN" CBs are pulled OUT. Set at least one Engine control Knob set to IDLE or WOW switch set to flight position	☐
5.	Speak in the cockpit and tap softly the Area Microphone.	☐
6.	Check on the CCU that both "FDR" and "CVR" fail lights are off.	☐
7.	Verify that CVR MUTE status message is not displayed in CAS list.	☐
8.	Connect the high impedance headset to the FDR control panel and check the Audio input.	☐
9.	Speak in Pilot's Headset and Check the audio input on the high impedance headset.	☐
10.	Speak in Co-Pilot's Headset and Check the audio input on the high impedance headset.	☐
11.	Speak in Hoist Operator's Headset (3rd AV900) and Check the audio input on the high impedance headset	☐
12.	Insert a jumper wire between PL212P4-16 and PL212P4-17.	☐
13.	Speak in the cockpit and check from the high impedance headset that no Audio input is present the high impedance headset.	☐
14.	Speak in Pilot's Headset and Check that no Audio input is present on the high impedance headset.	☐
15.	Speak in Co-Pilot's Headset and Check that no Audio input is present on the high impedance headset.	☐
16.	Speak in Hoist Operator's Headset (3rd AV900) and Check that no Audio input is present on the high impedance headset.	☐
17.	Verify CVR MUTE status message is displayed in CAS list.	☐

6.3 TESTS RESULT

Table - 4 3G4600A14311 ATP Results – Section 6.1

139G3110D002 MH-139 – 3G4600A14311 Acceptance Test Procedure *Section 6.1*					
REF.	***DESCRIPTION***	***OPERATOR***	***DATE***	***PASS***	***FAIL***
6.1	**TEST PREREQUISITES AND SAFETY PROVISION**				
1	*Proper Installation*				
2	*AW139 Avionics ATP successfully*				
3	*Primus Epic 4.8 installed*				
4	*IGN #1/2" and "START #1/2" pulled out*				
6.1.2	**ELECTRICAL SETTINGS**				
1	*EPDS CB pushed in*				
2	*Avionic Devices CB pushed in*				
3	*External Power Bench connected*				
Engineering dpt signature (if required):					
Quality dpt approval:					

Table - 5 3G4600A14311 ATP Results – Section 6.2

139G3110D002 MH-139 – 3G4600A14311 Acceptance Test Procedure *Section 6.2*					
REF.	***DESCRIPTION***	***OPERATOR***	***DATE***	***PASS***	***FAIL***
6.2	**TESTS TO BE PERFORMED**				
6.2.1.1	**CIRCUIT BREAKER'S CHECK**				
1	*CB Check*				
6.2.1.2	**INSTALLATION AND POWER SUPPLY CHECKS**				
1	*CB630 pushed in*				
2	*Pin grounding check*				
3	*28VDC check*				
6.2.1.3	**ADDITIONAL ELECTRICAL CHECKS**				
1	*Pin to Pin check*				
2	*Diode check*				
4	*Dimming check*				
5	*Pin to Pin check*				
0	**CVFDR MUTE FUNCTION** CHECK				
1	*FDR CBs pushed in*				
2	*Connector PL212P4 accessible*				
3	*H/C electrically powered*				
4	*Start & IGN CBs pulled out* *Engine Control Knob to Idle*				

5	*Mic check*				
6	*FDR and FDR operative check*				
7	*CVR MUTE CAS not present*				
8	*Audio Input ON check*				
12	*Audio Input OFF check*				
10	*CVR MUTE CAS present*				
Engineering dpt signature (if required):					
Quality dpt approval:					

ANNEX B

ELECTRICAL PROVISION TACAN SYSTEM ACCEPTANCE TEST PROCEDURE

5. TEST PREREQUISITES

5.1 SAFETY PROVISION

	CHECK	
1.	Disconnect (if installed) the connectors from the fire extinguishing bottles and suitably stow them. If other Electro-Explosive Devices (EEDs) are fitted, ensure that they are electrically disconnected.	☐
2.	When required for continuity testing, a low voltage tester shall be used.	☐
3.	No other form of probe is allowed under no circumstances.	☐
4.	When testing at pins and sockets of plug and receptacle connectors is required, the contact shall be made by means of the correct mating socket or pin.	☐
5.	Do not handle and operate plug/receptacle connectors with voltage presence.	☐
6.	During the test (with the helicopter electrically powered) the “IGN #1/2” and “START #1/2” CBs shall be pulled OUT.	☐

WARNING

Verify that no one is standing on the ground close to the transponder bottom antenna (1 meter radius) while the TACAN transponder is transmitting, in order to avoid exposure to transmitted RF power.
Do not operate the TACAN system while the aircraft is being re-fuelled.

