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AgustaWestland Products

SERVICE BULLETIN

N° 139-234

DATE: February 8, 2011

REV. : A - August 31, 2022

TITLE

ATA 34 – INSTALLATION OF DF935-11 DIRECTION FINDING SYSTEM

REVISION LOG

The Revision A of this Service Bulletin cancels and supersedes all the previous issues.

Helicopters already compliant with the first issue of this Service Bulletin do not need any additional action.

Due to the large amount of modifications introduced in this new revision, revision bars are not shown.

Revision A is issued to:

- update the SB to the new standard;
- introduce Part II to extend the effectivity of this Service Bulletin to AW139 from S/N 31400 to S/N 31699 and from S/N 41300 to S/N 41499.

1. PLANNING INFORMATION

A. EFFECTIVITY

Part I:

All AW139 helicopters from S/N 31201 to S/N 31398 and from S/N 41201 to S/N 41293.

Part II:

All AW139 helicopters from S/N 31400 to S/N 31699 and from S/N 41300 to S/N 41499.

Part III:

All AW139 helicopters from S/N 31201 to S/N 31699 and from S/N 41201 to S/N 41499.

B. COMPLIANCE

At Customer's option.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin is issued in order to provide the necessary instruction on how to install the DF935-11 direction finding system kit P/N 4G3450F00711.

E. DESCRIPTION

Leonardo Helicopters developed this Service Bulletin in order to provide all necessary instructions on how to install the DF935-11 direction finding system kit P/N 4G3450F00711.

NOTE

On helicopters equipped with 2nd ADF Kit P/N 3G3450F00212 the installation of DF 935 series Direction Finding system is NOT allowed due to functional incompatibilities.

The DF935 series Direction Finding is a stand-alone system with an integral synthesized receiver covering 30 to 470 MHz and five separate guard receivers to monitor predefined distress frequencies. All six receivers take bearings simultaneously and may be separately switched on and off. Bearing may be displayed on the DF Controller and simultaneously on the PFD.

The DF935-11 system provides the following functions in addition to the basic features of the 935 series system:

- Multi-beam function on SARBE 7 personal locator beacons;

- On Top Position Indicator (OTPI) function;
- Sonobuoy mode.

In particular for the OTPI function, the DF 935-11 generates a discrete output for connection to a NVG OTPI panel P/N 3G3450V00151, installed on the instrument panel, which signals when the aircraft has over-flown the target beacon.

Part I provides the necessary instruction to perform the DF (935-11) complete provision P/N 4G3450A02111 for AW139 long nose.

Part II provides the necessary instruction to perform the DF (935-11) complete provision P/N 4G3450A02112 for AW139 long nose enhanced.

Part III provides the necessary instruction to perform the DF (935-11) installation P/N 4G3450A02211.

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.

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

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

G. MANPOWER

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

Part I: approximately one-hundred and forty-five (145) MMH.

Part II: approximately one-hundred and forty-five (145) MMH.

Part III: approximately five (5) MMH.

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

H. WEIGHT AND BALANCE

PART I

WEIGHT (Kg)	2.4	
	ARM (mm)	**MOMENT (Kgmm)**
LONGITUDINAL BALANCE	3347	8032.8
LATERAL BALANCE	183	439.2

PART II

WEIGHT (Kg)	2.7	
	ARM (mm)	**MOMENT (Kgmm)**
LONGITUDINAL BALANCE	2688	7257.6
LATERAL BALANCE	244	658.8

PART III

WEIGHT (Kg)	4.08	
	ARM (mm)	**MOMENT (Kgmm)**
LONGITUDINAL BALANCE	3963	16169.04
LATERAL BALANCE	-26,6	-108.53

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-06-40-00-00A-028A-A	Access provision	All
DM03	39-A-20-10-08-00A-622A-A	Electrical contacts - Crimp	I, II
DM04	39-A-25-11-01-00A-520A-A	Right cockpit seat - Remove procedure	I, II
DM05	39-A-25-14-01-00A-520A-K	Right cockpit seat - Remove procedure	I, II
DM06	39-A-25-15-01-00A-520A-K	Right cockpit seat - Remove procedure	I, II
DM07	39-A-25-21-01-00A-520A-K	Cabin seat - Remove procedure	I, II
DM08	39-A-25-22-01- 00A-520A-K	Cabin seat - Remove procedure	I, II
DM09	39-A-06-41-00-00A-010A-A	Access doors and panels - General data	I, II
DM10	39-A-24-91-04-00A-920A-K	Integrally lighted panel -	I, II

DATA MODULE		DESCRIPTION	PART
		Replacement	
DM11	39-A-25-21-01-00A-720A-K	Cabin seat - Install procedure	I, II
DM12	39-A-25-22-01-00A-720A-K	Cabin seat - Install procedure	I, II
DM13	39-A-25-11-01-00A-720A-A	Right cockpit seat - Install procedure	I, II
DM14	39-A-25-14-01-00A-720A-K	Right cockpit seat - Install procedure	I, II
DM15	39-A-25-15-01-00A-720A-K	Right cockpit seat - Install procedure	I, II
DM16	39-A-11-00-01-00A-720A-A	Decal - Install procedure	III
DM17	39-A-46-20-00-00A-750A-A	Processing and integrating - Options and setting file - Load software procedure	III
DM18	39-D-34-55-00-00A-340A-K	DF system - Function test	III

Following Data Modules refer to CSRP:

DATA MODULE		DESCRIPTION	PART
DM19	CSRP-A-51-42-00-00A-720A-D	Potted inserts - Install procedure	I, II

2) ACRONYMS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
AR	As Required
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
IPD	Illustrated Part Data
ITEP	Illustrated tool and equipment publication
LH	Left Hand
FWD	Forward
LHD	Leonardo Helicopters Division
MMH	Maintenance Man-Hours
N.A.	Not Applicable
P/N	Part Number
RH	Right Hand
SB	Service Bulletin
S/N	Serial Number

3) ANNEX

N.A.

J. PUBLICATIONS AFFECTED

N.A.

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	**4G3450F00711**		**KIT DF (935-11)**	**REF**	**.**		**-**
2	**4G3450A02111**		**DF (935-11) COMPLETE PROVISION**	**REF**	**..**		**-**
3	**3G5310A14811**		**DF STRUCTURAL PROVISION**	**REF**	**...**		**-**
4	3G5310A15532	3G5310A15531	DF ANTENNA FAIRING ASSY	1	....		139-234L1
5	3G5310A15751		UPPER HOLE PROTECTION	1	....		139-234L1
6	3G5310A15851		LOWER HOLE PROTECTION	1	....		139-234L1
7	3G5310A37951	3G5310A37951M01	DF CLOUSURE SHEET	1	....		139-234L1
8	MS27039-1-05		SCREW	6	....		139-234L1
9	MS27039-1-09		SCREW	8	....		139-234L1
10	NAS1149C0332B		WASHER	14	....		139-234L1
11	NAS1836-3-16M		INSERT	6	....		139-234L1
12	**3G5310A26611**		**DF935-11 STRUCTURAL PROVISION**	**REF**	**...**		**-**
13	3G5311A12151		COVER PLATE	1	....		139-234L1
14	A407A08C1P		ANCHOR NUT	4	....		139-234L1
15	MS20426AD3-6		RIVET	0,1 kg	....		139-234L1
16	MS21073L06		RIVET	2	....		139-234L1
17	MS35214-27		NUTPLATE	2	....		139-234L1
18	**4G3450A00711**		**DF C/A ELECTRICAL PROVISION**	**REF**	**...**		**-**
19	3G9A01A27201	4G3450A00711A1R	DF C/A (A1A272)	1	....		139-234L1
20	3G9A01B28401		DF C/A (A1B284)	1	....		139-234L1
21	3G9A02B25901		DF C/A (A2B259)	1	....		139-234L1
22	3G9A02A30801		DF C/A (A2A308)	1	....		139-234L1
23	3G9B01B31801		DF C/A (B1B318)	1	....		139-234L1
24	3G9B02B25201		DF C/A (B2B252)	1	....		139-234L1
25	A630A31	AW001CL000A-X3	SUPPORT	2	....		139-234L1
26	A630A3BT	AW001TL3A08T	ANCHOR NUT	1	....		139-234L1
27	ED300K81		DECAL	1	....		139-234L1
28	M12883/53-001		RETAINER	1	....		139-234L1
29	M210E4N003	M83536/2-028M	RELAY	1	....		139-234L1
30	MS21919WDG2	AS21919WDG02	CLAMP	1	....		139-234L1
31	MS21919WDG4	AS21919WDG04	CLAMP	1	....		139-234L1
32	MS24693-S50		SCREW	2	....		139-234L1
33	MS90376-12Y		PLUG	1	....		139-234L1
34	MS90376-16Y		PLUG	1	....		139-234L1
35	NAS1149D0332J		WASHER	1	....		139-234L1
36	NAS1801-3-12		SCREW	1	....		139-234L1
37	**4G3450A02311**		**DF (935-11) C/A ELECTRICAL PROVISION**	**REF**	**...**		**-**
38	3G9A01B29801	3G9A01B29801A10R	DF C/A	1	....		139-234L1
39	A630A31	AW001CL000A-X3	SUPPORT	1	....		139-234L1

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
40	AW001CK02HS		TIEDOWN STRAP	1	....		139-234L1
41	**4G3450A03711**		**DF 935-2 PHASE 5 VARIANT ELECT PRO**	**REF**	**...**	**(1)**	**-**
42	3G9A02B32101		DF C/A	1	....	**(1)**	-
43	3G2490LXXXXX		Panel integrally light aux breaker	1		(2)	-
44	MS3320-3		Circuit breaker	1			139-234L1
45	ED300CB177		Decal	1			139-234L1
46	A556A-T22		Wire	2 m			139-234L1

PART II

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
47	**4G3450F00711**		**KIT DF (935-11)**	**REF**	**.**		**-**
48	**4G3450A02112**		**DF (935-11) COMPLETE PROVISION**	**REF**	**..**		**-**
49	**3G5310A14811**		**DF STRUCTURAL PROVISION**	**REF**	**...**		**-**
50	3G5310A15532	3G5310A15531	DF ANTENNA FAIRING ASSY	1	....		139-234L2
51	3G5310A15751		UPPER HOLE PROTECTION	1	....		139-234L2
52	3G5310A15851		LOWER HOLE PROTECTION	1	....		139-234L2
53	3G5310A37951	3G5310A37951M01	DF CLOUSURE SHEET	1	....		139-234L2
54	MS27039-1-05		SCREW	6	....		139-234L2
55	MS27039-1-09		SCREW	8	....		139-234L2
56	NAS1149C0332B		WASHER	14	....		139-234L2
57	NAS1836-3-16M		INSERT	6	....		139-234L2
58	**3G5310A26611**		**DF935-11 STRUCTURAL PROVISION**	**REF**	**...**		**-**
59	3G5311A12151		COVER PLATE	1	....		139-234L2
60	A407A08C1P		ANCHOR NUT	4	....		139-234L2
61	MS20426AD3-6		RIVET	0,1 kg	....		139-234L2
62	MS21073L06		RIVET	2	....		139-234L2
63	MS35214-27		NUTPLATE	2	....		139-234L2
64	**4G3450A00712**		**DF C/A ELECTRICAL PROVISION**	**REF**	**...**		**-**
65	3G9A01A27202	4G3450A00712A1R Or 4G3450A00712A4R	DF C/A (A1A272)	1	....		139-234L2
66	3G9A02A30802		DF C/A (A2A308)	1	....		139-234L2
67	3G9A01B28402	4G3450A00712A2R	DF C/A (A1B284)	1	....		139-234L2
68	3G9A02B25902		DF C/A (A2B259)	1	....		139-234L2
69	3G9B01B31802	4G3450A00712A3R	DF C/A (B1B318)	1	....		139-234L2
70	3G9B02B25202		DF C/A (B2B252)	1	....		139-234L2
71	AW001CB02H		CLAMP	2	....		139-234L2
72	AW001CB04H		CLAMP	2	....		139-234L2
73	AW001CL000A-X3		SUPPORT	2	....		139-234L2
74	AW001TL3A06		SUPPORT	1	....		139-234L2
75	AW001TL3A06T		SUPPORT	1	....		139-234L2
76	ED300K81		DECAL	1	....		139-234L2
77	M12883/53-001		RETAINER	1	....		139-234L2
78	M210E4N003	M83536/2-028M	RELAY	1	....		139-234L2
79	MS24693-S50		SCREW	2	....		139-234L2
80	NAS1149D0332J		WASHER	2	....		139-234L2
81	NAS1801-3-12		SCREW	2	....		139-234L2
82	**4G3450A02311**		**DF (935-11) C/A ELECTRICAL PROVISION**	**REF**	**...**		**-**
83	3G9A01B29801	3G9A01B29801A10R	DF C/A	1	....		139-234L2

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
84	AW001CL000A-X3		SUPPORT	1	....		139-234L2
85	AW001CK02HS		TIEDOWN STRAP	1	....		139-234L2
86	**4G3450A03711**		**DF 935-2 PHASE 5 VARIANT ELECT PRO**	**REF**	**...**	**(1)**	**-**
87	3G9A02B32101		DF C/A	1	....	**(1)**	-
88	3G2490LXXXXX		Panel integrally light aux breaker	1		(2)	-
89	MS3320-5		Circuit breaker	1			139-234L2
90	ED300CB177		Decal	1			139-234L2
91	A556A-T20		Wire	2 m			139-234L2

PART III

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
92	**4G3450F00711**		**KIT DF (935-11)**	**REF**	**.**		**-**
93	**4G3450A02211**		**DF (935-11) INSTALLATION**	**REF**	**..**		**-**
94	3G3450V00151		DF INDICATOR	1	...		139-234L3
95	715-40-10010		DIRECTION FINDER CONTROLLER	1	...		139-234L3
96	935-11		DIRECTION FINDER ANTENNA	1	...		139-234L3
97	AW001GH015A		GASKET FOR ANTENNAS	1	...		139-234L3
98	ED300E30		DECAL	1	...		139-234L3
99	ED300PL59		DECAL	1	...		139-234L3
100	ED300PL72		DECAL	1	...		139-234L3
101	MS35207-267		SCREW	8	...		139-234L3
102	MS35214-27		SCREW	2	...		139-234L3

Refer also to IPD for the spares materials required to comply with the AMP DMs referenced in the accomplishment instructions.

2) CONSUMABLES

The following consumable materials, or equivalent, are necessary to accomplish this service bulletin:

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
103	CCC-C-46 / Code No. 42501025	Soft lint-free cloth (C011)	AR	(3)	All
104	P-D-680 type II Code No. 505405407	Cleaning solvent Ardrox 5503 (C010)	AR	(3)	All
105	TT-N-95-B / Code No. 531055030	Aliphatic Naphtha (C059)	AR	(3)	All
106	Commercial	Gloves	AR	(3)	All
107	TT-M-261 / Code No. 32002675	Methyl-Ethyl-Ketone (C005)	AR	(3)	All
108	MS20995C32	Locwire, nonelectrical	AR	(3)	All
109	B7444-1-1-12C	Tube, insulating	1 m	(3)	All
110	MIL-PRF-23377	Epoxy primer	AR	(3)	All
111	999999999000015245 MC780 B-2	Sealant	AR	(3)	All
112	199-05-002 Type II, Class 2 / Code No. 900004603 (MMM-A-132)	Adhesive EA934NA (C057)	AR	(3)	I, II
113	199-05-002 Type I, Class 2 / Code No. 900000581 (MMM-A-132)	Adhesive EA9309.3NA (C021)	AR	(3)	I, II
114	AWMS05-001 Type I Class B	Sealant	AR	(3)	III

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
	Grade 2, Code No. 999999999000005965				
115	AWMS05-001 Type I Class C Grade 1, Code No. 999999999000009854	Sealant	AR	(3)	III
116	MIL-PRF-16173 GRADE 1	Tectyl	AR	(3)	
117	900004953 or AW001CK03LC	Lacing cord	AR	(3)	I, II
118	A236A01AB	Non metallic channel	AR	(3)	I, II
119	EN6049-006-32-5	Self-wrap braid, nomex, green	AR	(3)	I, II
120	EN6049-006-40-5	Self-wrap braid, nomex, green	AR	(3)	I, II

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
139-234L1	1		
3G9A02B32101	1	(1)	I
3G2490LXXXXX	1	(2)	
139-234L2	1		
3G9A02B32101		(1)	II
3G2490LXXXXX		(2)	
139-234L3	1		III

NOTE

(1) This cable assembly has to be required only for A/C equipped with Primus Epic S/W release Phase 5 or higher, only if not already installed on the A/C.

(2) The P/N is not properly completed because it is depending on the helicopter configuration. Customers must contact Product Support Engineering (engineering.support.lhd@leonardo.com) to request the new auxiliary CB panel at least three months in advance from the scheduled application of this Service Bulletin.

(3) Item to be procured as local supply.

B. SPECIAL TOOLS

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

C. INDUSTRY SUPPORT INFORMATION

N.A.

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) During the installation of bonding braids or components requiring grounding, clean the surface structure in order to obtain a good ground contact.

d) Let adhesive cure at room temperature for at least 24 hours unless otherwise specified.

e) All lengths are in mm.

f) Use sealant AWMS05-001 Type I, Class C, Grade 1 (C354) for mating surface.

g) Use sealant AWMS05-001 Type I Class B Grade 2 (C483) for fillet sealing.

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. With reference to Figures 1 thru 4, perform the DF Antenna structural provision P/N 3G5310A14811 and the instrument panel structural provision P/N 3G5310A26611 as described in the following procedures:
   - 2.1 If necessary remove rear lower panel assy P/N 3P5331A02231 or P/N 3P5331A02232 from the helicopter fuselage bottom. Keep the fastening hardware for further reuse.
   - 2.2 With reference to Figures 1 and 2 Section A-A, mark on rear lower panel the position for a circular cut-out.
   - 2.3 With reference to Figure 2, perform a Ø 70.0 hole in the lower panel.
   - 2.4 With reference to Figure 2 Detail B, fill honeycomb core around hole edges with EA934.NA adhesive. While the adhesive is still wet, bond hole lower protection

P/N 3G5310A15851 and hole upper protection P/N 3G5310A15751 with the same adhesive to obtain a final Ø 65.0 hole.

2.5 With reference to Figure 1, temporary position DF Antenna Fairing Assy P/N 3G5310A15532 on rear lower panel and countermark positions of n°6 inserts.

2.6 With reference to Figure 2, remove DF Antenna Fairing Assy and drill n°6 Ø 11.50÷11.60 holes at countermarked positions thru lower panel outer skin and honeycomb core, up to a depth of 13.5 mm.

2.7 In accordance with DM CSRP-A-51-42-00-00A-720A-D and with reference to Figure 2 Section C-C and Section A-A, install n°6 inserts P/N NAS1836-3-16M by means of EA934NA adhesive.

2.8 With reference to Figure 2 Section C-C, prepare for a good electrical bonding the areas of lower panel and of DF Antenna fairing as described in the following procedure:

2.8.1 Lightly abrade the affected areas with 220 grit abrasive paper.

2.8.2 Clean affected areas with Aliphatic Naphtha and apply one coat of MILPRF-23377 Epoxy Primer.

2.8.3 Apply a thin bead of Proseal 890B2 on mating surfaces of DF Antenna fairing assy P/N 3G5310A15531.

2.9 With reference to Figure 1 detail D, perform a Ø 4.0 drainage hole.

2.10 With reference to Figure 1 and Figure 2 section A-A, install DF Antenna fairing assy P/N 3G5310A15532 on rear lower panel by means of n°6 screws P/N MS27039-1-05 and n°6 washers P/N NAS1149C0332B.

2.11 Apply one coat of MIL-PRF-23377 Epoxy Primer on edges of mounting area of DF Antenna Fairing Assy P/N 3G5310A15532.

2.12 Restore on the DF Antenna Fairing the original exterior painting scheme of the helicopter.

2.13 If previously removed re-install the rear lower panel assy P/N 3P5331A02232 on the helicopter fuselage bottom by means of existing hardware.