5.2 PRELIMINARY CHECKS

	CHECK	Result
1.	Check that all the TACAN configuration P/Ns are correct. Fill the following Table. ITEM: Antenna Switch — PART NUMBER: 402-2303 — Check: ☐	☐
2.	The electrical wiring harness shall have been successfully tested for proper isolation resistance, electrical voltage and continuity between end points. In the event of a system failure or system malfunction, perform a pin-to-pin check (the applicable wiring diagram is ref. [1] in the table 3-1) to confirm that all wires terminate in their proper location, the power and ground are applied only where required and all data/audio bus connections are shielded and properly grounded.	☐
3.	Ensure that the D.C. Electrical Power Generation and Distribution System ATP has been successfully completed.	☐
4.	Ensure that the Avionic System ATP (ref. [2] in the Table 3-1) has been successfully completed.	☐

6. TOOLS REQUIRED

Tool	
1. DC External Power Bench (28VDC).	☐
2. Multimeter, conductor pins and wire extensions for troubleshooting operations. **INSTRUMENT PRECISION: +/- 2% MIN**	☐
3. Cable and Antenna Analyzer S332E or equivalent.	☐
5. Conductor pins and wire extensions for troubleshooting operation	☐

NOTE: THE TOOLS SHALL BE CALIBRATED BEFORE USING.

8. ELECTRICAL TEST

8.2 GROUNDING CHECKS AND POWER SUPPLY CHECKS

<table>
<tr><th colspan="2">CHECK</th><th>Result</th></tr>
<tr><td>1.</td><td>Pull OUT the TACAN CB (CB618).</td><td>☐</td></tr>
<tr><td>2.</td><td>Verify the grounding of the following pins:
TRC 2634 (A634)
A634P1-1 ☐
A634P1-2 ☐
A634P1-63 ☐
Tacan CTRL Unit (PL209)
PL209P1-S ☐</td><td>☐</td></tr>
<tr><td>3.</td><td>Verify the continuity of the core of coaxial cable between A634P3 and E184P1.
Verify isolation between the core and shield.</td><td>☐</td></tr>
<tr><td>4.</td><td>Verify continuity between A634P1-26 and PL209P1-R.</td><td>☐</td></tr>
<tr><td>5.</td><td>Connect a jumper between A634P1-48 and ground.
With the helicopter electrically powered, push IN the TACAN CB (CB618).
Verify the continuity of the core of coaxial RF cable between A634P3 and E185P1.
Verify isolation between the core and shield.</td><td>☐</td></tr>
</table>

	CHECK	Result
6.	Verify the voltage **28 ± 10% VDC** between the following couple of pins: **TRC 2634 (A634)** **A634P1-3 (+) vs A634P1-1 (-)** ☐ **A634P1-4 (+) vs A634P1-2 (-)** ☐	☐
7.	Pull OUT Tacan CB (**CB618**) Turn off power to the helicopter's busses and remove external power.	☐

9. COAXIAL CABLE TESTS

CHECK	results
1. Using instrument ref. [3] § 6 or equivalent, select cable loss mode and set the RF limits as follows: • Start frequency: 962 MHz. • Stop frequency: 1213 MHz.	☐
2. Perform Instrument calibration, if necessary.	☐

9.1 TOP ANTENNA CABLE ATTENUATION

CHECK	results
1. Select the Cable loss – one port applicable measure on the instrument ref. [3] § 6	☐
2. Verify that the TACAN circuit breaker (**CB618**) is pulled out.	☐
3. Disconnect the following connectors: **A634P3**, **A634P1** and **E185P1**	☐
4. Connect a jumper between A634P1-48 and ground.	☐
5. Connect the antenna plug **A634P3** connector to the Cable & Antenna Analyzer S332E or equivalent.	☐
6. Connect an enclosed precision "short" (of Calibration Tool) at the end of the RF coaxial transmission line (E185P1)	☐
7. Apply external power to the helicopter's busses and push in the TACAN CB (CB618).	☐
8. Perform the Cable Loss and record the maximum value, determined in the selected frequency range, in the table below.	☐
9. Pull CB out and remove the jumper between A634P1-48 and ground.	☐
10. Remove the precision "short" (of Calibration Tool) from the end of the coaxial transmission line (**E185P1**)	☐
11. Reconnect cables to the relevant coaxial connectors and antenna (**E185P1**)	☐

ANTENNA	PASS/FAIL
Line Attenuation or Cable Loss Attenuation [dB]	
	PASS if A<2.6 dB ±0.1 dB

9.2 BOTTOM ANTENNA CABLE ATTENUATION

Perform the CALIBRATION procedure on S332E Analyzer

<table>
<tr><th>CHECK</th><th>results</th></tr>
<tr><td>1. Select the Cable loss – one port applicable measure on the instrument ref. [3] § 6</td><td>☐</td></tr>
<tr><td>2. Verify that the TACAN circuit breaker (CB618) is pulled out.</td><td>☐</td></tr>
<tr><td>3. Disconnect the following connectors: A634P3, A634P1 and E184P1</td><td>☐</td></tr>
<tr><td>4. Connect the antenna plug A634P3 connector to the Cable&Antenna Analyzer S322E or equivalent.</td><td>☐</td></tr>
<tr><td>5. Connect an enclosed precision “short” (of Calibration Tool) at the end of the RF coaxial transmission line (E185P1)</td><td></td></tr>
<tr><td>6. Perform the Cable Loss and record the maximum value, determined in the selected frequency range, in the table below.
<table>
<tr><th>ANTENNA</th><th rowspan="2">PASS/FAIL</th></tr>
<tr><th>Line Attenuation or Cable Loss Attenuation [dB]</th></tr>
<tr><td></td><td>PASS if A<1.7 dB ±0.1 dB</td></tr>
</table>
</td><td>☐</td></tr>
<tr><td>7. Remove the precision “short” (of Calibration Tool) at the end of the coaxial transmission line (E184P1)</td><td>☐</td></tr>
<tr><td>8. Reconnect cables to the relevant coaxial connectors and antenna (E184P1)</td><td>☐</td></tr>
</table>