2.14 With reference to Figure 3 View A Step 1, remove the AW139 logo P/N 3G1130A01251 from instrument panel. Keep logo and fastening hardware for later re-use.

2.15 With reference to Figure 3 View A Step 2, fill n°2 of the existing n°4 holes with EA9309.NA adhesive and mark contour of cut-out.

2.16 With reference to Figure 3 View A Step 2, make the cut-out through the instrument panel plate.

2.17 Touch up bare surfaces with one coat of MIL-PRF-23377 Epoxy Primer.

2.18 With reference to Figure 4 View A Step 3, temporarily locate AW139 logo on the

instrument panel and countermark hole positions.

2.19 With reference to Figure 4 View A and Section B-B, drill n°4 Ø 4.30÷4.50 at countermarked position and bond n°4 anchor nuts P/N A407A08C1P by means of EA9309.NA adhesive.

2.20 With reference to Figure 4 View A Step 3 and Section C-C, mark position for n°2 anchor nuts P/N MS21073L06 for the installation of the OTPI LT panel P/N 3G3450V00151.

2.21 With reference to Figure 4 Section C-C, drill n°2 Ø 3.68÷3.81 holes at marked positions and install n°2 anchor nuts P/N MS21073L06 by means of n°4 rivets P/N MS20426AD3-6.

2.22 With reference to Figure 4 View A Step 4, re-install AW139 logo P/N 3G1130A01251 on the instrument panel by means of existing hardware.

NOTE

The following step 2.23 has to be performed only if Part III of this Service Bulletin is not intended to be performed consequently to Part I, otherwise skip to step 3.

2.23 With reference to Figure 4 View A Step 4, install the cover plate P/N 3G5311A12151 by means of n°2 screws P/N MS35214-27.

3. With reference to Figures 5 thru 11, perform the DF basic electrical provision P/N 4G3450A00711 as described in the following procedures:

NOTE

As alternative different clamps of proper shape and size can be used if the clamps required to be installed in the following procedure (DF basic electrical provision P/N 4G3450A00711) do not fit.

3.1 In accordance with AMP DM 39-A-25-11-01-00A-520A-A or DM 39-A-25-14-01-00A-520A-K or DM 39-A-25-15-01-00A-520A-K, remove pilot seat.

3.2 In accordance with AMP DM 39-A-25-21-01-00A-520A-K or DM 39-A-25-22-01- 00A-520A-K, remove passenger seats.

3.3 In accordance with AMP DM 39-A-06-41-00-00A-010A-A, remove cockpit and cabin floor panels 132AR and 142AR and cabin roof panel 142CR and 140BT.

3.4 Remove interseat console lateral panels and lining on RH door post.

3.5 With reference to Figures 8 and 10, bond n°2 plastic supports P/N A630A31 at Location 1 and Location 2 in the interseat console and passenger cabin

compartment by means of EA9309.NA adhesive.

3.6 With reference to Figure 10, bond n°1 plastic support P/N A630A3BT at Location 3 by means of EA9309.NA adhesive and the Pressure Application Fixture (PAF). If necessary a shorter screw can be used to complete clamps installation.

NOTE

Use edging P/N A236A on edges which are liable to cause damage to cables.

NOTE

Use sleeve P/N A582A where protection against chafing is required and where contact with structure may occur. Woven, metal-aramid fiber sleeve may be installed without disconnecting the harness or removing end fittings.

3.7 With reference to Figures 5 thru 11, lay down the below listed cable assemblies, following the existing routes unless otherwise indicated:

- DF Cable assembly P/N 3G9A01A27201 (A1A272)
- DF Cable assembly P/N 3G9A01B28401 (A1B284)
- DF Cable assembly P/N 3G9A02A30801 (A2A308)
- DF Cable assembly P/N 3G9A02B25901 (A2B259)
- DF Cable assembly P/N 3G9B01B31801 (B1B318)
- DF Cable assembly P/N 3G9B02B25201 (B2B252)

NOTE

For the correct installation of cable assemblies P/N 3G9A01B28401 (A1B284) and P/N 3G9A02B25901 (A2B259), parts from both productive P/N 4G3450A02311A10R and P/N 4G3450A00711A1R are necessary.

NOTE

Where necessary and in accordance with AMP DM 39-A-20-10-08-00A-622A-A crimp on wires the required electrical contacts (Refer to table on Figure 38 and 39) by means of proper crimping tool.

3.8 With reference to Figure 8, Figure 9 View A-A, Figures 26 and 27 wiring diagram, perform electrical connections between PL59P1 DF Controller connector in interseat console and P110 connector.

3.9 With reference to Figures 7, 8 and Figure 26 wiring diagram, perform electrical connections between PL59P1 DF Controller connector in interseat console and TB136-2 and TB138 modules in the cockpit area.

3.10 With reference to Figures 6, 7, 8 and Figure 26 Wiring Diagram, complete electrical connections between PL59P1 DF Controller connector in interseat console and TB132P1 module and TB118P1 connector in the cockpit area. Install splice SP1166 near to PL59P1 connector.

3.11 With reference to Figure 6, Figure 9 View A-A and Figure 26 wiring diagram, complete electrical connections between P110 connector and A8-6P3 connector of the MRC 2.

3.12 With reference to Figure 7, Figure 9 View A-A and Figure 27 wiring diagram, perform electrical connections between TB118P1 connector in the cockpit area and P102 connector in the compartment under cockpit floor.

3.13 With reference to Figure 10 View B-B, install the self-adhesive rubber edging P/N A236A01AB in the floor intercostal hole.

3.14 With reference to Figure 9, Figure 10 View B-B and Figures 26 and 27 wiring diagram, perform electrical connections between J102 and J110 connectors and the E30P1 DF Antenna connector in the compartment between STA 3900 and STA 4800 underneath passenger cabin floor.

3.15 With reference to Figure 9, Figure 10 View B-B and Figure 26 wiring diagram, complete electrical connections between E30P1 DF Antenna connector and TB250 Ground Module in the cockpit area.

3.16 With reference to Figure 9 and Figure 26 wiring diagram, perform electrical connection between J102 connector and PL1P6 connector of auxiliary C/B panel.

3.17 Modify the auxiliary C/B panel on the overhead panel, in accordance with the following procedures:

3.17.1 With reference to AMP DM 39-A-24-91-04-00A-920A-K, remove from the overhead Auxiliary C/B panel the existing Integrally-lit panel.

3.17.2 Install where indicated on the new Integrally-lighted panel P/N 3G2490LXXXXX one Circuit Breaker P/N MS3320-3 for DF system in the Auxiliary C/B panel.

3.17.3 In accordance with AMP DM 39-A-11-00-01-00A-720A-A, install decal ED300CB177 adjacent to the Circuit Breaker previously installed on the new integrally-lit panel P/N 3G2490LXXXX.

NOTE

Contact Product Support Engineering (engineering.support.lhd@leonardo.com) at least 3 months in advance of embodiment date of this SB in order to collect the exact W/D applicable to helicopter configuration.

3.17.4 With reference to Figure 26 Wiring diagram, perform electrical connection between CB177 and pin Y of PL1P6 Auxiliary C/B panel connector, using A556AT Size 22 cable. CB177 has to be connected on 28V DC MAIN BUS2 W22D.

3.17.5 With reference to AMP DM 39-A-24-91-04-00A-920A-K install the new Integrally-lit Auxiliary C/B panel P/N 3G2490L0XXXXX.

NOTE

For helicopter not equipped with Primus Epic S/W Phase 4.8 comply with step 3.18. Then continue with step 3.20 and subsequent.

3.18 With reference to Figures 6, 7 and Figure 27 wiring diagram, perform electrical connections between A2-1P3 connector in the nose area and TB122P1 connector located behind instrument panel.

NOTE

For helicopter already equipped with Primus Epic S/W Phase 5, or higher, perform following to step 3.19.

3.19 With reference to Figure 15 and Figure 32 wiring diagram, install wires R2860A22-S(WH) and R2860A22-S(BL), belonging to Phase 5 variant Cable Assy P/N 3G9A02B32101 (A2B321), and perform electrical connections between pin 50 and pin 51 of A2-1P2 connector in the nose area and pin 8 and pin 15 of TB122P1 connector.

3.20 With reference to Figure 7, Figure 9 View A-A and Figure 27 wiring diagram, perform electrical connections between TB122P1 connector and P110 connector.

3.21 With reference to Figures 7, 8 and Figure 28 wiring diagram, perform the electrical connection between TB117P1 connector in the LH side cockpit area and J111 connector in the interseat console. Install diode CR119 in the line.

3.22 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 9, install on the existing hardware in the RH cockpit floor the following items by means of n°2 screws P/N M24693-S50:

- relay socket P/N M12883/53-001 (as alternative relay socket

P/N M12883/52-001 can be installed on existing hardware);

- relay P/N M210E4N003;
- decal P/N ED300K81, adjacent to relay.

3.23 With reference to Figures 7, 9 and Figure 28 wiring diagram, perform the electrical connections between TB118P1, TB122P1 connectors in the RH side cockpit and K181P1 connector of relay K81. Install diode CR118 in the line and connect wire R844C22-G from P111 connector to wire R844B22-G by means of splice SP1163.

3.24 With reference to Figure 8, 9 and Figure 28 wiring diagram, perform electrical connections between PL59P1 connector of DF Controller, K81P1 connector of K81 Relay, P102 connector and on line junction TB1023.

NOTE

Following steps 3.25 and 3.26 are applicable only for helicopter equipped with HF system kit P/N 3G2310F00211. Skip to step 3.27 for helicopter not equipped with HF system kit P/N 3G2310F00211.

3.25 With reference to Figure 11 and Figure 29 Wiring Diagram, remove or stow wires R623B22-S(WH), R623B22-S(BL) and R623A22N-S, connected to A7-6P3 connector of MRC1, P125 connector and TB149 ground module in the nose area. In case of stowage use stowage caps P/N 32807.

3.26 With reference to Figure 11 and Figure 29 wiring diagram, install and connect wire R880A22-S(WH) between pin 8 of P125 connector and pin 27 of TB109P1 connector and wire R881A22-S between pin 15 of A7-6P3 connector and pin 26 of TB109P1 connector.

3.27 With reference to Figures 8, 11 and Figure 29 Wiring Diagram, perform the electrical connections between TB109P1 connector and TB105P1 connector, and TB1023 junction and TB 109P1 connector.

3.28 With reference to Figure 11 and Figure 29 wiring diagram, complete electrical connections in nose area between wire R880B22N from TB149 Ground Module and wire R880A22-S(BL) from P125 connector, by means of splice SP1119.

3.29 With reference to Figure 6 Figure 30 wiring diagram, perform the electrical connections between TB110P1 connector, TB104P1 connector and TB109P1 connector and A8-6P3 connector of MRC2 and TB104P1 connector.

4. With reference to Figures 12 thru 14, install the DF 935-11 electrical provision P/N 4G3450A02311 as described in the following procedures:

4.1 With reference to Figure 12, lay down the DF OTPI LT Panel Cable assembly P/N 3G9A01B29801 (A1B298), following the existing routes.

NOTE

Cable assembly P/N 3G9A01B29801 is provided with PL72P1 connector already connected.

4.2 With reference to Figure 13 and Figure 31 wiring diagram, perform the electrical connections between PL72P1 DF OPTI panel and PL13P2 connector of PL13 Lamp Test panel and at PL2P2 connector of PL2 Lights panel in the interseat console.

4.3 With reference to Figures 13 and 14 and Figure 31 wiring diagram, perform the electrical connections at TB138 Ground module, at TB136-1 and TB136-4 Modules and at TB118P1 connector behind interseat console.

4.4 With reference to Figure 14 and Figure 31 wiring diagram, perform the electrical connection at TB132P1 connector behind instrument panel.

5. Perform a pin-to-pin continuity check of all electrical connections performed.
6. Re-install interseat console lateral panels and lining on RH door post.
7. In accordance with AMP DM 39-A-06-41-00-00A-010A-A, re-install cockpit and cabin floor panels 132AR and 142AR and cabin roof panel 142CR and 140BT.
8. In accordance with AMP DM 39-A-25-21-01-00A-720A-K or DM 39-A-25-22-01-00A-720A-K, re-install passenger seats in the RH side of passenger cabin.
9. In accordance with AMP DM 39-A-25-11-01-00A-720A-A or DM 39-A-25-14-01-00A-720A-K or DM 39-A-25-15-01-00A-720A-K, re-install pilot seat.
10. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
11. Return the helicopter to flight configuration and record for compliance with Part I of this Service Bulletin on the helicopter logbook.
12. 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. With reference to Figures 1 thru 4, perform the DF Antenna structural provision P/N 3G5310A14811 and the instrument panel structural provision P/N 3G5310A26611 as described in the following procedures:
   - 2.1 If necessary remove rear lower panel assy P/N 3P5331A02231 or P/N 3P5331A02232 from the helicopter fuselage bottom. Keep the fastening hardware for further reuse.
   - 2.2 With reference to Figures 1 and 2 Section A-A, mark on rear lower panel the position for a circular cut-out.
   - 2.3 With reference to Figure 2, perform a Ø 70.0 hole in the lower panel.
   - 2.4 With reference to Figure 2 Detail B, fill honeycomb core around hole edges with EA934.NA adhesive. While the adhesive is still wet, bond hole lower protection P/N 3G5310A15851 and hole upper protection P/N 3G5310A15751 with the same adhesive to obtain a final Ø 65.0 hole.
   - 2.5 With reference to Figure 1, temporary position DF Antenna Fairing Assy P/N 3G5310A15532 on rear lower panel and countermark positions of n°6 inserts.
   - 2.6 With reference to Figure 2, remove DF Antenna Fairing Assy and drill n°6 Ø 11.50÷11.60 holes at countermarked positions thru lower panel outer skin and honeycomb core, up to a depth of 13.5 mm.
   - 2.7 In accordance with DM CSRP-A-51-42-00-00A-720A-D and with reference to Figure 2 Section C-C and Section A-A, install n°6 inserts P/N NAS1836-3-16M by means of EA934NA adhesive.
   - 2.8 With reference to Figure 2 Section C-C, prepare for a good electrical bonding the areas of lower panel and of DF Antenna fairing as described in the following procedure:
     - 2.8.1 Lightly abrade the affected areas with 220 grit abrasive paper.
     - 2.8.2 Clean affected areas with Aliphatic Naphtha and apply one coat of MILPRF-23377 Epoxy Primer.
     - 2.8.3 Apply a thin bead of Proseal 890B2 on mating surfaces of DF Antenna fairing assy P/N 3G5310A15532.
   - 2.9 With reference to Figure 1 detail D, perform a Ø 4.0 drainage hole.
   - 2.10 With reference to Figure 1 and Figure 2 section A-A, install DF Antenna fairing assy P/N 3G5310A15531 on rear lower panel by means of n°6 screws P/N MS27039-1-05 and n°6 washers P/N NAS1149C0332B.

2.11 Apply one coat of MIL-PRF-23377 Epoxy Primer on edges of mounting area of DF Antenna Fairing Assy P/N 3G5310A15532.

2.12 Restore on the DF Antenna Fairing the original exterior painting scheme of the helicopter.

2.13 If previously removed re-install the rear lower panel assy P/N 3P5331A02232 on the helicopter fuselage bottom by means of existing hardware.

2.14 With reference to Figure 3 View A Step 1, remove the AW139 logo P/N 3G1130A01251 from instrument panel. Keep logo and fastening hardware for later re-use.

2.15 With reference to Figure 3 View A Step 2, fill n°2 of the existing n°4 holes with EA9309.NA adhesive and mark contour of cut-out.

2.16 With reference to Figure 3 View A Step 2, make the cut-out through the instrument panel plate.

2.17 Touch up bare surfaces with one coat of MIL-PRF-23377 Epoxy Primer.

2.18 With reference to Figure 4 View A Step 3, temporarily locate AW139 logo on the instrument panel and countermark hole positions.

2.19 With reference to Figure 4 View A and Section B-B, drill n°4 Ø 4.30÷4.50 at countermarked position and bond n°4 anchor nuts P/N A407A08C1P by means of EA9309.NA adhesive.

2.20 With reference to Figure 4 View A Step 3 and Section C-C, mark position for n°2 anchor nuts P/N MS21073L06 for the installation of the OTPI LT panel P/N 3G3450V00151.

2.21 With reference to Figure 4 Section C-C, drill n°2 Ø 3.68÷3.81 holes at marked positions and install n°2 anchor nuts P/N MS21073L06 by means of n°4 rivets P/N MS20426AD3-6.

2.22 With reference to Figure 4 View A Step 4, re-install AW139 logo P/N 3G1130A01251 on the instrument panel by means of existing hardware.

NOTE

The following step 2.23 has to be performed only if Part III of this Service Bulletin is not intended to be performed consequently to Part I, otherwise skip to step 3.

2.23 With reference to Figure 4 View A Step 4, install the cover plate P/N 3G5311A12151 by means of n°2 screws P/N MS35214-27.

3. With reference to Figures 16 thru 22, perform the DF basic electrical provision P/N 4G3450A00712 as described in the following procedures:

NOTE

As alternative different clamps of proper shape and size can be used if the clamps required to be installed in the following procedure (DF basic electrical provision P/N 4G3450A00711) do not fit.

3.1 In accordance with AMP DM 39-A-25-11-01-00A-520A-A or DM 39-A-25-14-01-00A-520A-K or DM 39-A-25-15-01-00A-520A-K, remove pilot seat.

3.2 In accordance with AMP DM 39-A-25-21-01-00A-520A-K or DM 39-A-25-22-01- 00A-520A-K, remove passenger seats.

3.3 In accordance with AMP DM 39-A-06-41-00-00A-010A-A, remove cockpit and cabin floor panels 132AR and 142AR and cabin roof panel 142CR and 140BT.

3.4 Remove interseat console lateral panels and lining on RH door post.

3.5 With reference to Figures 19 and 22, bond n°2 plastic supports P/N AW001CL000A-X3 at Location 1 and Location 3 in the interseat console and passenger cabin compartment by means of EA9309.NA adhesive.

3.6 With reference to Figure 21, bond n°1 plastic support P/N AW001TL3A06 at Location 1 by means of EA9309.NA adhesive and the Pressure Application Fixture (PAF). If necessary a shorter screw can be used to complete clamps installation.

3.7 With reference to Figure 22, bond n°1 plastic support P/N AW001TL3A06T at Location 2 by means of EA9309.NA adhesive and the Pressure Application Fixture (PAF). If necessary a shorter screw can be used to complete clamps installation.

NOTE

Use edging P/N A236A on edges which are liable to cause damage to cables.

NOTE

Use sleeve P/N A582A where protection against chafing is required and where contact with structure may occur. Woven, metal-aramid fiber sleeve may be installed without disconnecting the harness or removing end fittings.

3.8 With reference to Figures 16 thru 22, lay down the below listed cable assemblies, following the existing routes unless otherwise indicated:

- DF Cable assembly P/N 3G9A01A27202 (A1A272)
- DF Cable assembly P/N 3G9A01B28402 (A1B284)
- DF Cable assembly P/N 3G9A02A30802 (A2A308)

- DF Cable assembly P/N 3G9A02B25902 (A2B259)
- DF Cable assembly P/N 3G9B01B31802 (B1B318)
- DF Cable assembly P/N 3G9B02B25202 (B2B252)

NOTE

Where necessary and in accordance with AMP DM 39-A-20-10-08-00A-622A-A crimp on wires the required electrical contacts (Refer to table on Figure 40 and 41) by means of proper crimping tool.

3.9 With reference to Figure 19, Figure 20, Figures 33 and 34 wiring diagram, perform electrical connections between PL59P1 DF Controller connector in interseat console and P110 connector.

3.10 With reference to Figures 18, 19 and Figure 33 wiring diagram, perform electrical connections between PL59P1 DF Controller connector in interseat console and TB136-2 and TB138 modules in the cockpit area.