10. TEST RESULTS

Table 10-1: Electrical provision for TACAN+ - Test Results

139G3450D019 Helicopter S/N:_____ Electrical provision for TACAN + Acceptance Test Procedure				
REF.	***DESCRIPTION***	***OPERATOR***	***DATE***	***REMARKS***
5	*Test Prerequisites*			
6	*Tools Required*			
8.2	*Grounding Check and power supply checks*			
9.1 9.2	*Antenna Cable Attenuation*			
Engineering dpt signature(if required):				
Quality dpt approval:				

ANNEX C

AW139 – ICS AUDIO CUSTOMIZATION ACCEPTANCE TEST PROCEDURE

12.5.5 AURAL WARNING TEST (CUSTOMIZATION 3G2350P05711)

1. Verify both MAUs are operative (Circuit Breakers set IN) ❒
2. Connect David Clark Headsets; model H10-13, to the 4th AV900 headset plugs ❒
3. On Test Control Panel, momentary press the AWG pushbutton and verify the linked aural message (“Aural System Test – Aural System test”) is heard on 4th AV900 operator’s headsets ❒
4. Push and keep pressed the AWG pushbutton on the Test Control Panel and verify that the Aural Warning messages are generated and heard on 4th AV900 operator’s headsets ❒
5. Verify that the EGPWS circuit breaker is set IN and ensure Radar Altimeters CBs are IN ❒
6. By mean of the MCDU Test page, enable the TAWS test function pressing the TAWS test button and verify that the Aural Warning messages are generated and heard on 4th AV900 operator’s headsets ❒

ANNEX D

ELECTRICAL PROVISION FOR MH-139 BAE IFF SYSTEM
ACCEPTANCE TEST PROCEDURE

5 TEST PREREQUISITES

5.1 Safety Provision

	CHECK	
1.	Disconnect (if installed) the connectors from the fire extinguishing bottles and suitably stow them. If other Electro-Explosive Devices (EEDs) are fitted, ensure that they are electrically disconnected.	❒
2.	When required for continuity testing, a low voltage tester shall be used.	❒
3.	No other form of probe is allowed under no circumstances.	❒
4.	When testing at pins and sockets of plug and receptacle connectors is required, the contact shall be made by means of the correct mating socket or pin.	❒
5.	Do not handle and operate plug/receptacle connectors with voltage presence.	❒
6.	During the test (with the helicopter electrically powered) the “IGN #1/2” and “START #1/2” CBs shall be pulled OUT.	❒

WARNING

Verify that no one is standing on the ground close to the transponder bottom antenna (1 meter radius) while the IFF transponder is transmitting, in order to avoid exposure to transmitted RF power.
Do not operate the IFF system while the aircraft is being re-fuelled.

5.2 Preliminary Checks

	CHECK	
1.	Check that all the IFF configuration P/Ns are correct. Fill the following Table.	❒

ITEM	PART NUMBER	Check
Coaxial relay	A151A001	❒
GPS Splitter	7-397	❒

2.	The electrical wiring harness shall have been successfully tested for proper isolation resistance, electrical voltage and continuity between end points (DIT-MCO). In the event of a system failure or system malfunction, perform a pin-to-pin check (the applicable wiring diagram is 4G9340F00411 Kit BAE IFF Drawings) to confirm that all wires terminate in their proper location, the power and ground are applied only where required and all data/audio bus connections are shielded and properly grounded.	❒
3.	Ensure that the D.C. Electrical Power Generation and Distribution System ATP has been successfully completed.	❒
4.	Ensure that the Avionic System ATP (139G4600D001 Rev. U AVIONIC SYSTEM ACCEPTANCE TEST PROCEDURE) has been successfully completed.	❒

6 TOOLS REQUIRED

Tools		
1.	DC External Power Bench (28VDC).	❒
2.	Multimeter, conductor pins and wire extensions for troubleshooting operations. **INSTRUMENT PRECISION: +/- 2% MIN**	❒
3.	Cable and Antenna Analyzer S332E or equivalent.	❒
4.	Bondimeter	❒
5.	WOW switch simulation kit	❒
6.	Conductor pins and wire extensions for troubleshooting operation	❒

NOTE: THE TOOLS ARE CALIBRATED BEFORE USING THEM.

7 ELECTRICAL TEST

7.1 Circuit Breaker's Check

CHECK	Result
Verify the presence and the correct rating of the following CB:	❒

REF. DES.	LIMIT VALUE [A]	LOCATION
CB631	5	OVERHEAD CONSOLE

7.2 Bonding Check

The bonding values are in according with the LHD standards rules after will be evaluating each installation.