3.11 With reference to Figures 17, 18, 19 and Figure 33 Wiring Diagram, complete electrical connections between PL59P1 DF Controller connector in interseat console and TB132P1 module and TB118P1 connector in the cockpit area. Install splice SP1166 near to PL59P1 connector.

3.12 With reference to Figures 17, 20 and Figure 33 wiring diagram, complete electrical connections between P110 connector and A8-6P3 connector of the MRC 2.

3.13 With reference to Figure 18, Figure 20 and Figure 34 wiring diagram, perform electrical connections between TB118P1 connector in the cockpit area and P102 connector in the compartment under cockpit floor.

3.14 With reference to Figures 20, 22 and Figures 33 and 34 wiring diagram, perform electrical connections between J102 and J110 connectors and the E30P1 DF Antenna connector in the compartment between STA 3900 and STA 4800 underneath passenger cabin floor.

3.15 With reference to Figures 20, 22 and Figure 33 wiring diagram, complete electrical connections between E30P1 DF Antenna connector and TB250 Ground Module in the cockpit area.

3.16 With reference to Figure 20 and Figure 33 wiring diagram, perform electrical connection between J102 connector and PL1P6 connector of auxiliary C/B panel.

3.17 Modify the auxiliary C/B panel on the overhead panel, in accordance with the following procedures:

3.17.1 With reference to AMP DM 39-A-24-91-04-00A-920A-K, remove from the overhead Auxiliary C/B panel the existing Integrally-lit panel.

3.17.2 Install where indicated on the new Integrally-lighted panel P/N 3G2490LXXXXX one Circuit Breaker P/N MS3320-5 for DF system in the Auxiliary C/B panel.

3.17.3 In accordance with AMP DM 39-A-11-00-01-00A-720A-A, install decal ED300CB177 adjacent to the Circuit Breaker previously installed on the new integrally-lit panel P/N 3G2490LXXXX.

NOTE

Contact Product Support Engineering (engineering.support.lhd@leonardo.com) at least 3 months in advance of embodiment date of this SB in order to collect the exact W/D applicable to helicopter configuration.

3.17.4 With reference to Figure 26 Wiring diagram, perform electrical connection between CB177 and pin Y of PL1P6 Auxiliary C/B panel connector, using A556AT Size 20 cable. CB177 has to be connected on 28V DC MAIN BUS2 W22A.

3.17.5 With reference to AMP DM 39-A-24-91-04-00A-920A-K install the new Integrally-lit Auxiliary C/B panel P/N 3G2490L0XXXXX.

NOTE

For helicopter not equipped with Primus Epic S/W Phase 4.8 comply with step 3.18. Then continue with step 3.20 and subsequent.

3.18 With reference to Figures 17, 18 and Figure 34 wiring diagram, perform electrical connections between A2-1P3 connector in the nose area and TB122P1 connector located behind instrument panel.

NOTE

For helicopter already equipped with Primus Epic S/W Phase 5, or higher, perform following to step 3.19.

3.19 With reference to Figure 15 and Figure 32 wiring diagram, install wires R2860A22-S(WH) and R2860A22-S(BL), belonging to Phase 5 variant Cable Assy P/N 3G9A02B32101 (A2B321), and perform electrical connections between pin 50 and pin 51 of A2-1P2 connector in the nose area and pin 8 and pin 15 of TB122P1 connector.

3.20 With reference to Figures 18, 19 and Figure 34 wiring diagram, perform electrical connections between TB122P1 connector and P110 connector.

3.21 With reference to Figures 18, 19 and Figure 35 wiring diagram, perform the

electrical connection between TB117P1 connector in the LH side cockpit area and J111 connector in the interseat console. Install diode CR119 in the line.

3.22 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 9, install on the existing hardware in the RH cockpit floor the following items by means of n°2 screws P/N M24693-S50:

- relay socket P/N M12883/53-001 (as alternative relay socket P/N M12883/52-001 can be installed on existing hardware);
- relay P/N M210E4N003;
- decal P/N ED300K81, adjacent to relay.

3.23 With reference to Figures 18, 19, 20 and Figure 35 wiring diagram, perform the electrical connections between TB118P1, TB122P1 connectors in the RH side cockpit and K81P1 connector of relay K81. Install diode CR118 in the line and connect wire R844C22-G from P111 connector to wire R844B22-G by means of splice SP1163.

3.24 With reference to Figures 18, 19, 20 and Figure 35 wiring diagram, perform electrical connections between PL59P1 connector of DF Controller, K81P1 connector of K81 Relay, P102 connector and on line junction TB1023.

NOTE

Following steps 3.25 and 3.26 are applicable only for helicopter equipped with HF system kit P/N 3G2310F00211. Skip to step 3.27 for helicopter not equipped with HF system kit P/N 3G2310F00211.

3.25 With reference to Figure 17 and Figure 36 Wiring Diagram, remove or stow wires R623B22-S(WH), R623B22-S(BL) and R623A22N-S, connected to A7-6P3 connector of MRC1, P125 connector and TB149 ground module in the nose area. In case of stowage use stowage caps P/N 32807.

3.26 With reference to Figure 17 and Figure 36 wiring diagram, install and connect wire R880A22-S(WH) between pin 8 of P125 connector and pin 27 of TB109P1 connector and wire R881A22-S between pin 15 of A7-6P3 connector and pin 26 of TB109P1 connector.

3.27 With reference to Figures 17, 18, 19 and Figure 36 Wiring Diagram, perform the electrical connections between TB109P1 connector and TB105P1 connector, and TB1023 junction and TB109P1 connector.

3.28 With reference to Figure 17, 20 and Figure 36 wiring diagram, complete electrical connections in nose area between wire R880B22N from TB149 Ground Module and wire R880A22-S(BL) from P125 connector, by means of splice SP1119.

3.29 With reference to Figure 17 and Figure 37 wiring diagram, perform the electrical connections between TB110P1 connector, TB104P1 connector and TB109P1 connector and A8-6P3 connector of MRC2 and TB104P1 connector.

4. With reference to Figures 12 thru 14, install the DF 935-11 electrical provision P/N 4G3450A02311 as described in the following procedures:

4.1 With reference to Figure 12, lay down the DF OTPI LT Panel Cable assembly P/N 3G9A01B29801 (A1B298), following the existing routes.

NOTE

Cable assembly P/N 3G9A01B29801 is provided with PL72P1 connector already connected.

4.2 With reference to Figure 13 and Figure 31 wiring diagram, perform the electrical connections between PL72P1 DF OPTI panel and PL13P2 connector of PL13 Lamp Test panel and at PL2P2 connector of PL2 Lights panel in the interseat console.

4.3 With reference to Figures 13 and 14 and Figure 31 wiring diagram, perform the electrical connections at TB138 Ground module, at TB136-1 and TB136-4 Modules and at TB118P1 connector behind interseat console.

4.4 With reference to Figure 14 and Figure 31 wiring diagram, perform the electrical connection at TB132P1 connector behind instrument panel.

5. Perform a pin-to-pin continuity check of all electrical connections performed.
6. Re-install interseat console lateral panels and lining on RH door post.
7. With reference to AMP DM 39-A-06-40-00-00A-028A-A, re-install cockpit and cabin floor panels 132AR and 142AR and cabin roof panel 142CR and 140BT.
8. With reference to AMP DM 39-A-25-21-01-00A-720A-K or DM 39-A-25-22-01-00A-720A-K, re-install passenger seats in the RH side of passenger cabin.
9. With reference to AMP DM 39-A-25-11-01-00A-720A-A or DM 39-A-25-14-01-00A-720A-K or DM 39-A-25-15-01-00A-720A-K, re-install pilot seat.
10. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
11. Return the helicopter to flight configuration and record for compliance with Part II of this Service Bulletin on the helicopter logbook.
12. 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. With reference to Figures 23 thru 25 perform the installation of DF 935-11 system P/N 4G3450A02211, as described in the following procedures:
   - 2.1 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 24, install decal P/N ED300PL72 on DF OTPI LT panel P/N 3G3450V00151.
   - 2.2 With reference to Figure 24, connect the OTPI LT panel P/N 3G3450V00151 to connector PL72P1 and install the panel on the instrument panel with two screws P/N MS35214-27.
   - 2.3 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 25, install decal P/N ED300PL59 on the DF Controller panel P/N 715-40-10010.
   - 2.4 With reference to Figure 25, remove plate P/N 999-0500-85-219 from the interseat console, connect the DF Controller panel P/N 715-40-10010 to PL59P1 connector and install panel on the interseat console.
   - 2.5 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 25, install decal P/N ED300E30 on the DF antenna P/N 935-11.
   - 2.6 With reference to Figure 25, connect DF antenna P/N 935-11 to E30P1 connector, then install the DF antenna on the Antenna fairing assy P/N 3G5310A15532 by means of eight screws P/N MS35207-267.
   - 2.7 With reference to Figure 24 View A-A, remove lock ring P/N Y30700501 from DF Circuit Breaker in the Auxiliary C/B panel.
3. With reference to AMP DM 39-A-46-20-00-00A-750A-A (software loading procedure), enable DF system by means of APM setting tool as described in the following steps:
   - 3.1 If Audio Panel Block 2 (P/N 7511900-9860X; -98801) is installed on the helicopter enable NAV A2 option to allow DF system to work with ICS system.
   - 3.2 If Audio Panel Block 3 (P/N 7511900-99001; 99201) is installed on the helicopter enable NAV A2 option to allow DF system to work with ICS system. If Passenger Briefing system is installed on the helicopter, enable NAV A1 option too.
4. With reference to AMP DM 39-D-34-55-00-00A-340A-K, perform the functional check Test of DF 935-11.
5. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
6. Return the helicopter to flight configuration and record for compliance with Part III of this

Service Bulletin on the helicopter logbook.

7. 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”.

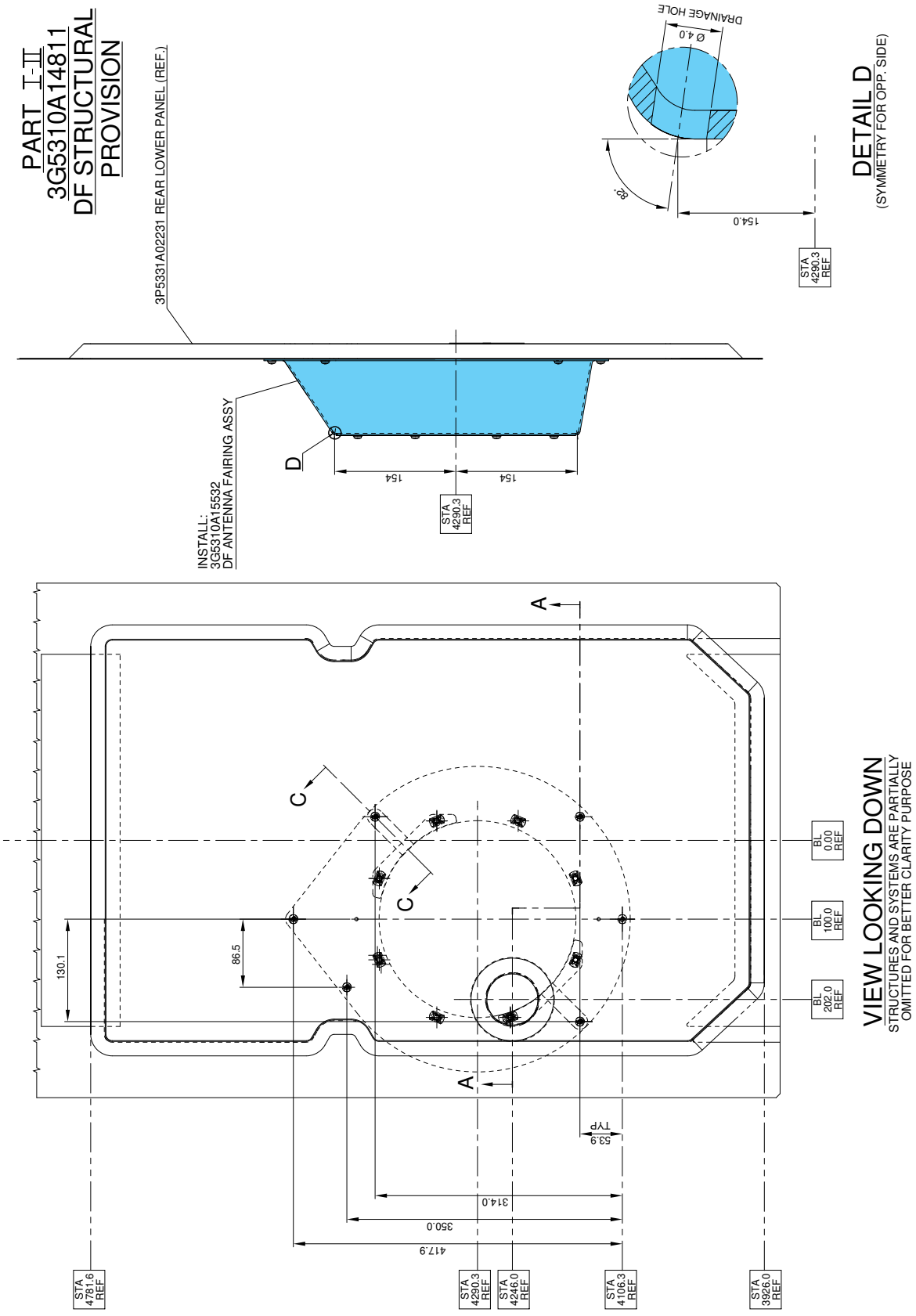

PART I-II
3G5310A14811
DF STRUCTURAL
PROVISION
3P5331A02231 REAR LOWER PANEL (REF.)
INSTALL:
3G5310A15532
DF ANTENNA FAIRING ASSY
D
154
154
STA
4290.3
REF
DRAINAGE HOLE
Ø 4.0
45°
154.0
STA
4290.3
REF
DETAIL D
(SYMMETRY FOR OPP. SIDE)
A
C
C
A
130.1
86.5
BL
0.0
REF
BL
100.0
REF
BL
202.0
REF
53.9
TYP
314.0
350.0
417.9
STA
4781.6
REF
STA
4290.3
REF
STA
4246.0
REF
STA
4106.3
REF
STA
3926.0
REF
VIEW LOOKING DOWN
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 1

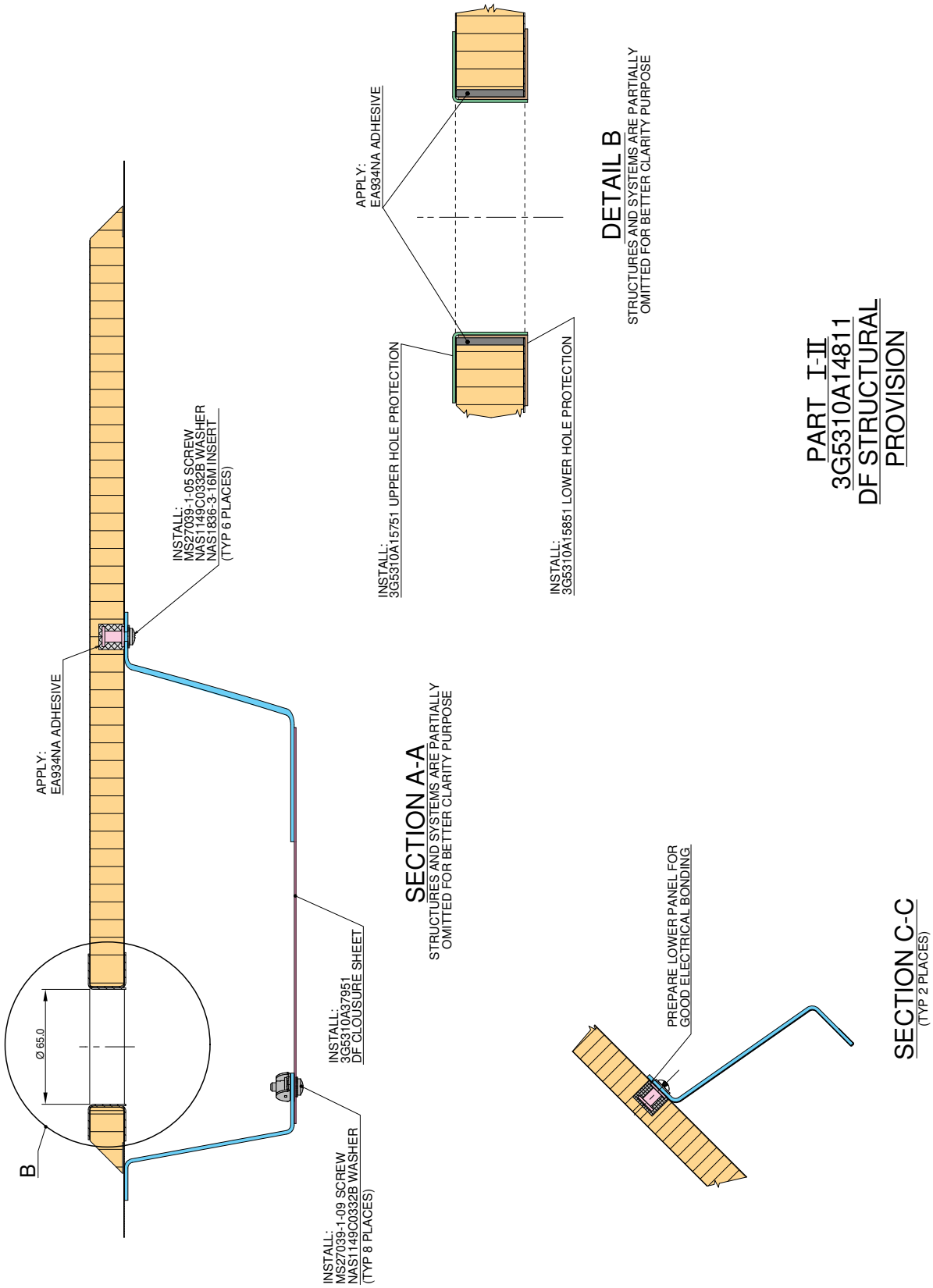
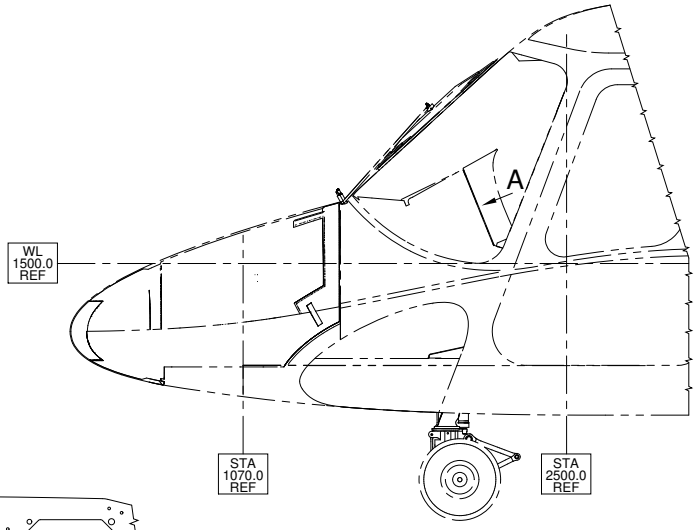
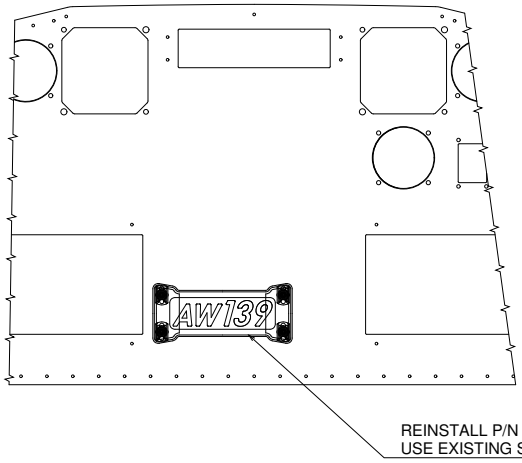