CHECK	Result
1. Make sure that the helicopter is powered off.	❒
2. Disconnect the external DC power bench.	❒
3. Disconnect CP91P1, CP91P2 and CP91P3.	❒
4. For each of the items listed in the following table, use the micro-ohmmeter to measure the bonding resistance between the device (connector shell if not otherwise stated) and the specified reference point. Record the measured value in the table.	❒
5. Reconnect CP91P1, CP91P2 and CP91P3..	❒

N°	UUT	Description	UUT test point	Reference point	LIMIT VALUE [mΩ]	Results [mΩ]
1	CP91	GPS Splitter	Connector shell	Local structure	5	

7.3 GROUNDING CHECKS AND POWER SUPPLY CHECKS

<table>
<tr><th colspan="2">CHECK</th><th>Result</th></tr>
<tr><td>1.</td><td>With the helicopter electrically powered, pull out the IFF CB (CB631).</td><td>❒</td></tr>
<tr><td>2.</td><td>Disconnect all the connectors and terminal lugs belonging to the following LRUs:
XPDR Antennas (E10 & E13).</td><td>❒</td></tr>
<tr><td>3.</td><td>Verify the grounding of the following pins:
AN/DPX-7 RST
A641P1-22 ☐
A641P1-47 ☐
A641P1-48 ☐
A641P1-55 ☐
IFF Remote CTRL Unit
PL213P1-6 ☐
PL213P1-9 ☐
PL213P1-37 ☐</td><td>❒</td></tr>
<tr><td>4.</td><td>Push CB631 in and apply 28V on A641P1-25 (put a jump between A641P1-25 and A641P1-24).</td><td></td></tr>
<tr><td>5.</td><td>Ensure XPDR switch is set to MIL and verify the continuity of the core of coaxial RF cable between the following connector:
A641P4 and E10P1
A641P3 and E13P1
A2-9P2-A1 and CP91P3
A727GPS and CP91P2
CP91P3 and E17P1
Verify the isolation between core and shield of coaxial of each connector.</td><td>❒</td></tr>
<tr><td>6.</td><td>Verify the voltage 28 ± 10%VDC between the following couple of pins:
AN/DPX-7 RST
A641P1-24 (+) vs A641P1-22 (-) ☐</td><td>❒</td></tr>
<tr><td>7.</td><td>Pull out the IFF CB and reconnect all connectors to the XPDR Antennas (E10&E13).</td><td>❒</td></tr>
<tr><td>8.</td><td>Set the WOW switches simulation kit on ground position. Verify the grounding of the IFF Remote Control Unit A641P1 connector pin P1-28.</td><td>❒</td></tr>
<tr><td>9.</td><td>Set the WOW switches simulation kit in-air position. Verify the open state of the BAE IFF Remote Control Unit A641P1 connector pin P1-28.</td><td>❒</td></tr>
<tr><td>10.</td><td>Verify the open state of the BAE IFF Remote Control Unit PL213P1 connector pin P1-29.</td><td>❒</td></tr>
<tr><td>11.</td><td>Set the WOW switches simulation kit on ground position. Verify the grounding of IFF Remote Control Unit PL213P1 connector pin: P1-43.</td><td>❒</td></tr>
</table>

	CHECK	Result
12.	Set the WOW switches simulation kit in air position. Verify the open state of IFF Remote Control Unit PL213P1 connector pin: P1-43.	❒
13.	Verify the voltage **28 ± 10%VDC** between the following couple of pins: **AN/DPX-7 RST** **A641P1-24 (+) vs A641P1-22 (-)** ☐	❒

8 COAXIAL CABLE TEST

Note. In order to perform tests described in this section, the coaxial relay K397 shall be forced to use the MIL position.

Table 1: Summary of Antenna Cables Attenuation

	Line Attenuation or Cable Loss at Central Frequency			
	Measure (Ameas, [dB[)	Expected Limit [dB] (*)	Measure (Ameas, [dB[)	Expected Limit [dB] (*)
Central Frequency [MHz]	**1090**		**1030**	
Top Antenna Cable E13		< 3		< 3
Bottom Antenna Cable E10		< 3		< 3

(*) 0.1 dB tolerance

8.1 Top Antenna Cable Attenuation

CHECK	Result
1. Set a RF signal with the following characteristics for the S332E Analyzer. Start Frequency: 1070 MHz – (Central Frequency: 1090 MHz) - Stop Frequency: 1100 MHz	❒
2. Perform the CALIBRATION procedure on S332E Analyzer if necessary	❒
3. Select the Cable loss – one port applicable measure on the S332E Analyzer	❒
4. Pull OUT the IFF CB (**CB631)**	❒
5. Unplug the Antenna Coaxial connector **E13P1**	❒
6. Connect **A641P3** connector to the S332E Analyzer.	❒
7. Connect an enclosed precision short in place of the transponder top antenna E13P1 at the end of the transmission line.	❒
8. Perform the Cable Loss measure and verify that highest value is < 3	❒
9. Report the line attenuation in **Table 1: Summary of Antenna Cables Attenuation**.	❒
10. Set a RF signal with the following characteristics for the S332E Analyzer. Start Frequency: 1010 MHz – (Central Frequency: 1030 MHz) - Stop Frequency: 1050 MHz	❒
11. Report the line attenuation in **Table 1: Summary of Antenna Cables Attenuation.**	❒
12. Perform the Cable Loss measure and verify that highest value is < 3	❒