APPLY:
EA934NA ADHESIVE
INSTALL:
MS27039-1-05 SCREW
NAS1149C0332B WASHER
NAS1836-3-16M INSERT
(TYP 6 PLACES)
APPLY:
EA934NA ADHESIVE
INSTALL:
3G5310A15751 UPPER HOLE PROTECTION
INSTALL:
3G5310A15851 LOWER HOLE PROTECTION
DETAIL B
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
PART I-II
3G5310A14811
DF STRUCTURAL
PROVISION
SECTION A-A
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
Ø 65.0
B
INSTALL:
3G5310A37951
DF CLOUSURE SHEET
INSTALL:
MS27039-1-09 SCREW
NAS1149C0332B WASHER
(TYP 8 PLACES)
PREPARE LOWER PANEL FOR
GOOD ELECTRICAL BONDING
SECTION C-C
(TYP 2 PLACES)

Figure 2

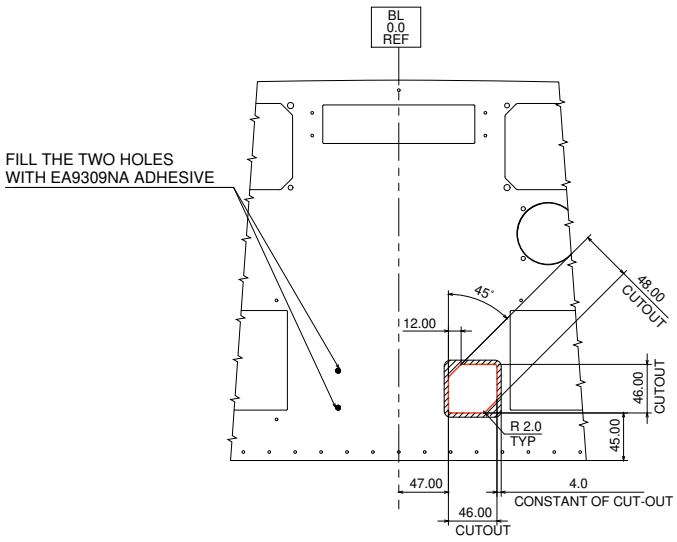
PART I-II
3G5310A26611
DF935-11 STRUCTURAL
PROVISION



VIEW LOOKING
INBOARD LEFT SIDE



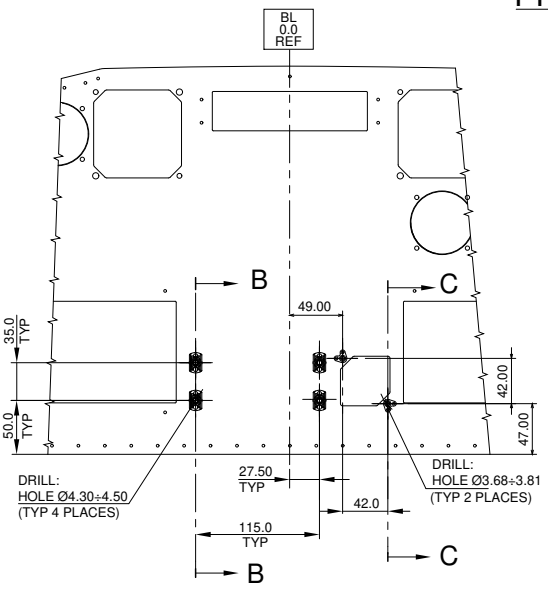
VIEW A
LAST OPERATION
STEP 1



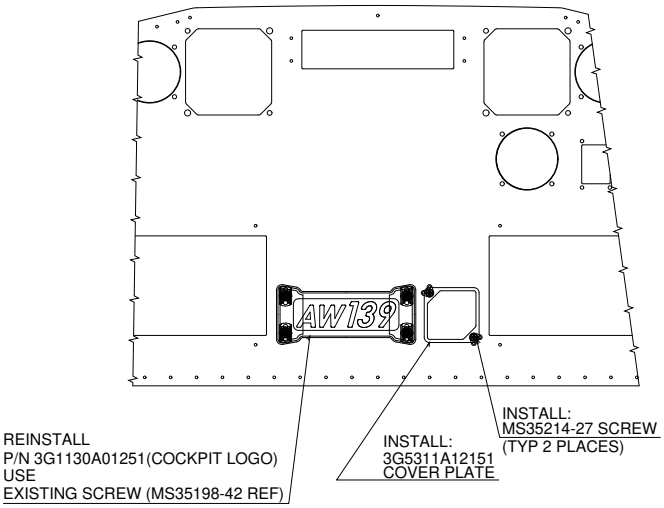
VIEW A
ONLY CUTOUT SHOWN FOR CLARITY
STEP 2

Figure 3

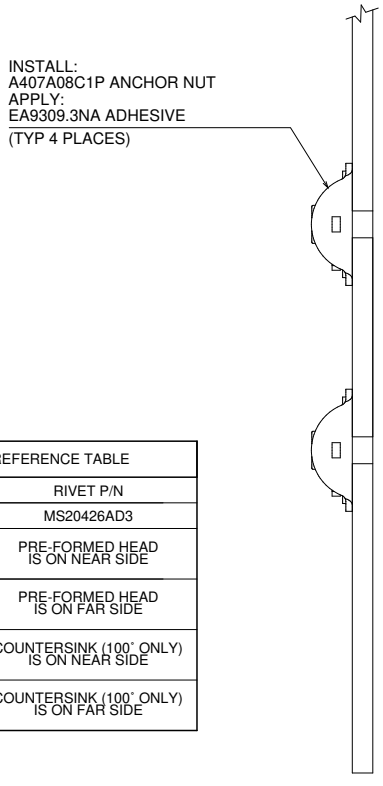
PART I-II
3G5310A26611
DF935-11 STRUCTURAL PROVISION



VIEW A
ONLY ANCHOR NUT SHOWN FOR CLARITY
STEP 3

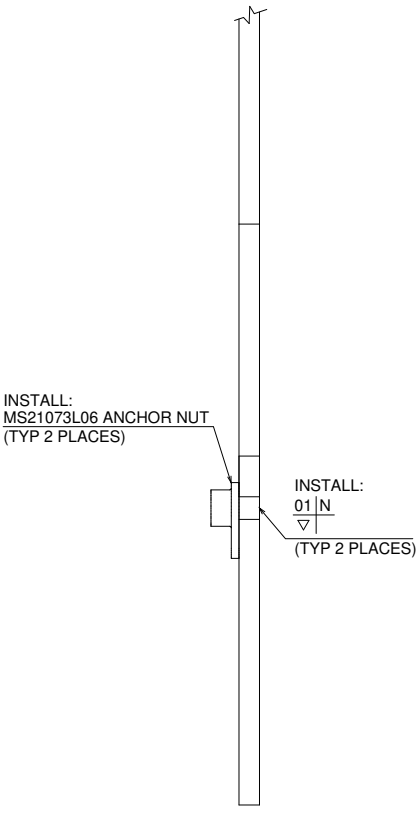


VIEW A
STEP 4



RIVET REFERENCE TABLE	
REF. N°	RIVET P/N
01	MS20426AD3
N	PRE-FORMED HEAD IS ON NEAR SIDE
F	PRE-FORMED HEAD IS ON FAR SIDE
▽	COUNTERSINK (100° ONLY) IS ON NEAR SIDE
△	COUNTERSINK (100° ONLY) IS ON FAR SIDE

SECTION B-B
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



SECTION C-C
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 4

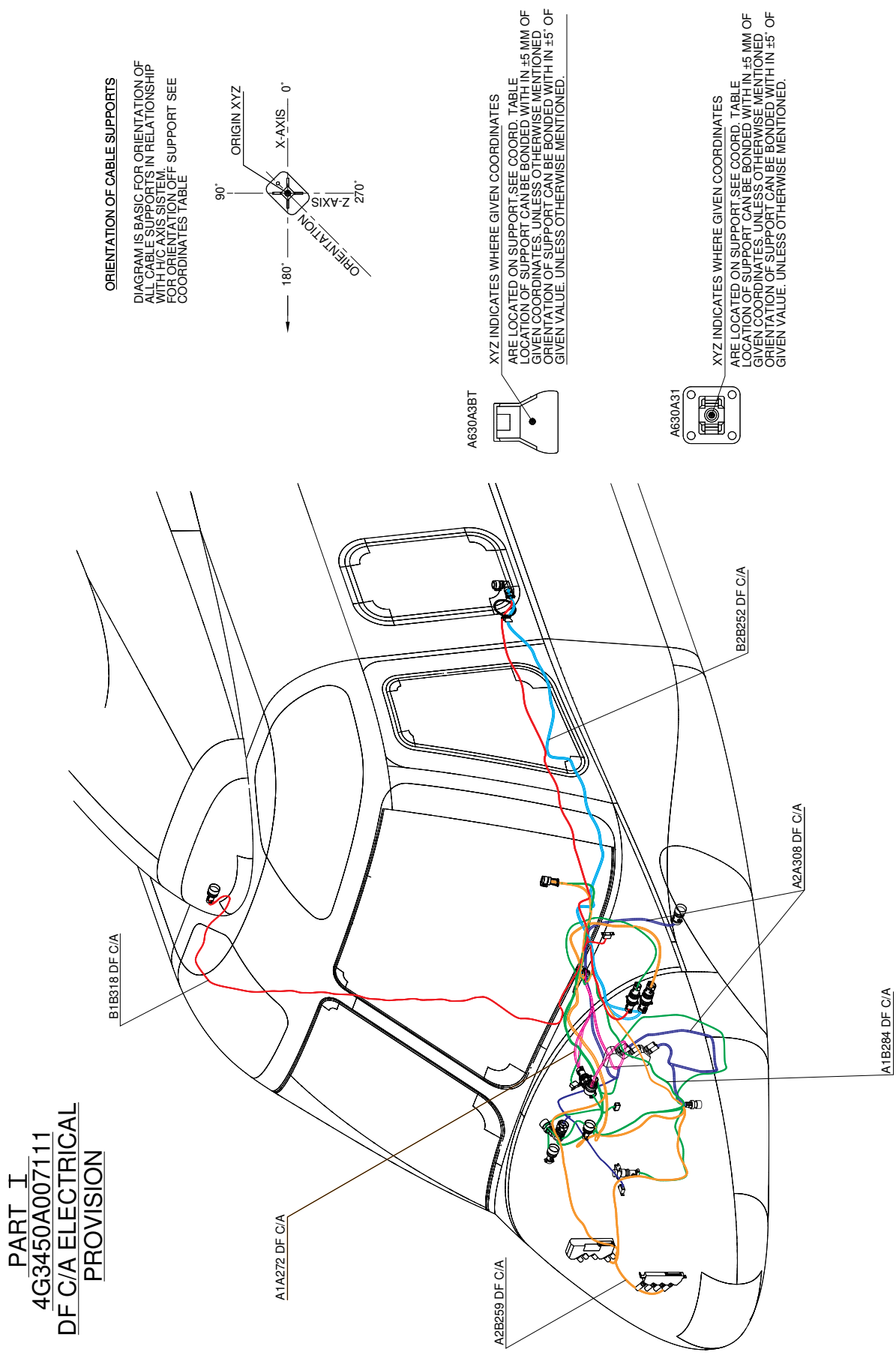
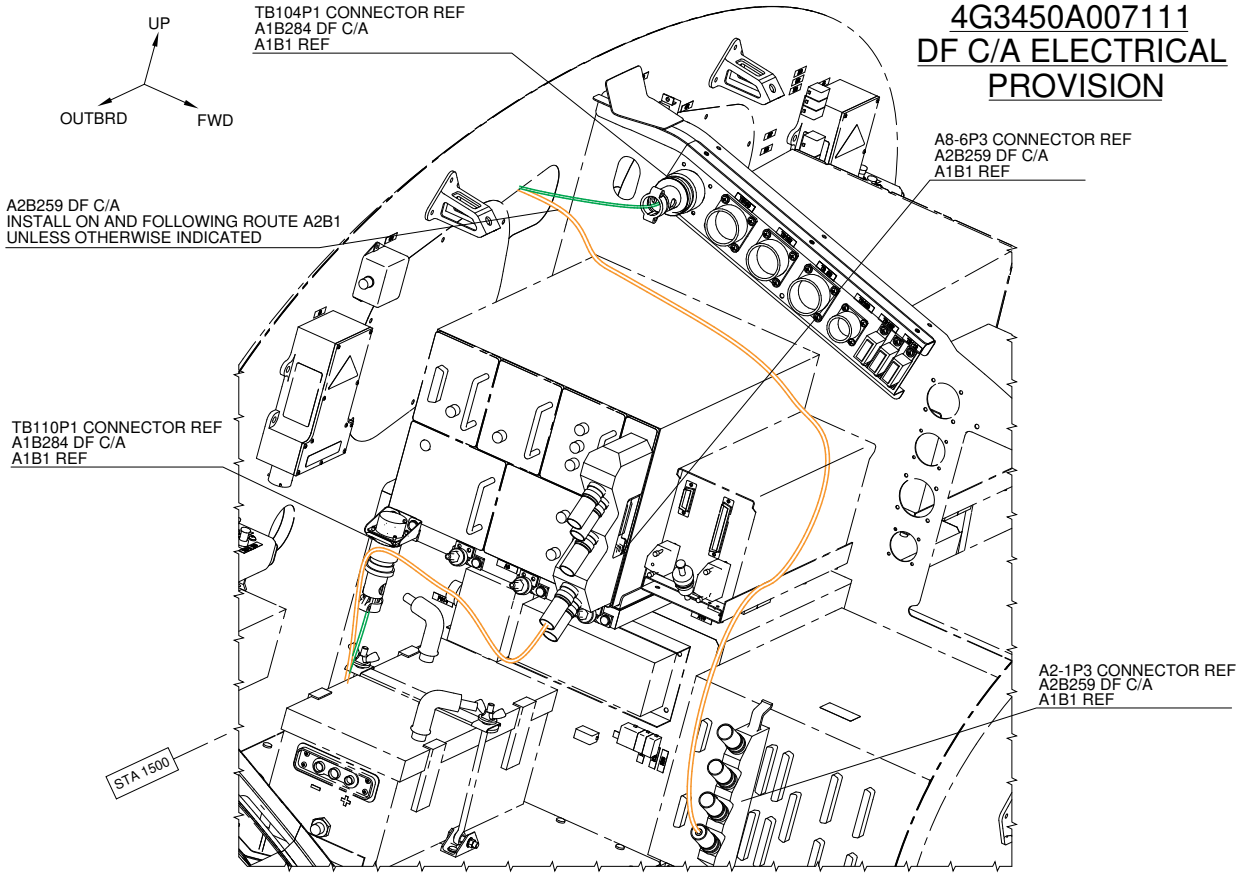
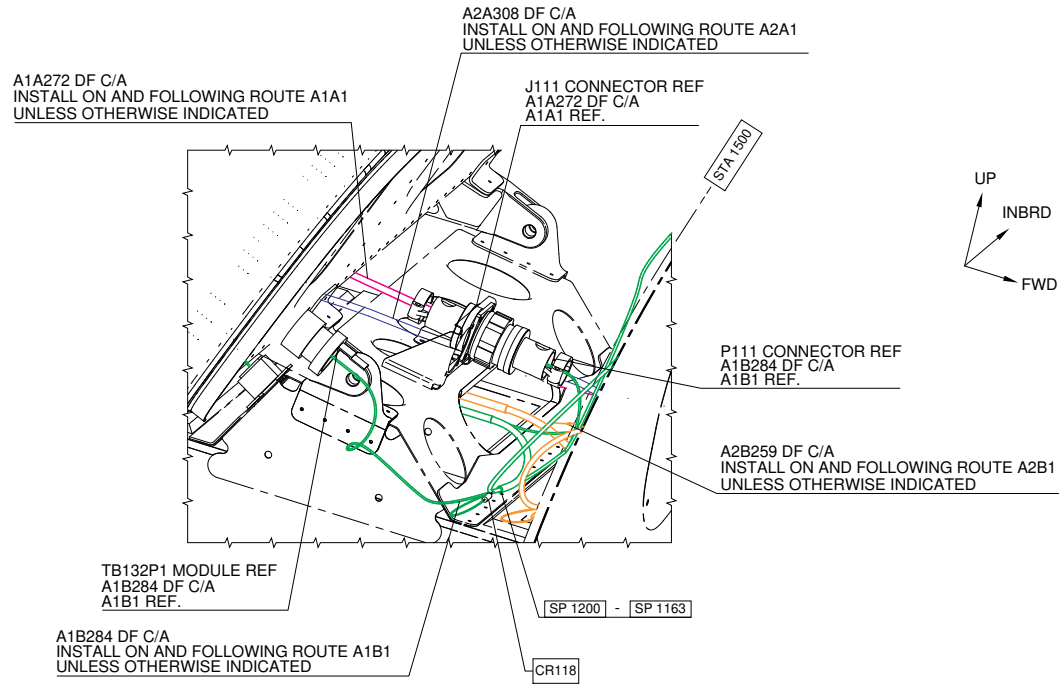

PART I
4G3450A007111
DF C/A ELECTRICAL
PROVISION
ORIENTATION OF CABLE SUPPORTS
DIAGRAM IS BASIC FOR ORIENTATION OF ALL CABLE SUPPORTS IN RELATIONSHIP WITH H/C AXIS SISTEM.
FOR ORIENTATION OFF SUPPORT SEE COORDINATES TABLE
ORIGIN XYZ
X-AXIS 0°
Z-AXIS 270°
ORIENTATION
90°
180°
A630A3BT
XYZ INDICATES WHERE GIVEN COORDINATES ARE LOCATED ON SUPPORT.SEE COORD. TABLE
LOCATION OF SUPPORT CAN BE BONDED WITH IN ±5 MM OF GIVEN COORDINATES. UNLESS OTHERWISE MENTIONED
ORIENTATION OF SUPPORT CAN BE BONDED WITH IN ±5° OF GIVEN VALUE. UNLESS OTHERWISE MENTIONED.
A630A31
XYZ INDICATES WHERE GIVEN COORDINATES ARE LOCATED ON SUPPORT.SEE COORD. TABLE
LOCATION OF SUPPORT CAN BE BONDED WITH IN ±5 MM OF GIVEN COORDINATES. UNLESS OTHERWISE MENTIONED
ORIENTATION OF SUPPORT CAN BE BONDED WITH IN ±5° OF GIVEN VALUE. UNLESS OTHERWISE MENTIONED.
B1B318 DF C/A
B2B252 DF C/A
A2A308 DF C/A
A1B284 DF C/A
A1A272 DF C/A
A2B259 DF C/A

Figure 5



VIEW LOOKING NOSE RH SIDE

STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

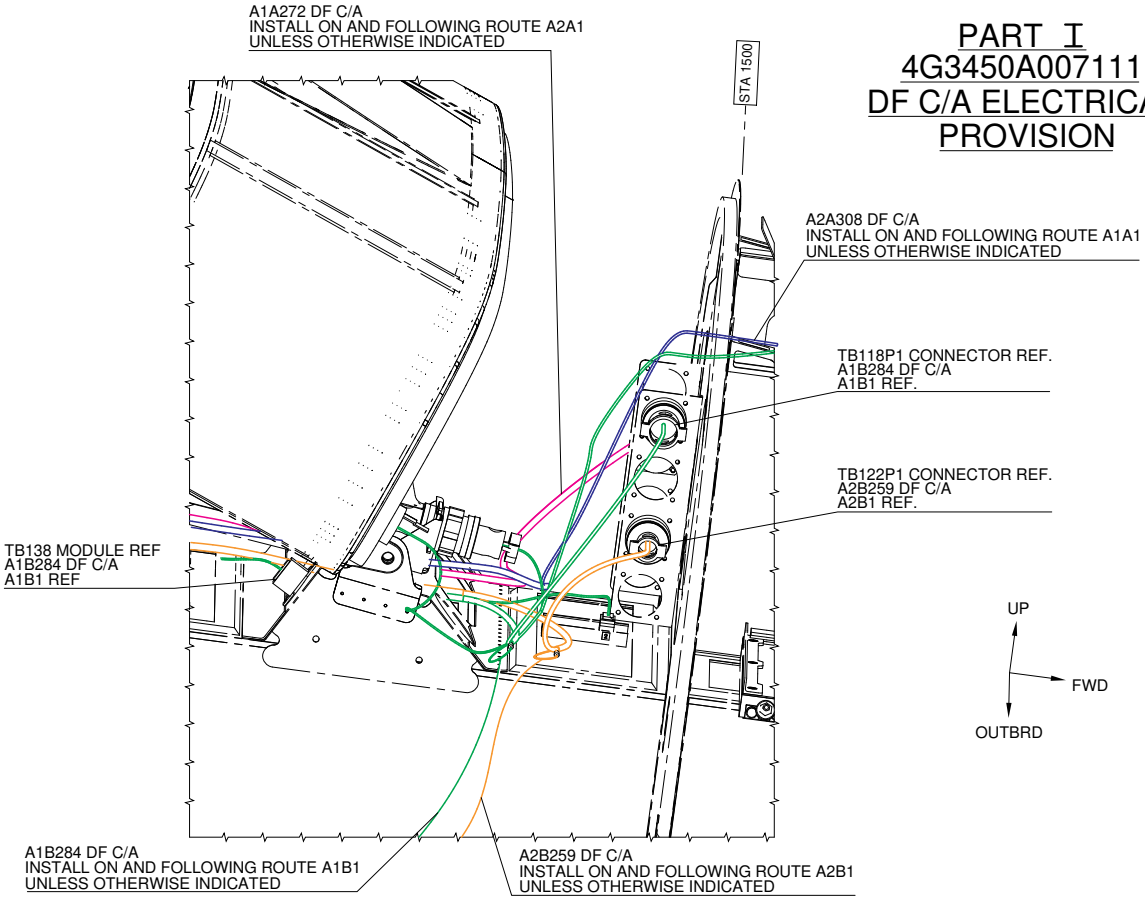


VIEW LOOKING COCKPIT AREA RH SIDE

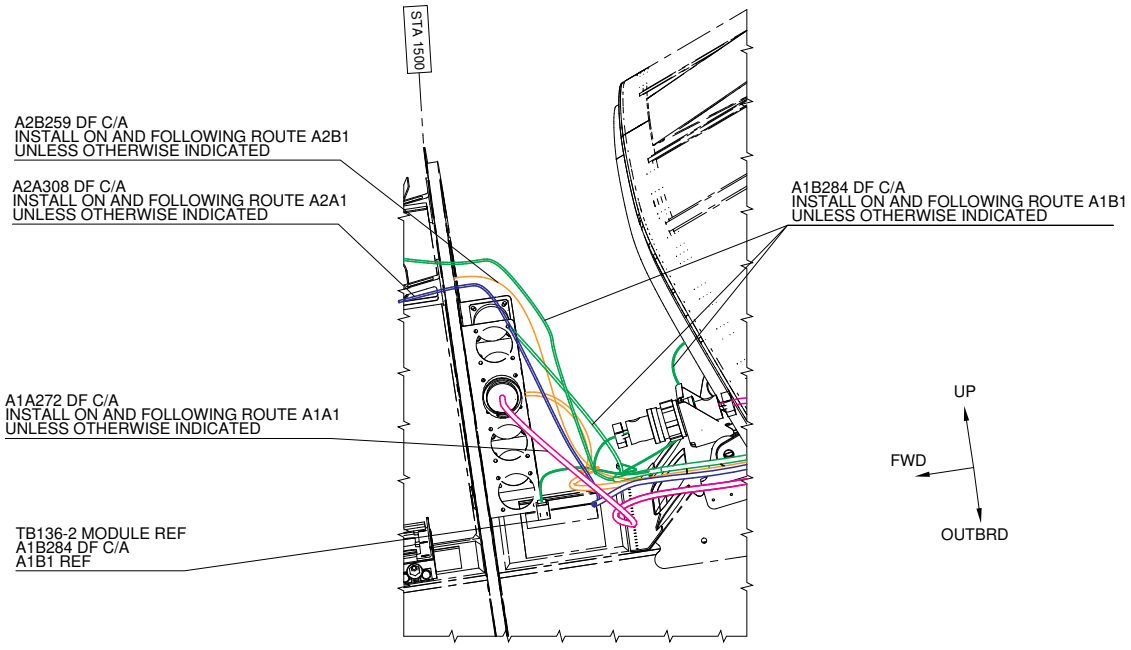
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 6

PART I
4G3450A007111
DF C/A ELECTRICAL PROVISION



VIEW LOOKING COCKPIT AREA RH SIDE
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE



VIEW LOOKING COCKPIT AREA LH SIDE
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 7

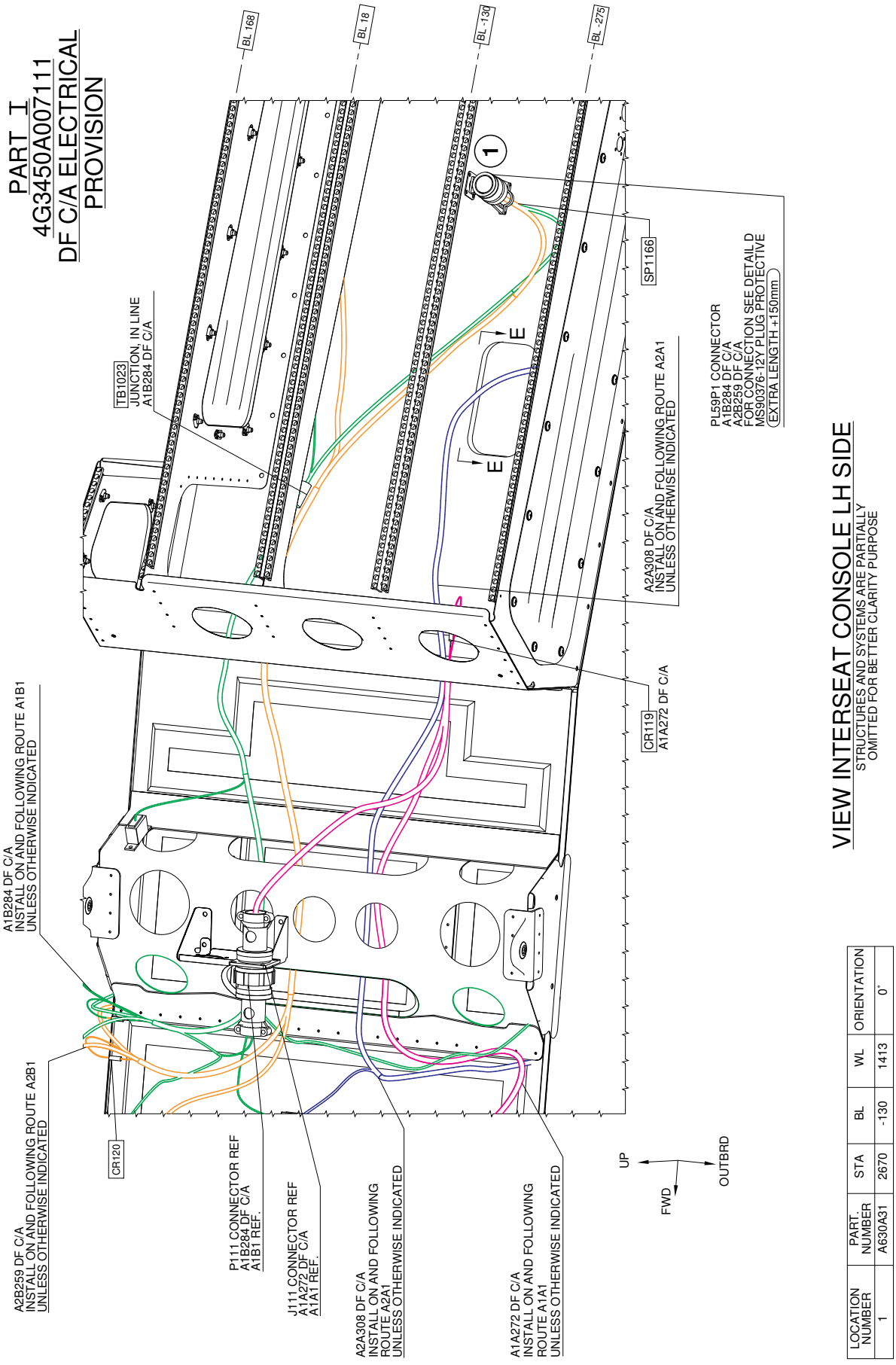
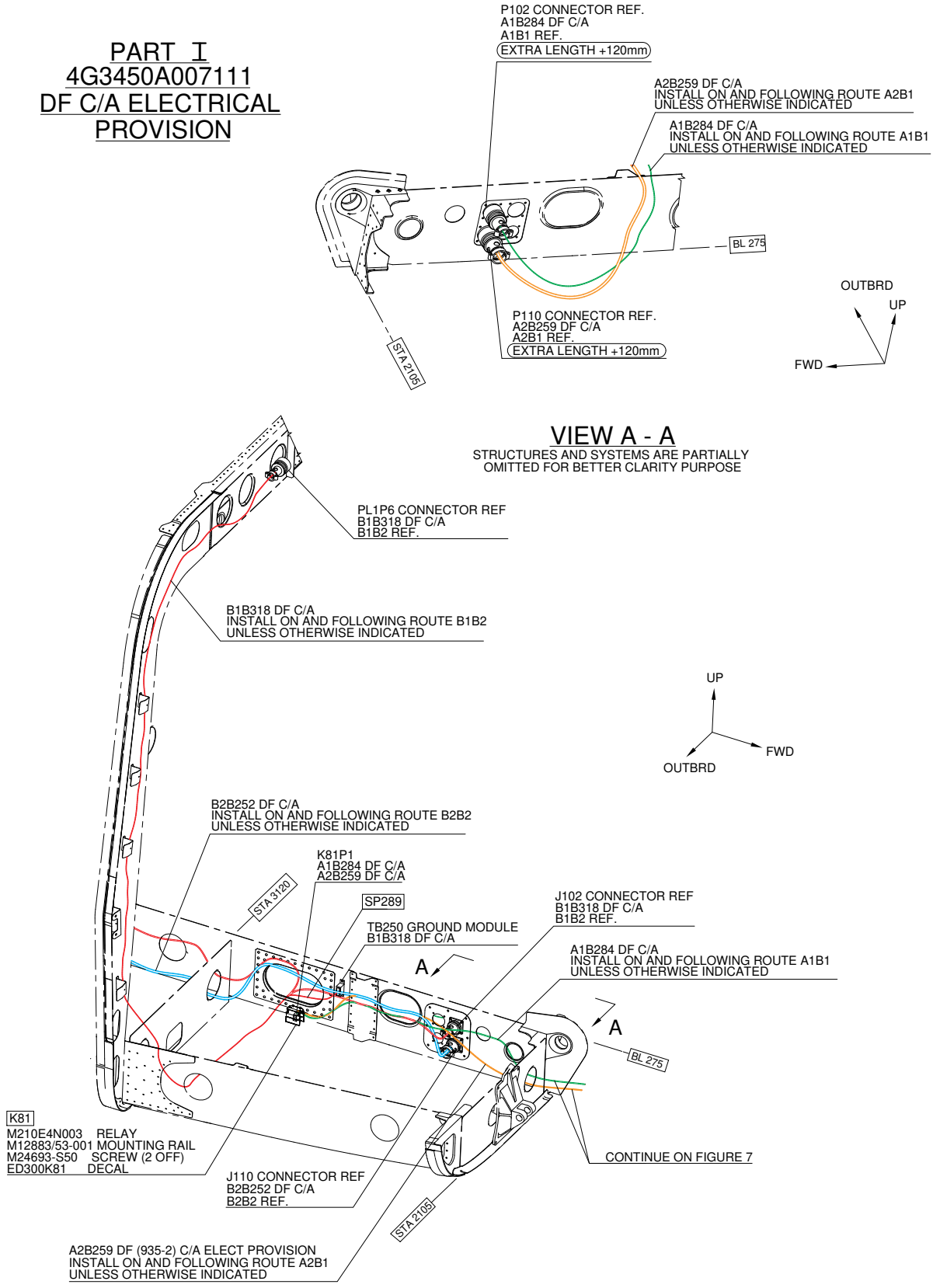

PART I
4G3450A007111
DF C/A ELECTRICAL
PROVISION
VIEW INTERSEAT CONSOLE LH SIDE
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
BL 168
BL 18
BL -130
BL -275
TB1023
JUNCTION, IN LINE
A1B284 DF C/A
SP1166
P159P1 CONNECTOR
A1B284 DF C/A
A2B259 DF C/A
FOR CONNECTION SEE DETAIL D
MS90376-12Y PLUG PROTECTIVE
(EXTRA LENGTH +150mm)
A2A308 DF C/A
INSTALL ON AND FOLLOWING ROUTE A2A1
UNLESS OTHERWISE INDICATED
CR119
A1A272 DF C/A
A1B284 DF C/A
INSTALL ON AND FOLLOWING ROUTE A1B1
UNLESS OTHERWISE INDICATED
A2B259 DF C/A
INSTALL ON AND FOLLOWING ROUTE A2B1
UNLESS OTHERWISE INDICATED
CR120
P111 CONNECTOR REF
A1B284 DF C/A
A1B1 REF.
J111 CONNECTOR REF
A1A272 DF C/A
A1A1 REF.
A2A308 DF C/A
INSTALL ON AND FOLLOWING
ROUTE A2A1
UNLESS OTHERWISE INDICATED
A1A272 DF C/A
INSTALL ON AND FOLLOWING
ROUTE A1A1
UNLESS OTHERWISE INDICATED
UP
FWD
OUTBRD
E
E
1
LOCATION NUMBER | PART. NUMBER | STA | BL | WL | ORIENTATION
1 | A630A31 | 2670 | -130 | 1413 | 0°

Figure 8

PART I
4G3450A007111
DF C/A ELECTRICAL PROVISION



VIEW CABIN FLOOR FROM STA 3120 TO 2105
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 9

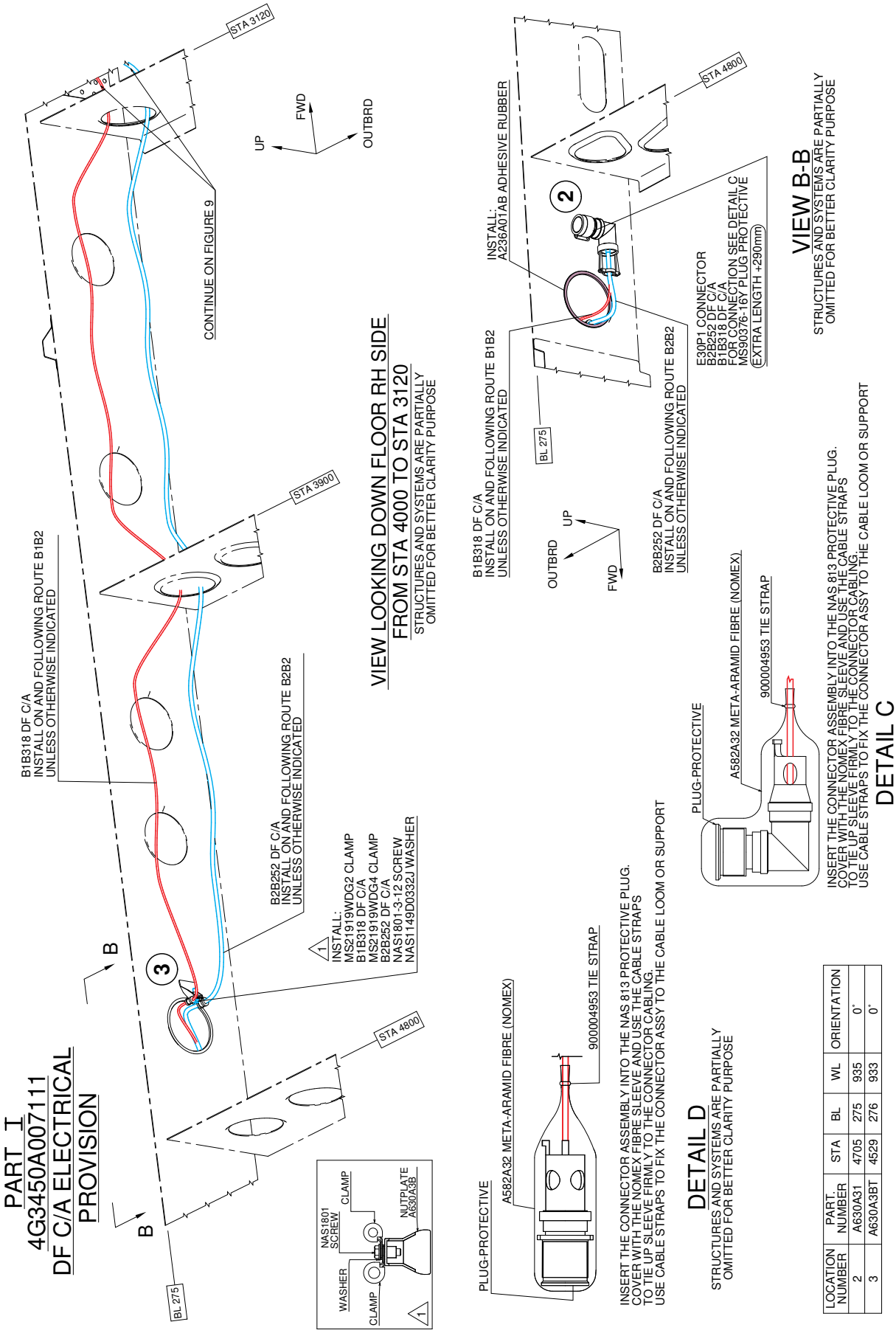
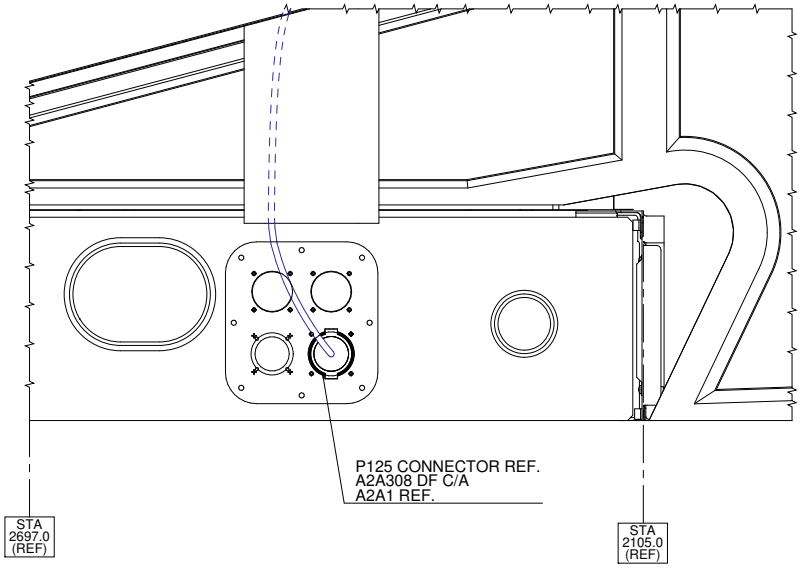
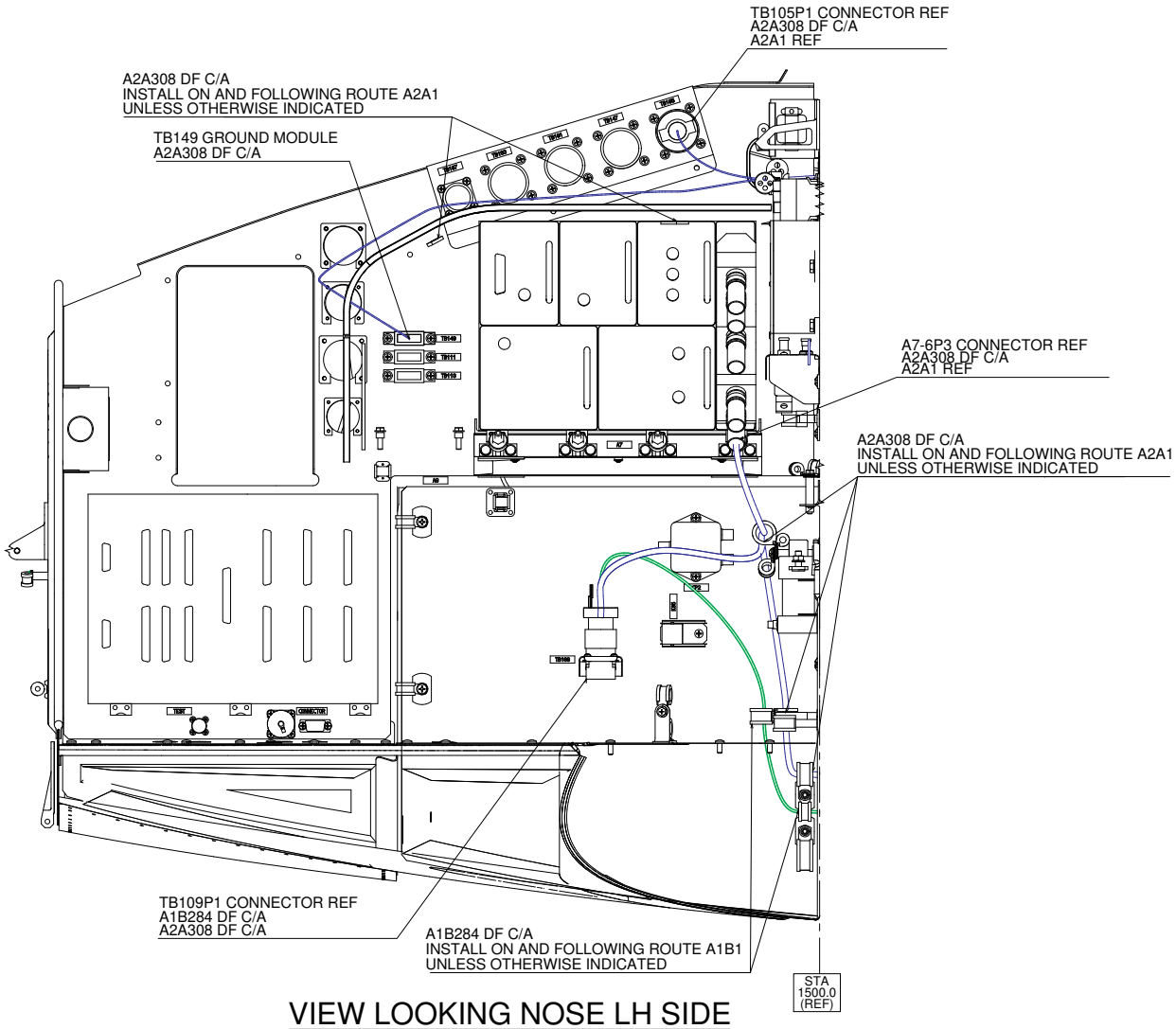