CHECK	Result
13. Report the line attenuation in **Table 1: Summary of Antenna Cables Attenuation**	❒
14. Connect the E13P1 connector to the transponder top antenna (E13)	❒

8.2 Bottom Antenna Cable Attenuation

CHECK	Result
15. Set a RF signal with the following characteristics for the S332E Analyzer. Start Frequency: 1070 MHz – (Central Frequency: 1090 MHz) - Stop Frequency: 1100 MHz	❒
16. Perform the CALIBRATION procedure on S332E Analyzer if necessary	❒
17. Select the Cable loss – one port applicable measure on the S332E Analyzer	❒
18. Pull OUT the IFF CB (**CB631)**	❒
19. Unplug the Antenna Coaxial connector **E10P1**	❒
20. Connect **A641P3** connector to the S332E Analyzer.	❒
21. Connect an enclosed precision short in place of the transponder top antenna E10P1 at the end of the transmission line.	❒
22. Perform the Cable Loss measure and verify that highest value is < 3	❒
23. Report the line attenuation in **Table 1: Summary of Antenna Cables Attenuation**.	❒
24. Set a RF signal with the following characteristics for the S332E Analyzer. Start Frequency: 1010 MHz – (Central Frequency: 1030 MHz) **-** Stop Frequency: 1050 MHz	❒
25. Report the line attenuation in **Table 1: Summary of Antenna Cables Attenuation.**	❒
26. Perform the Cable Loss measure and verify that highest value is < 3	❒
27. Report the line attenuation in **Table 1: Summary of Antenna Cables Attenuation**	❒
28. Connect the E10P1 connector to the transponder top antenna (E10)	❒

8.3 TOP ANTENNA VSWR

CHECK	Result
1. Ensure the transponder top antenna (E13) is fully installed and connect A64 1P3 connector to the S332D Analyzer.	❒
2. Select the VSWR test mode and set is as follows • Start Frequency: 1010 MHz • Stop Frequency: 1110 MHz Select four frequency marker lines as follow, in order to identifies to sub band • M1 marker: 1020 MHz, start sub band 1 • M2 marker: 1040 MHz, stop sub band 1 • M3 marker: 1080 MHz, start sub band 2 • M4 marker: 1110 MHz, stop sub band 2	❒
3. Verify that all VSWR values in sub band 1 and sub band 2 are not higher than 1.7. Report the measured values below	❒

Measured			Expected	Measured			Expected	
VSWR M1 Marker	VSWR M1 Marker	VSWR 1030 MHz	VSWR 1030 < 1.7	VSWR M3 Marker	VSWR M4 Marker	VSWR 1090 MHz	VSWR 1090 < 1.7	PASS*

*PASS if VSWR is not higher than 1.7 at 1030 and 1090 MHz.
Slightly higher VSWR values are admitted outside sub band 1 and sub band 2.

8.4 BOTTOM ANTENNA VSWR

CHECK	Result
4. Ensure the transponder bottom antenna (E10) is fully installed and connect A641P4 connector to the S332D Analyzer.	❒
5. Select the VSWR test mode and set is as follows • Start Frequency: 1010 MHz • Stop Frequency: 1110 MHz Select four frequency marker lines as follow, in order to identifies to sub band • M1 marker: 1020 MHz, start sub band 1 • M2 marker: 1040 MHz, stop sub band 1 • M3 marker: 1080 MHz, start sub band 2 • M4 marker: 1110 MHz, stop sub band 2	❒
6. Verify that all VSWR values in sub band 1 and sub band 2 are not higher than 1.7. Report the measured values below	❒

Measured			Expected	Measured			Expected	
VSWR M1 Marker	VSWR M1 Marker	VSWR 1030 MHz	VSWR 1030 < 1.7	VSWR M3 Marker	VSWR M4 Marker	VSWR 1090 MHz	VSWR 1090 < 1.7	PASS*

*PASS if VSWR is not higher than 1.7 at 1030 and 1090 MHz.
Slightly higher VSWR values are admitted outside sub band 1 and sub band 2.

8.5 CIV GPS Functional Check

CHECK	Result
1. On Pilot (or Copilot) MCDU, select press **NAV** button and select **POS SENSOR** page	❒
2. Select **GPS2** status	❒
3. Verify the correct coordinates are visualized, that the number of satellite tracked is >5 and the GPS is in **NAVIGATION** or **DIFFERENTIAL** mode.	❒

9 TEST RESULTS

Table 9-1 Electrical provision for BAE IFF System Test Results.

139G9340D005 Helicopter S/N:_____ Electrical provision for BAE IFF System Acceptance Test Procedure				
REF.	***DESCRIPTION***	***OPERATOR***	***DATE***	***REMARKS***
5	*TEST PREREQUISITES*			
6	*TOOLS REQUIRED*			
7	*ELECTRICAL TEST*			
8	*COAXIAL CABLE TEST*			
Engineering dpt signature(if required):				
Quality dpt approval:				

ANNEX E

MH139 - ELECTRICAL PROVISION FOR ATK ASE SYSTEM

ACCEPTANCE TEST PROCEDURE

4 System test

4.1 Provision test

4.1.1 Test prerequisites

The following requirements shall be fulfilled prior to execution of the test procedures described in this document:

	CHECK	Result
1.	Disconnect (if installed) the connectors from the fire extinguishing bottles and suitably stow them. If other Electro-Explosive Devices (EEDs) are fitted, ensure that they are electrically disconnected.	❒
2.	When required for continuity testing, a low voltage tester shall be used.	❒
3.	No other form of probe is allowed under no circumstances.	❒
4.	When testing at pins and sockets of plug and receptacle connectors is required, the contact shall be made by means of the correct mating socket or pin.	❒
5.	Do not handle and operate plug/receptacle connectors with voltage presence.	❒
6.	During the test (with the helicopter electrically powered) the “IGN #1/2” and “START #1/2” CBs shall be pulled OUT.	❒
7.	The electrical wiring harness shall have been successfully tested for proper isolation resistance, electrical voltage and continuity between end points (DIT-MCO). In the event of a system failure or system malfunction, perform a pin-to-pin check (the applicable wiring diagram is ref. [1] in the 2.1) to confirm that all wires terminate in their proper location, the power and ground are applied only where required and all data/audio bus connections are shielded and properly grounded.	❒
8.	Ensure that the D.C. Electrical Power Generation and Distribution System ATP has been successfully completed.	❒
9.	Make sure AW139 Avionic system Acceptance Test Procedure (paragraph [2]) has been successfully completed.	❒
10.	Make sure AW139 Avionic bonding Acceptance Test Procedure (paragraph [3]) has been successfully completed.	❒
11.	Make sure the External Power Bench is operative and set to the appropriate voltage (28±1 VDC)	❒

4.1.2 Safety provisions

For your own safety and in order to prevent damage to the rotorcraft, strictly obey the following instructions at all times.

	CHECK	Result
1.	Make sure the following circuit breakers are **pulled out** at all times during performance of the procedures described in this document: • ENGINE IGN 1 - OUT • ENGINE START 1 - OUT • ENGINE IGN 2 - OUT • ENGINE START 2 - OUT	❒
2.	Make sure the following fire extinguishing bottle connectors are **disconnected and stowed** at all times during performance of the procedures described in this document: • E11P1 • E11P2 • E12P1 • E12P2	❒
3.	Make sure that any other Electro-Explosive Devices (EED) fitted on the rotorcraft is **disconnected and secured.**	❒
4.	Whenever the procedure requires the helicopter to be powered off, make sure the following switches are switched **off**: • BATTERY MASTER OFF • BATTERY MAIN OFF • BATTERY AUX - OFF • EXT PWR OFF	❒
5.	When required a low voltage tester may be used for continuity testing.	❒
6.	When testing at pins and sockets of plug and receptacles connectors is required, contact has to be made by means of the correct mating socket or pin. Under no circumstances, any other form of probe must be used.	❒
7.	When not otherwise specified, a ±5% tolerance is implied for measured values w.r.t required values.	❒

4.1.3 Required tools

The following tools are required:

- 28VDC external power bench;
- Multimeter with appropriate mating pins, sockets and extension leads;
- WOW simulator

All instruments shall be duly calibrated according to the applicable procedures and shall provide a measurement uncertainty less than 2%.

The operator shall make sure that all instruments and tools are set up and operated according to the applicable operating instructions.

4.1.4 Circuit Breaker's Check

Verify the presence and the correct rating of the following CBs:

Item	REF-DES	Max value[A]	MeasuredValue [A]
1	CB621 MWS CONTR	**2**	
2	CB623 CMDS CONTR	**5**	
3	CB620 MWS PRCSR	**7.5**	
4	CB622 CMDS PWR	**15**	

4.1.5 Grounding Checks

	CHECK	Result
1.	Ensure that each one of the following pins on the MWS Computer Processor (A645) for following mating connector is properly grounded: **A645P1 Pin B, C** **A645P3 Pin q**	❒
2.	Ensure that each one of the following pins on the MWS Control Indicator (PL216) for following mating connector is properly grounded: **PL216P3 Pin 2, 3**	❒
3.	Ensure that each one of the following pins on the CMDS Control Display Unit (PL215) for following mating connector is properly grounded: **PL215P1 Pin 1, 3, 9, 10, 51, 64**	❒
4.	Ensure that the **K395P1 Pin X2** on the RELAY K395 is properly grounded:	❒
5.	Ensure that each one of the following pins on the CMDS CTRL PNL (PL214) for following mating connector is properly grounded: **PL214P1 Pin M**	❒
6.	Ensure that each one of the following pins on the CMDS PROGRAMMER (A648) for following mating connector is properly grounded: **A648P2 Pin 12**	❒
7.	Verify with the tester that is connected to ground: **K396P1 Pin A1**	❒

4.1.6 Power supply check

Disconnect the following connectors: A645P1, PL216P3, PL215P1, PL214P1, PL163P1, A8-6P1, A7-6P1.