PART I
4G3450A007111
DF C/A ELECTRICAL
PROVISION
STA 3120
STA 3900
STA 4800
CONTINUE ON FIGURE 9
UP
FWD
OUTBRD
B1B318 DF C/A
INSTALL ON AND FOLLOWING ROUTE B1B2
UNLESS OTHERWISE INDICATED
B2B252 DF C/A
INSTALL ON AND FOLLOWING ROUTE B2B2
UNLESS OTHERWISE INDICATED
1
INSTALL:
MS21919WDG2 CLAMP
B1B318 DF C/A
MS21919WDG4 CLAMP
B2B252 DF C/A
NAS1801-3-12 SCREW
NAS1149D0332J WASHER
VIEW LOOKING DOWN FLOOR RH SIDE
FROM STA 4000 TO STA 3120
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
B
3
BL 275
NAS1801
SCREW
CLAMP
WASHER
CLAMP
NUTPLATE
A630A3B
1
INSTALL:
A236A01AB ADHESIVE RUBBER
2
E30P1 CONNECTOR
B2B252 DF C/A
B1B318 DF C/A
FOR CONNECTION SEE DETAIL C
MS90376-16Y PLUG PROTECTIVE
(EXTRA LENGTH +290mm)
VIEW B-B
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
PLUG-PROTECTIVE
A582A32 META-ARAMID FIBRE (NOMEX)
900004953 TIE STRAP
INSERT THE CONNECTOR ASSEMBLY INTO THE NAS 813 PROTECTIVE PLUG.
COVER WITH THE 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 C
DETAIL D
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
LOCATION NUMBER | PART NUMBER | STA | BL | WL | ORIENTATION
2 | A630A31 | 4705 | 275 | 935 | 0°
3 | A630A3BT | 4529 | 276 | 933 | 0°

Figure 10

PART I
4G3450A007111
DF C/A ELECTRICAL
PROVISION



VIEW E-E
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE



VIEW LOOKING NOSE LH SIDE
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 11

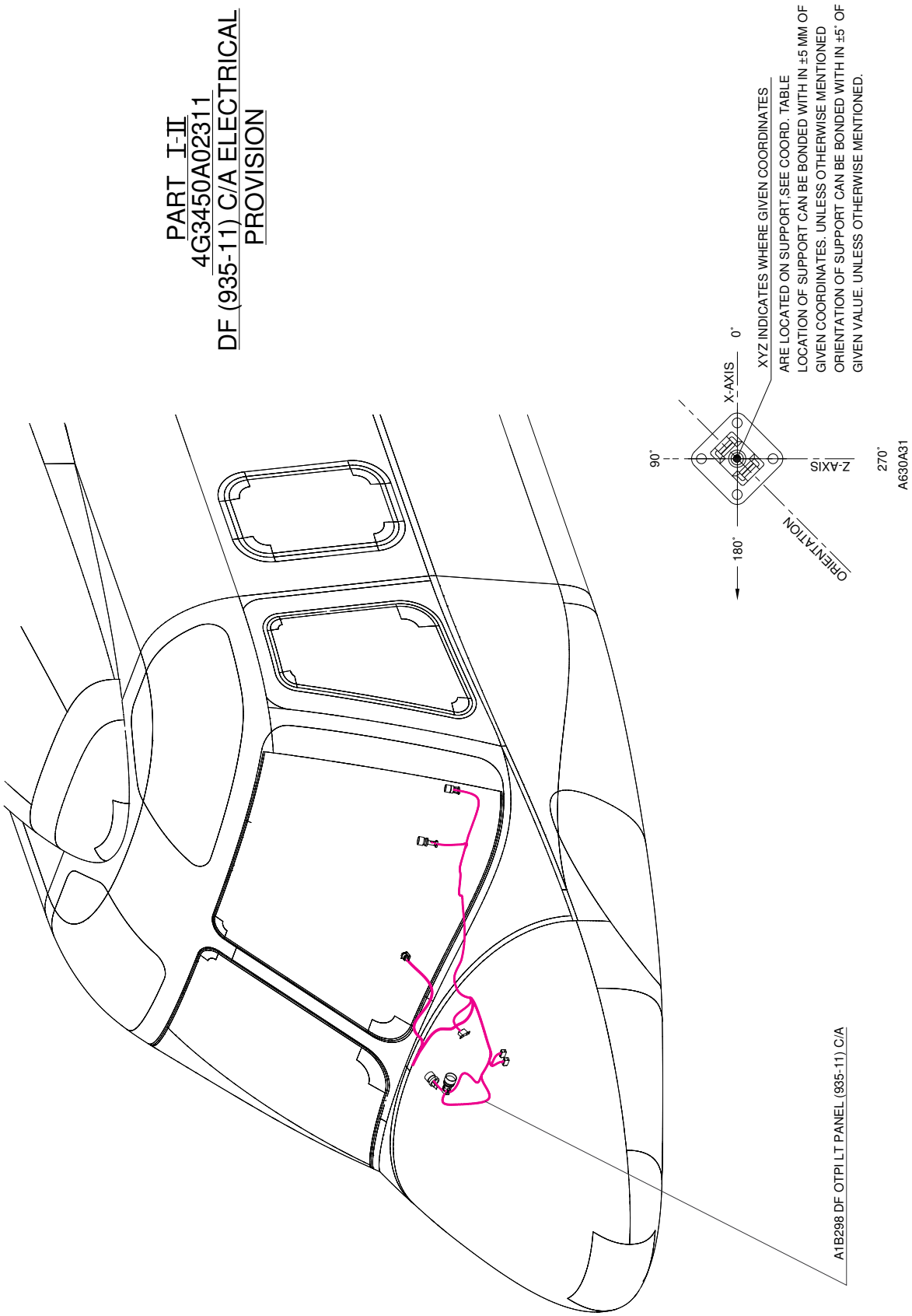

PART I-II
4G3450A02311
DF (935-11) C/A ELECTRICAL
PROVISION
XYZ INDICATES WHERE GIVEN COORDINATES
ARE LOCATED ON SUPPORT.SEE COORD. TABLE
LOCATION OF SUPPORT CAN BE BONDED WITH IN ±5 MM OF
GIVEN COORDINATES. UNLESS OTHERWISE MENTIONED
ORIENTATION OF SUPPORT CAN BE BONDED WITH IN ±5° OF
GIVEN VALUE. UNLESS OTHERWISE MENTIONED.
X-AXIS
0°
90°
Z-AXIS
270°
180°
ORIENTATION
A630A31
A1B298 DF OTPI LT PANEL (935-11) C/A

Figure 12

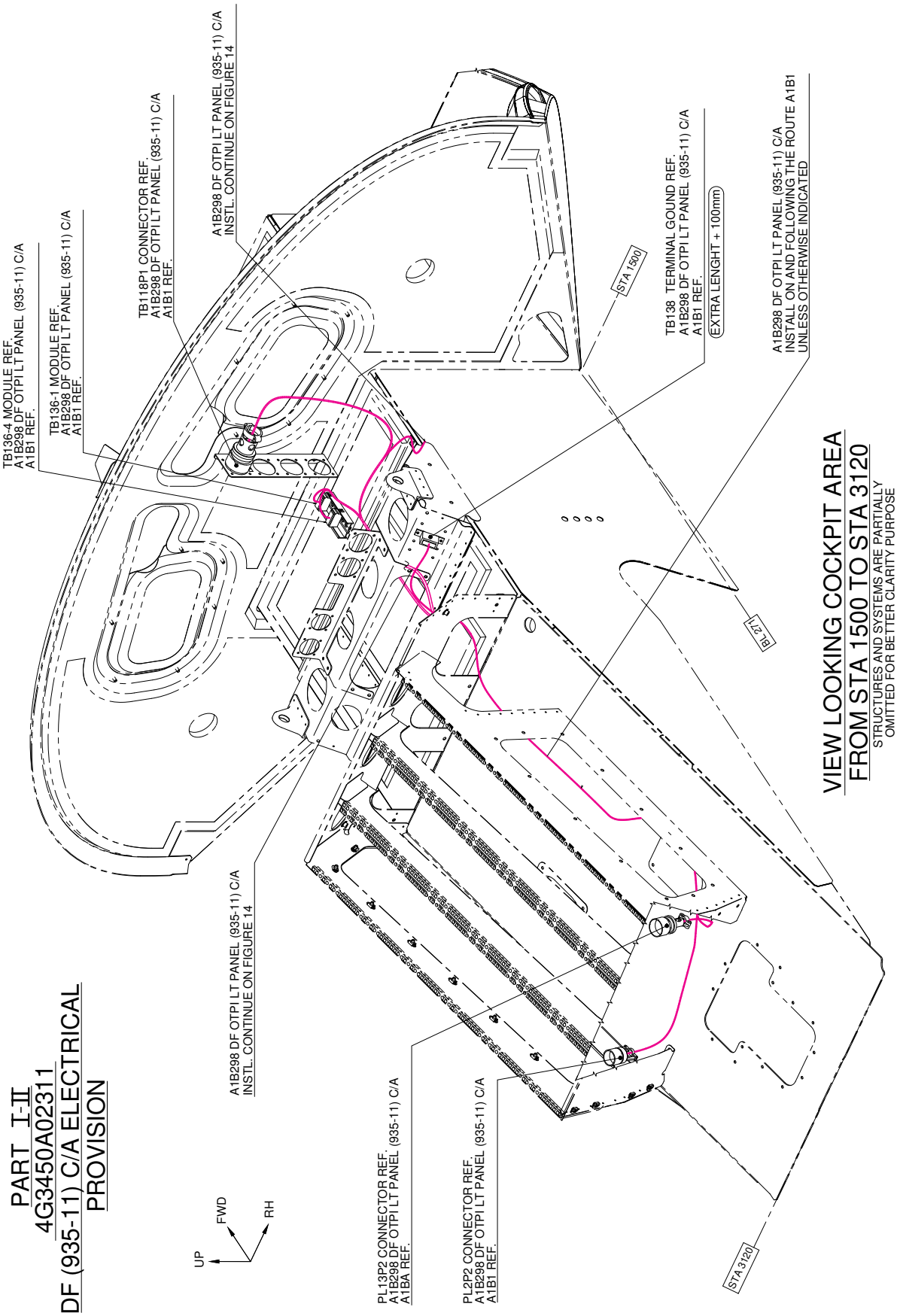

PART I-II
4G3450A02311
DF (935-11) C/A ELECTRICAL
PROVISION
VIEW LOOKING COCKPIT AREA
FROM STA 1500 TO STA 3120
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
TB136-4 MODULE REF.
A1B298 DF OTPI LT PANEL (935-11) C/A
A1B1 REF.
TB136-1 MODULE REF.
A1B298 DF OTPI LT PANEL (935-11) C/A
A1B1 REF.
TB118P1 CONNECTOR REF.
A1B298 DF OTPI LT PANEL (935-11) C/A
A1B1 REF.
A1B298 DF OTPI LT PANEL (935-11) C/A
INSTL. CONTINUE ON FIGURE 14
STA 1500
TB138 TERMINAL GOUND REF.
A1B298 DF OTPI LT PANEL (935-11) C/A
A1B1 REF.
(EXTRA LENGHT + 100mm)
A1B298 DF OTPI LT PANEL (935-11) C/A
INSTALL ON AND FOLLOWING THE ROUTE A1B1
UNLESS OTHERWISE INDICATED
BL 27
A1B298 DF OTPI LT PANEL (935-11) C/A
INSTL. CONTINUE ON FIGURE 14
PL13P2 CONNECTOR REF.
A1B298 DF OTPI LT PANEL (935-11) C/A
A1BA REF.
PL2P2 CONNECTOR REF.
A1B298 DF OTPI LT PANEL (935-11) C/A
A1B1 REF.
STA 3120
UP
FWD
RH

Figure 13

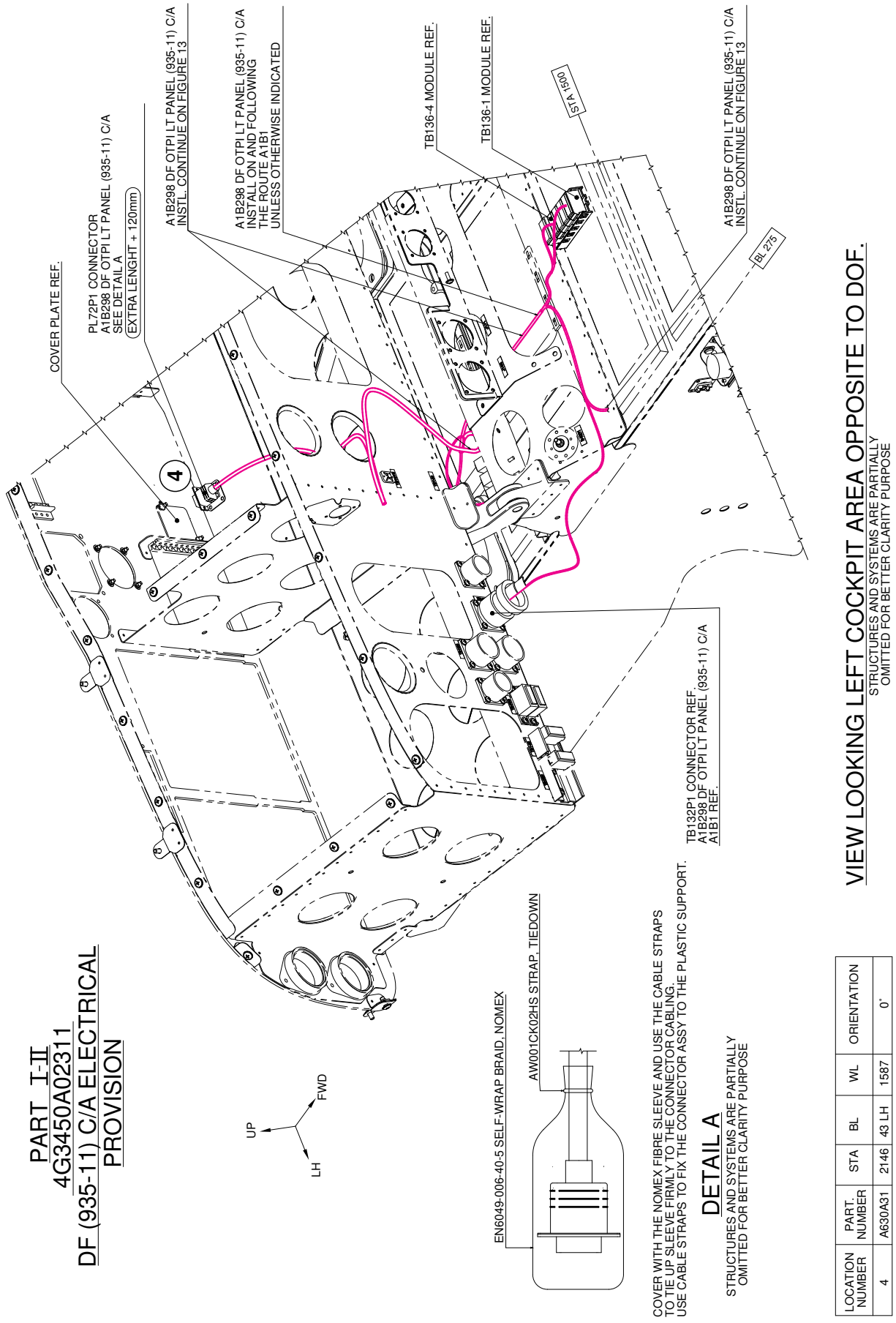

PART I-II
4G3450A02311
DF (935-11) C/A ELECTRICAL PROVISION
COVER PLATE REF.
PL72P1 CONNECTOR A1B298 DF OTPI LT PANEL (935-11) C/A SEE DETAIL A
EXTRA LENGHT + 120mm
A1B298 DF OTPI LT PANEL (935-11) C/A INSTL. CONTINUE ON FIGURE 13
A1B298 DF OTPI LT PANEL (935-11) C/A INSTALL ON AND FOLLOWING THE ROUTE A1B1 UNLESS OTHERWISE INDICATED
TB136-4 MODULE REF.
TB136-1 MODULE REF.
STA 1500
A1B298 DF OTPI LT PANEL (935-11) C/A INSTL. CONTINUE ON FIGURE 13
BL 275
4
UP
FWD
LH
EN6049-006-40-5 SELF-WRAP BRAID, NOMEX
AW001CK02HS STRAP, TIEDOWN
COVER WITH THE 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 PLASTIC SUPPORT.
DETAIL A
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
TB132P1 CONNECTOR REF. A1B298 DF OTPI LT PANEL (935-11) C/A A1B1 REF.
VIEW LOOKING LEFT COCKPIT AREA OPPOSITE TO DOF.
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
LOCATION NUMBER | PART. NUMBER | STA | BL | WL | ORIENTATION
4 | A630A31 | 2146 | 43 LH | 1587 | 0°

Figure 14

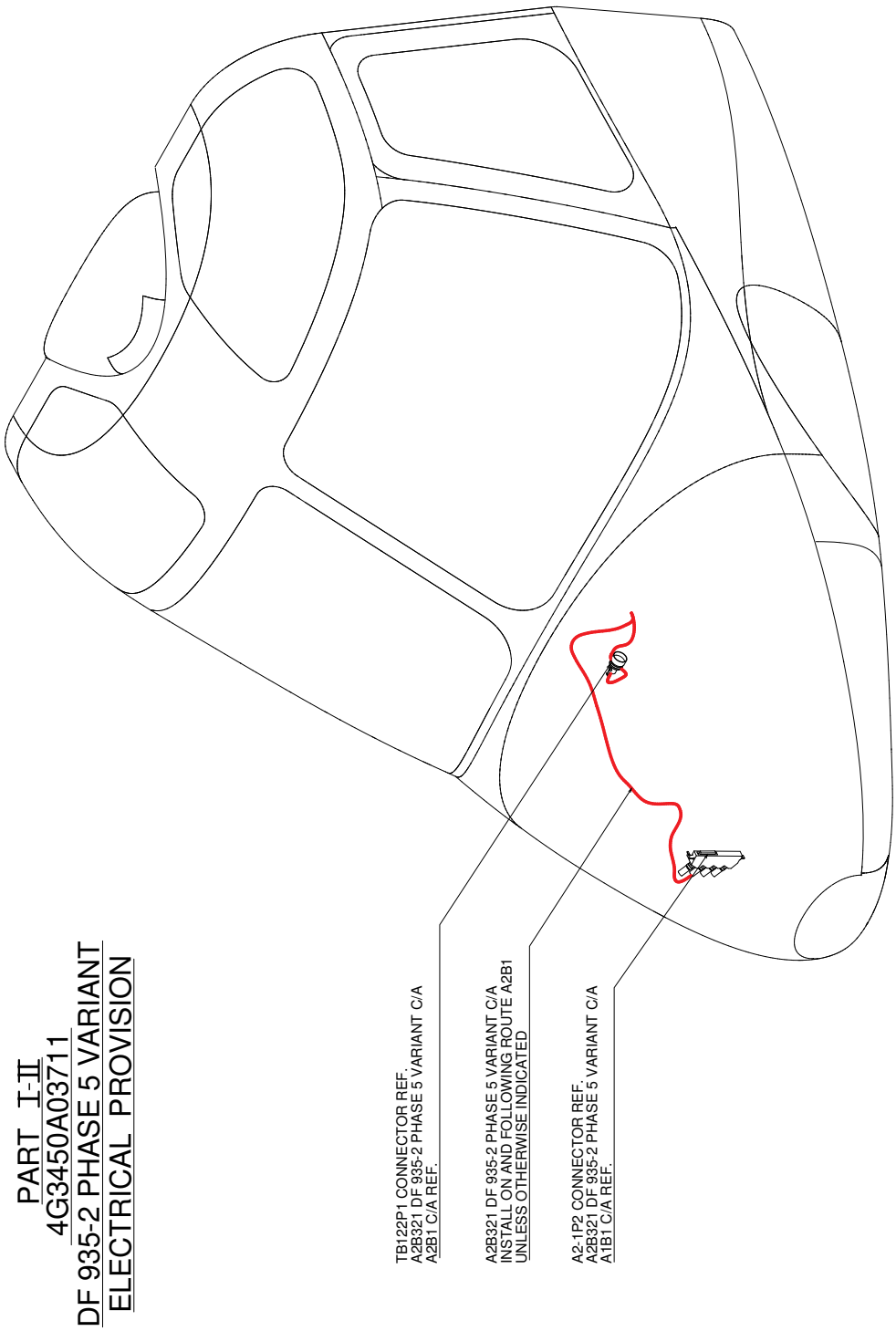

PART I-II
4G3450A03711
DF 935-2 PHASE 5 VARIANT
ELECTRICAL PROVISION
TB122P1 CONNECTOR REF.
A2B321 DF 935-2 PHASE 5 VARIANT C/A
A2B1 C/A REF.
A2B321 DF 935-2 PHASE 5 VARIANT C/A
INSTALL ON AND FOLLOWING ROUTE A2B1
UNLESS OTHERWISE INDICATED
A2-1P2 CONNECTOR REF.
A2B321 DF 935-2 PHASE 5 VARIANT C/A
A1B1 C/A REF.

Figure 15

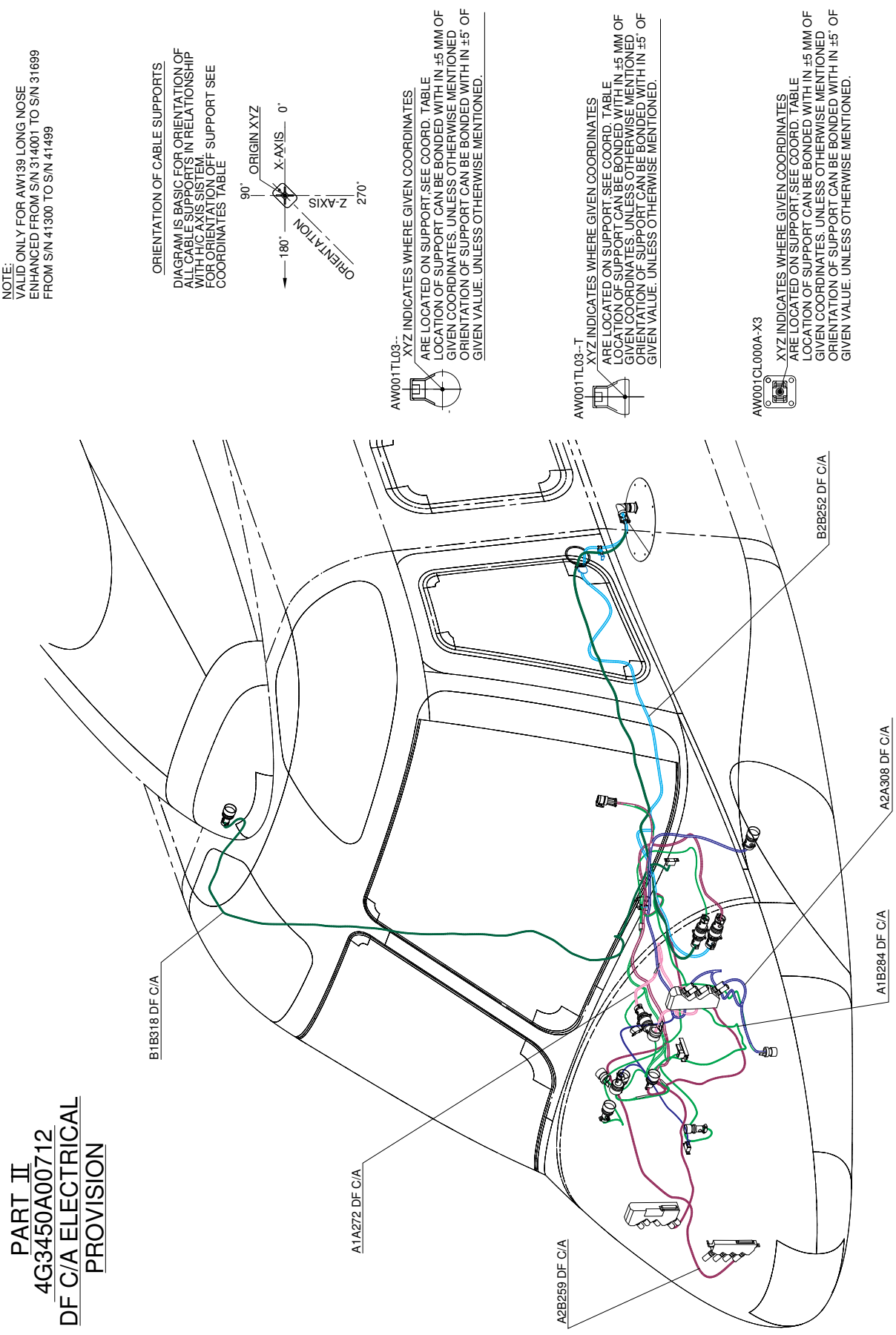
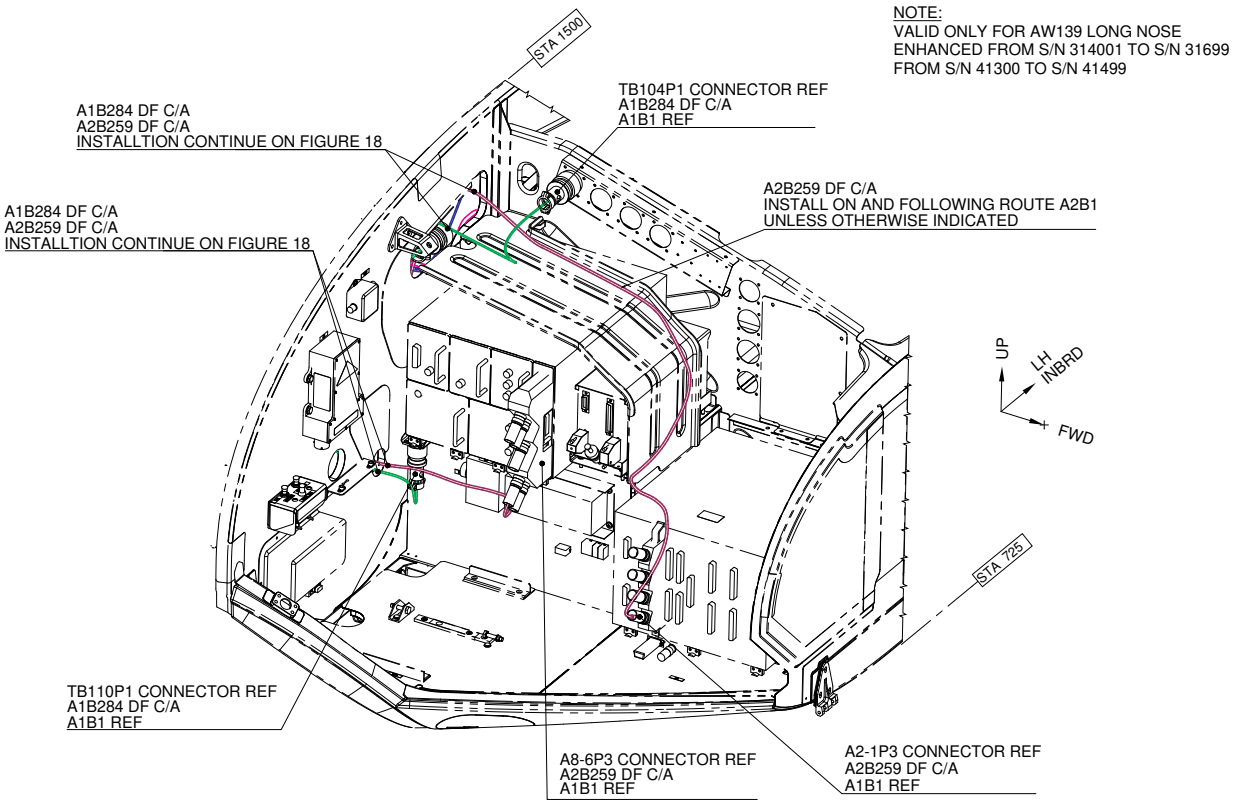

NOTE:
VALID ONLY FOR AW139 LONG NOSE
ENHANCED FROM S/N 314001 TO S/N 31699
FROM S/N 41300 TO S/N 41499
ORIENTATION OF CABLE SUPPORTS
DIAGRAM IS BASIC FOR ORIENTATION OF ALL CABLE SUPPORTS IN RELATIONSHIP WITH H/C AXIS SISTEM.
FOR ORIENTATION OFF SUPPORT SEE COORDINATES TABLE
90°
ORIGIN XYZ
X-AXIS
0°
180°
Z-AXIS
270°
ORIENTATION
AW001TL03--
XYZ INDICATES WHERE GIVEN COORDINATES ARE LOCATED ON SUPPORT,SEE COORD. TABLE LOCATION OF SUPPORT CAN BE BONDED WITH IN ±5 MM OF GIVEN COORDINATES. UNLESS OTHERWISE MENTIONED ORIENTATION OF SUPPORT CAN BE BONDED WITH IN ±5° OF GIVEN VALUE. UNLESS OTHERWISE MENTIONED.
AW001TL03--T
XYZ INDICATES WHERE GIVEN COORDINATES ARE LOCATED ON SUPPORT,SEE COORD. TABLE LOCATION OF SUPPORT CAN BE BONDED WITH IN ±5 MM OF GIVEN COORDINATES. UNLESS OTHERWISE MENTIONED ORIENTATION OF SUPPORT CAN BE BONDED WITH IN ±5° OF GIVEN VALUE. UNLESS OTHERWISE MENTIONED.
AW001CL000A-X3
XYZ INDICATES WHERE GIVEN COORDINATES ARE LOCATED ON SUPPORT,SEE COORD. TABLE LOCATION OF SUPPORT CAN BE BONDED WITH IN ±5 MM OF GIVEN COORDINATES. UNLESS OTHERWISE MENTIONED ORIENTATION OF SUPPORT CAN BE BONDED WITH IN ±5° OF GIVEN VALUE. UNLESS OTHERWISE MENTIONED.
PART II
4G3450A00712
DF C/A ELECTRICAL PROVISION
B1B318 DF C/A
A1A272 DF C/A
A2B259 DF C/A
B2B252 DF C/A
A2A308 DF C/A
A1B284 DF C/A