Use a multimeter to perform checks as detailed in the following table:

	CHECK	Result
1.	With the helicopter electrically powered ON push in all CB's detailed in the paragraph 4.1.4	❒
2.	Verify the voltage **28 ± 10% VDC** between the following pins: MWS – Computer Processor (A645) for mating connector **A645P1-A (+) vs A645P1-B (-)** MWS – CONTROL INDICATOR (PL216) for mating connector **PL216P3-1 (+) vs PL216P3-2 (-)** CMDS – CTRL DISPLAY UNIT (PL215) for mating connector **PL215P1-2 (+) vs PL215P1-1 (-)**	❒ ❒ ❒
3.	With the NVG switch set to NORM, move the console dimming control knob and verify that • passing from DAY to NIGHT (click of the knob), pin C of connector PL214P1 switches from 28V steady to 0-28V varying depending on console knob position • the voltage of the pin L of the connector PL214P1 moves from 0 to 5 V	❒
4.	With the NVG switch set to NORM, move the console dimming control knob and verify that • passing from DAY to NIGHT (click of the knob), continuity between pins 43 of connector PL215P1 and DC GND switches from CONNECTED to OL • passing from DAY to NIGHT (click of the knob), continuity between pins 50 of connector PL215P1 and DC GND switches from OL to CONNECTED • the voltage of the pin 8 of the connector PL215P1 moves from 0 to 5 V • the voltage of the pin 49 of the connector PL215P1 moves from 0 to 28 V.	❒
5.	Set the NVG switch set to NVG, move the console dimming control knob and verify that • pin 43, 49 and 50 of the connector PL215P1 is OPEN (reading OL in continuity with DC GND) • the voltage of the pin 8 of the connector PL215P1 moves from 0 to 5 V	❒
6.	Set NVG switch back to NORM and Dimming Console Knob to DAY (OFF).	❒
7.	Select Diode mode on the multimeter.	❒
8.	Connect the positive clamp to pin PL214P1-A and the negative clamp to pin PL13P2-G, and verify the Diode test passes (≥ 0.5 VDC reading).	❒
9.	Connect the positive clamp to pin PL13P2-G and the negative clamp to pin PL214P1-A, and verify the Diode test fails (OL reading).	❒
10.	Connect the positive clamp to pin PL163P1-9 and the negative clamp to pin PL13P2-G, and verify the Diode test passes (≥ 0.5 VDC reading).	❒
11.	Connect the positive clamp to pin PL13P2-G and the negative clamp to pin PL163P1-9, and verify the Diode test fails (OL reading).	❒

CHECK	Result
12. Connect the positive clamp to pin K457P1-X2 and the negative clamp to pin PL13P2-G, and verify the Diode test passes (≥ 0.5 VDC reading).	❒
13. Connect the positive clamp to pin PL13P2-G and the negative clamp to pin K457P1-X2, and verify the Diode test fails (OL reading).	❒
14. Verify continuity between K457P1-A3 and PL215P1-31.	❒
15. Press and hold the LAMP button on Test Control Panel and verify that: • Voltage between pins PL215P1-31 and DC GND is 28 V • Voltage between pins PL163P1-9 and DC GNS is 0 V • Voltage between pins PL214P1-A and DC GND is 0 V	❒
16. Power OFF the helicopter	❒

ADDITIONAL CHECK		Result
17.	Pull out CB 621, MWS CONTR	❒
18.	Disconnect A8-6P1 and A7-6P1.	❒
19.	Check there is continuity between • pin 33 of the MWS-CI (PL216) mating connector PL216P3 and the pin 65 of the MRC2 (A8) mating connector A8-6P1. • pin 33 of the MWS-CI (PL216) mating connector PL216P3 and the pin 65 of the MRC1 (A7) mating connector A7-6P1. • pin 35 of the MWS-CI (PL216) mating connector PL216P3 and the pin 66 of the MRC2 (A8) mating connector A8-6P1. • pin 35 of the MWS-CI (PL216) mating connector PL216P3 and the pin 66 of the MRC1 (A7) mating connector A7-6P1.	❒
20.	Reconnect all connectors disconnected previously	❒

4.2 PIN to PIN Check

	CHECK	Result
1.	With the helicopter electrically not powered	❒
2.	Disconnect these connectors: K396P1, PL214P1, PL215P1, A645P2, A645P3, A648P2, A648P1, A648P2, A651P1, A651P3, A58J1, A59J1, A650J1 and A649J1.	❒
3.	Verify the continuity between K396P1-B2 and PL214P1-E	❒
4.	Verify the continuity between K396P1-A2 and PL215P1-45 and between A648P1-D and PL215P1-45	❒
5.	Verify the continuity between PL215P1-26 and PL214-G, between PL215P1-29 and PL214-K and PL215P1-19 and PL214-H	❒
6.	Verify the continuity between: A648P1-L and A645P2-D, A648P1-Y and A645P2-E, A648P1-B and A645P2-F, A648P1-c and A645P2-G A648P2-24 and A645P2-W A648P2-52 and A648P2-55 A648P2-52 and A648P2-58 A648P2-52 and A648P2-51	❒
7.	Verify the continuity between: PL215P1-60 and A648P1-a, PL215P1-61 and A648P1-b, PL215P1-62 and A648P1-J, PL215P1-63 and A648P1-G, PL215P1-5 and A648P1-E, PL215P1-4 and A648P1-K, PL215P1-11 and A651P3-33 PL215P1-24 and A651P1-54 PL215P1-65 and A651P1-37 PL215P1-65 and A651P1-34 PL215P1-66 and A651P1-33 PL215P1-17 and A651P3-37 PL215P1-18 and A651P3-36 PL215P1-23 and A651P3-32 A651P1-33 and A651P3-40	❒

	CHECK	Result
8.	Verify the continuity between: A652P1-D and A645P3-L A652P1-E and A645P3-M A652P1-L and A645P3-V A652P1-K and A645P3-W A643P1-D and A645P3-J A643P1-E and A645P3-K A643P1-L and A645P3-T A643P1-K and A645P3-U A646P1-D and A645P3-R A646P1-E and A645P3-n A646P1-L and A645P3-Z A646P1-K and A645P3-u A647P1-D and A645P3-N A647P1-E and A645P3-P A647P1-L and A645P3-X A647P1-K and A645P3-Y	❒
9.	Verify the continuity between: A59J1-63 and A58J1-63 A59J1-63 and PL215P1-27 A59J1-63 and A650J1-B A59J1-63 and A649J1-B A59J1-60 and A58J1-60 A59J1-60 and PL214P1-J A59J1-60 and A650J1-A A59J1-60 and A649J1-A	❒
10.	Remove Safety Pin from Safety Switch and Verify continuity between; A651P3-35 and K395P1-B1 A651P3-54 and K395P1-B1	❒
11.	Reconnect all connectors previously disconnected (at step 2) put the Safety Pin back into Safety Switch	❒

5 Test results

139G9900D012 MH139 – ATK ASE SYSTEM ACCEPTANCE TEST PROCEDURE							
Helicopter NC							
Paragraph		**Item(s)**		**Requirement**	**Result**	**Pass/Fail**	**Operator**
4.1	Provision test						
4.1.4	Breaker's check	all				□ P □ F	
4.1.5	Grounding check	all				□ P □ F	
4.1.6	Power supply check	all				□ P □ F	
4.2	PIN to PIN Check	all				□ P □ F	
Remarks							
Date							
Engineering dept. signature (if required)							
Quality dept. approval							

Appendix A In service test

The aim of this section is to provide technical advice regarding the methods of testing systems in-service or subsequent to the initial build as defined in this ATP. This advice does not constitute part of the formal clearance of the rotorcraft. It is intended that this ATP could be used in-service following the reinstallation or replacement of electrical system components as Connectors, Cables, LRUs, etc.

Testing of parts of the system not included in the provision (e.g. radio, car kit and related cable-on-part assemblies) shall be performed according to the applicable instructions issued by the DO responsible for the equipment installation.

AFTER REINSTALLATION OF COMPONENTS

COMPONENT REPLACED	REF DES	TEST REQUIRED
MWS Computer Processor	A645	4.1.5 - Grounding check 4.1.6 - Power supply check
MWS Computer Indicator	PL216	4.1.5 - Grounding check 4.1.6 - Power supply check
CMDS Programmer	A648	4.1.5 - Grounding check 4.1.6 - Power supply check 4.2 – Pin to Pin check
CMDS Sequencer	A651	4.1.6 - Power supply check 4.2 – Pin to Pin check
CMDS Control Display Unit	PL215	4.1.5 - Grounding check 4.1.6 - Power supply check 4.2 – Pin to Pin check
CMDS Control Panel	PL214	4.1.4 - Grounding check (item 5) 4.1.5 - Power supply check

AFTER REPLACEMENT OF COMPONENTS

COMPONENT REPLACED	REF DES	TEST REQUIRED
MWS Computer Processor	A645	4.1.4 - Grounding check 4.1.5 - Power supply check
MWS Computer Indicator	PL216	4.1.4 - Grounding check 4.1.5 - Power supply check
CMDS Programmer	A648	4.1.5 - Grounding check 4.1.6 - Power supply check 4.2 – Pin to Pin check
CMDS Sequencer	A651	4.1.5 - Power supply check 4.2 – Pin to Pin check
CMDS Control Display Unit	PL215	4.1.4 - Grounding check 4.1.5 - Power supply check 4.2 – Pin to Pin check
CMDS Control Panel	PL214	4.1.4 - Grounding check 4.1.5 - Power supply check

LEONARDO
HELICOPTERS

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.