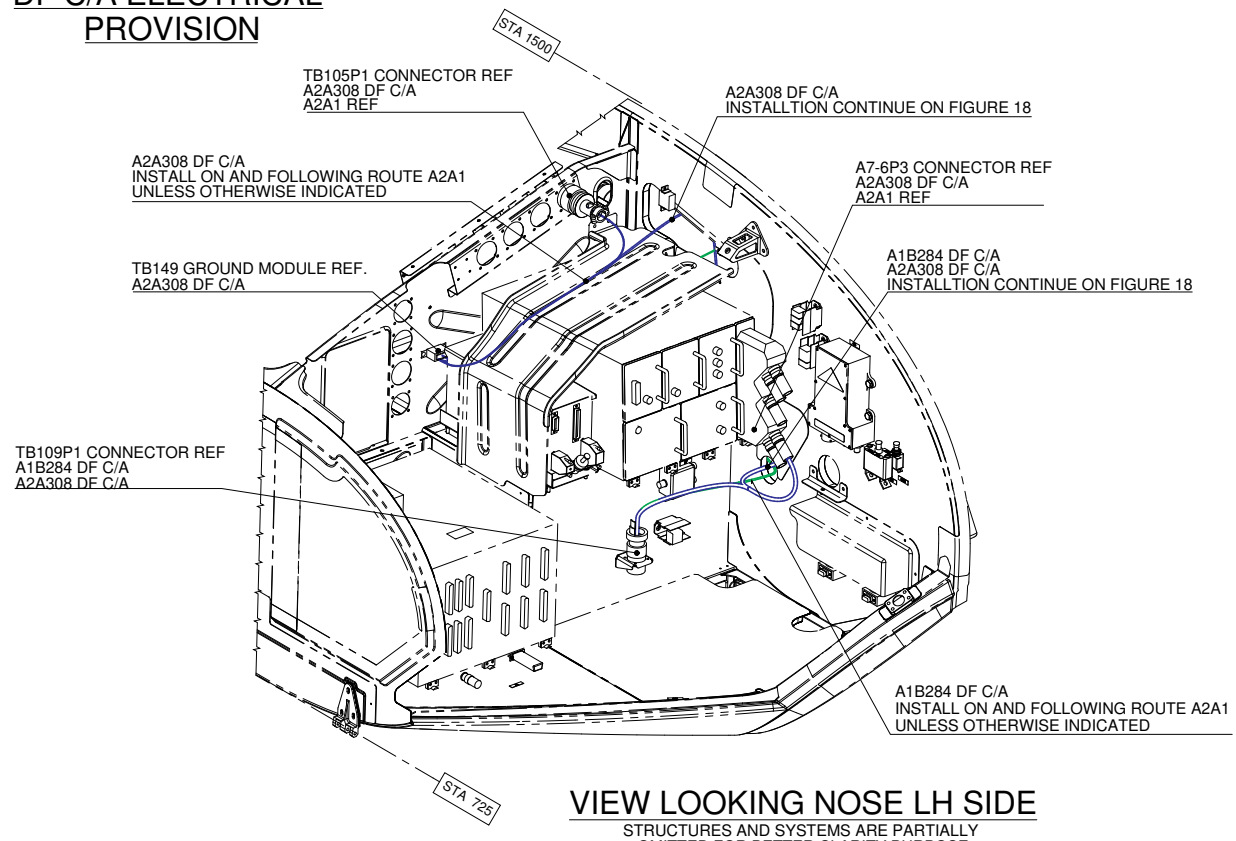
Figure 16



VIEW LOOKING NOSE RH SIDE

STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

PART Ⅱ
4G3450A00712
DF C/A ELECTRICAL
PROVISION



VIEW LOOKING NOSE LH SIDE

STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 17

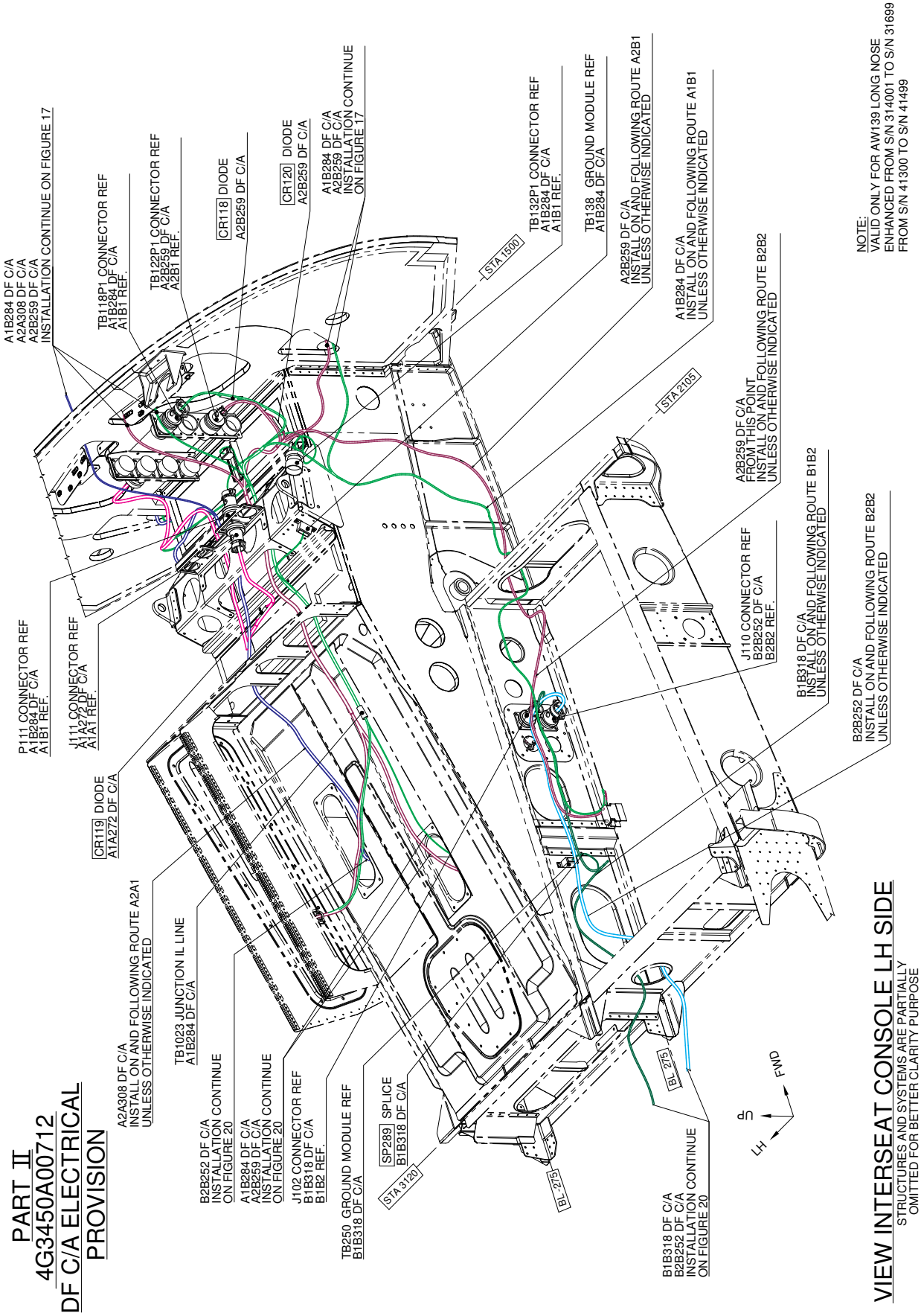

PART II
4G3450A00712
DF C/A ELECTRICAL
PROVISION
VIEW INTERSEAT CONSOLE LH SIDE
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
NOTE:
VALID ONLY FOR AW139 LONG NOSE
ENHANCED FROM S/N 314001 TO S/N 31699
FROM S/N 41300 TO S/N 41499
A1B284 DF C/A
A2A308 DF C/A
A2B259 DF C/A
INSTALLATION CONTINUE ON FIGURE 17
P111 CONNECTOR REF
A1B284 DF C/A
A1B1 REF.
J111 CONNECTOR REF
A1A272 DF C/A
A1A1 REF.
CR119 DIODE
A1A272 DF C/A
TB118P1 CONNECTOR REF
A1B284 DF C/A
A1B1 REF.
TB122P1 CONNECTOR REF
A2B259 DF C/A
A2B1 REF.
CR118 DIODE
A2B259 DF C/A
CR120 DIODE
A2B259 DF C/A
A1B284 DF C/A
A2B259 DF C/A
INSTALLATION CONTINUE
ON FIGURE 17
STA 1500
TB132P1 CONNECTOR REF
A1B284 DF C/A
A1B1 REF.
TB138 GROUND MODULE REF
A1B284 DF C/A
A2B259 DF C/A
INSTALL ON AND FOLLOWING ROUTE A2B1
UNLESS OTHERWISE INDICATED
A1B284 DF C/A
INSTALL ON AND FOLLOWING ROUTE A1B1
UNLESS OTHERWISE INDICATED
STA 2105
A2B259 DF C/A
FROM THIS POINT
INSTALL ON AND FOLLOWING ROUTE B2B2
UNLESS OTHERWISE INDICATED
J110 CONNECTOR REF
B2B252 DF C/A
B2B2 REF.
B1B318 DF C/A
INSTALL ON AND FOLLOWING ROUTE B1B2
UNLESS OTHERWISE INDICATED
B2B252 DF C/A
INSTALL ON AND FOLLOWING ROUTE B2B2
UNLESS OTHERWISE INDICATED
A2A308 DF C/A
INSTALL ON AND FOLLOWING ROUTE A2A1
UNLESS OTHERWISE INDICATED
TB1023 JUNCTION IL LINE
A1B284 DF C/A
B2B252 DF C/A
INSTALLATION CONTINUE
ON FIGURE 20
A1B284 DF C/A
A2B259 DF C/A
INSTALLATION CONTINUE
ON FIGURE 20
J102 CONNECTOR REF
B1B318 DF C/A
B1B2 REF.
TB250 GROUND MODULE REF
B1B318 DF C/A
SP289 SPLICE
B1B318 DF C/A
STA 3120
BL -275
BL 275
B1B318 DF C/A
B2B252 DF C/A
INSTALLATION CONTINUE
ON FIGURE 20
UP
FWD
LH

Figure 18

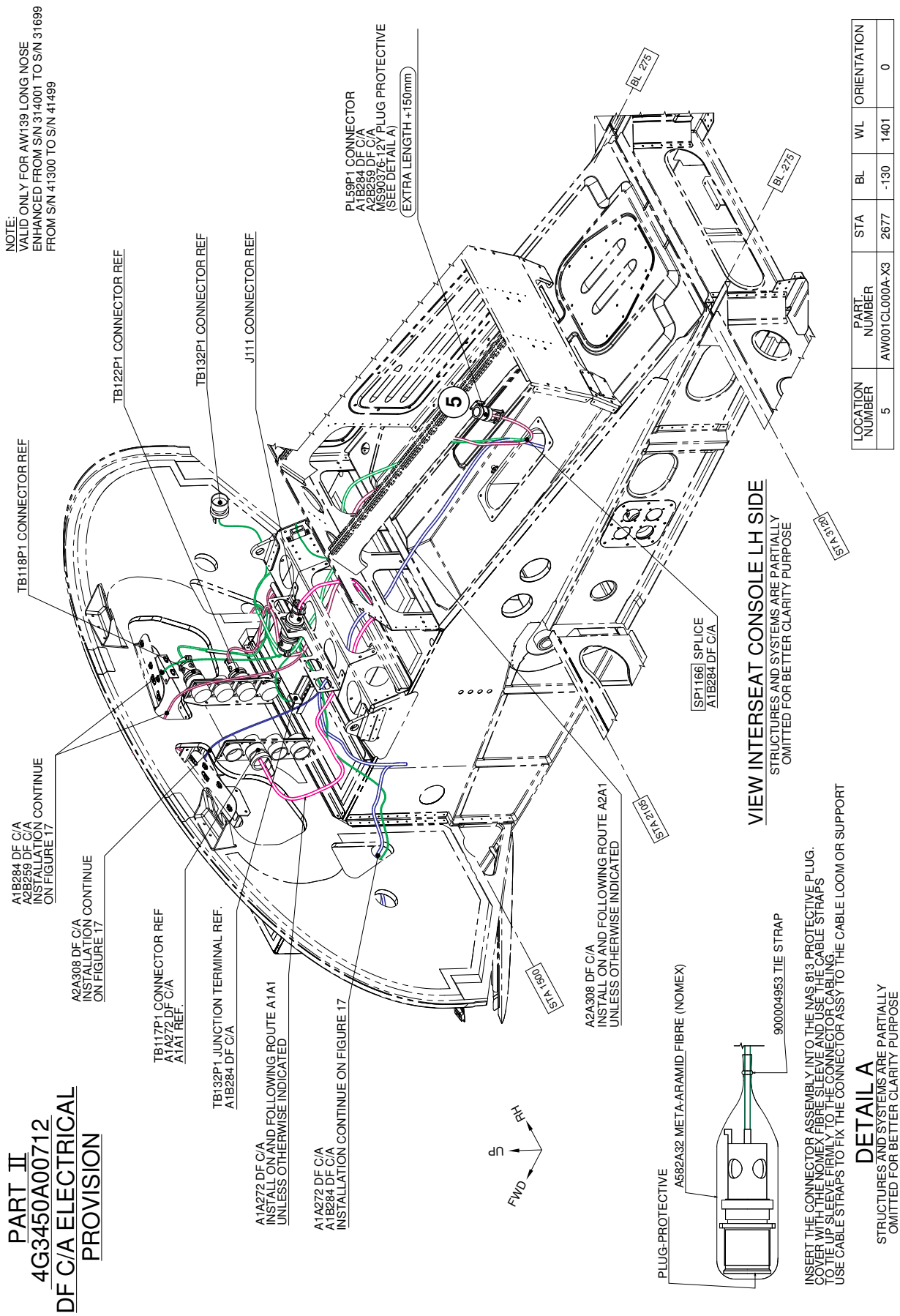

PART II
4G3450A00712
DF C/A ELECTRICAL PROVISION
NOTE:
VALID ONLY FOR AW139 LONG NOSE ENHANCED FROM S/N 314001 TO S/N 31699
FROM S/N 41300 TO S/N 41499
TB118P1 CONNECTOR REF
TB122P1 CONNECTOR REF
TB132P1 CONNECTOR REF
J111 CONNECTOR REF
PL59P1 CONNECTOR
A1B284 DF C/A
A2B259 DF C/A
MS90376-12Y PLUG PROTECTIVE
(SEE DETAIL A)
EXTRA LENGTH +150mm
BL 275
BL 275
STA 3243.45
STA 3014.45
STA 3510.45
A1B284 DF C/A
A2B259 DF C/A
INSTALLATION CONTINUE
ON FIGURE 17
A2A308 DF C/A
INSTALLATION CONTINUE
ON FIGURE 17
TB117P1 CONNECTOR REF
A1A272 DF C/A
A1A1 REF.
TB132P1 JUNCTION TERMINAL REF.
A1B284 DF C/A
A1A272 DF C/A
INSTALL ON AND FOLLOWING ROUTE A1A1
UNLESS OTHERWISE INDICATED
A1A272 DF C/A
A1B284 DF C/A
INSTALLATION CONTINUE ON FIGURE 17
A2A308 DF C/A
INSTALL ON AND FOLLOWING ROUTE A2A1
UNLESS OTHERWISE INDICATED
SP1166 SPLICE
A1B284 DF C/A
VIEW INTERSEAT CONSOLE LH SIDE
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
LOCATION NUMBER
PART NUMBER
STA
BL
WL
ORIENTATION
5
AW001CL000A-X3
2677
-130
1401
0
RH
UP
FWD
PLUG-PROTECTIVE
A582A32 META-ARAMID FIBRE (NOMEX)
900004953 TIE STRAP
INSERT THE CONNECTOR ASSEMBLY INTO THE NAS 813 PROTECTIVE PLUG.
COVER WITH THE 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
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 19

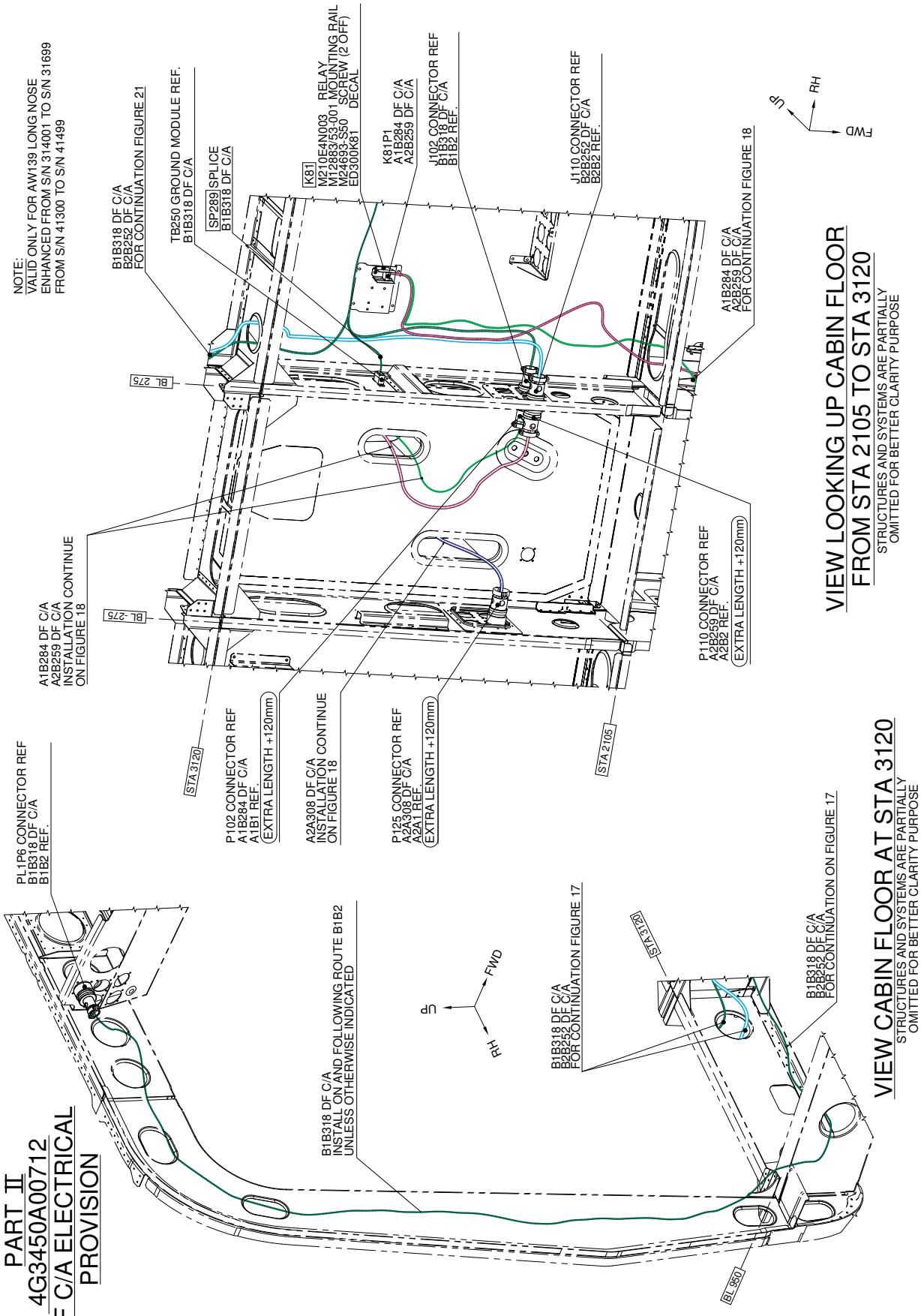
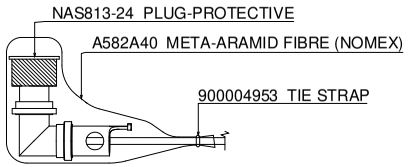

PART II
4G3450A00712
DF C/A ELECTRICAL
PROVISION
NOTE:
VALID ONLY FOR AW139 LONG NOSE
ENHANCED FROM S/N 31400 1 TO S/N 31699
FROM S/N 41300 TO S/N 41499
B1B318 DF C/A
B2B252 DF C/A
FOR CONTINUATION FIGURE 21
TB250 GROUND MODULE REF.
B1B318 DF C/A
SP289 SPLICE
B1B318 DF C/A
K81
M210E4N003 RELAY
M12883/53-001 MOUNTING RAIL
M24693-S50 SCREW (2 OFF)
ED300K81 DECAL
K81P1
A1B284 DF C/A
A2B259 DF C/A
J102 CONNECTOR REF
B1B318 DF C/A
B1B2 REF.
J110 CONNECTOR REF
B2B252 DF C/A
B2B2 REF.
A1B284 DF C/A
A2B259 DF C/A
FOR CONTINUATION FIGURE 18
UP
RH
FWD
BL 275
BL 275
A1B284 DF C/A
A2B259 DF C/A
INSTALLATION CONTINUE
ON FIGURE 18
STA 3120
P102 CONNECTOR REF
A1B284 DF C/A
A1B1 REF.
EXTRA LENGTH +120mm
A2A308 DF C/A
INSTALLATION CONTINUE
ON FIGURE 18
P125 CONNECTOR REF
A2A308 DF C/A
A2A1 REF.
EXTRA LENGTH +120mm
STA 2105
P110 CONNECTOR REF
A2B259 DF C/A
A2B2 REF.
EXTRA LENGTH +120mm
VIEW LOOKING UP CABIN FLOOR
FROM STA 2105 TO STA 3120
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
PL1P6 CONNECTOR REF
B1B318 DF C/A
B1B2 REF.
B1B318 DF C/A
INSTALL ON AND FOLLOWING ROUTE B1B2
UNLESS OTHERWISE INDICATED
UP
FWD
RH
B1B318 DF C/A
B2B252 DF C/A
FOR CONTINUATION FIGURE 17
STA 3100
B1B318 DF C/A
B2B252 DF C/A
FOR CONTINUATION ON FIGURE 17
BL 960
VIEW CABIN FLOOR AT STA 3120
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

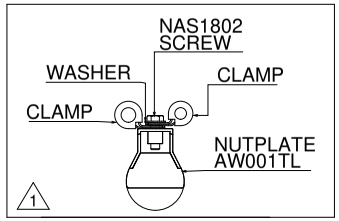
Figure 20

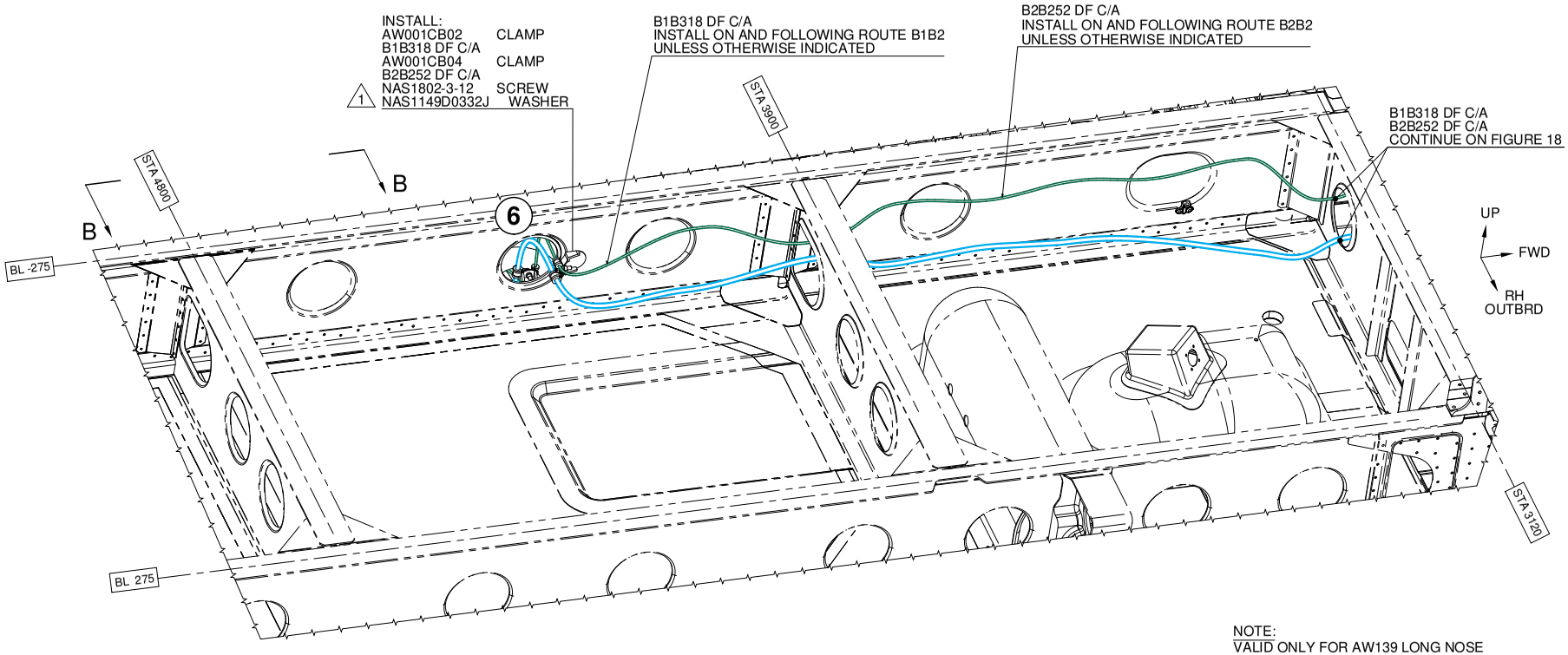


INSERT THE CONNECTOR ASSEMBLY INTO THE NAS813 PROTECTIVE PLUG.
COVER WITH THE NOMEX FIBRE SLEEVE AND USE THE CABLE STRAP
TO TIE UP FIRMLY TO THE CONNECTOR CABLING.
USE CABLE STRAPS TO FIX THE CONNECTOR ASSY TO THE PLASTIC SUPPORT.

DETAIL E

PART II
4G3450A00712
DF C/A ELECTRICAL PROVISION





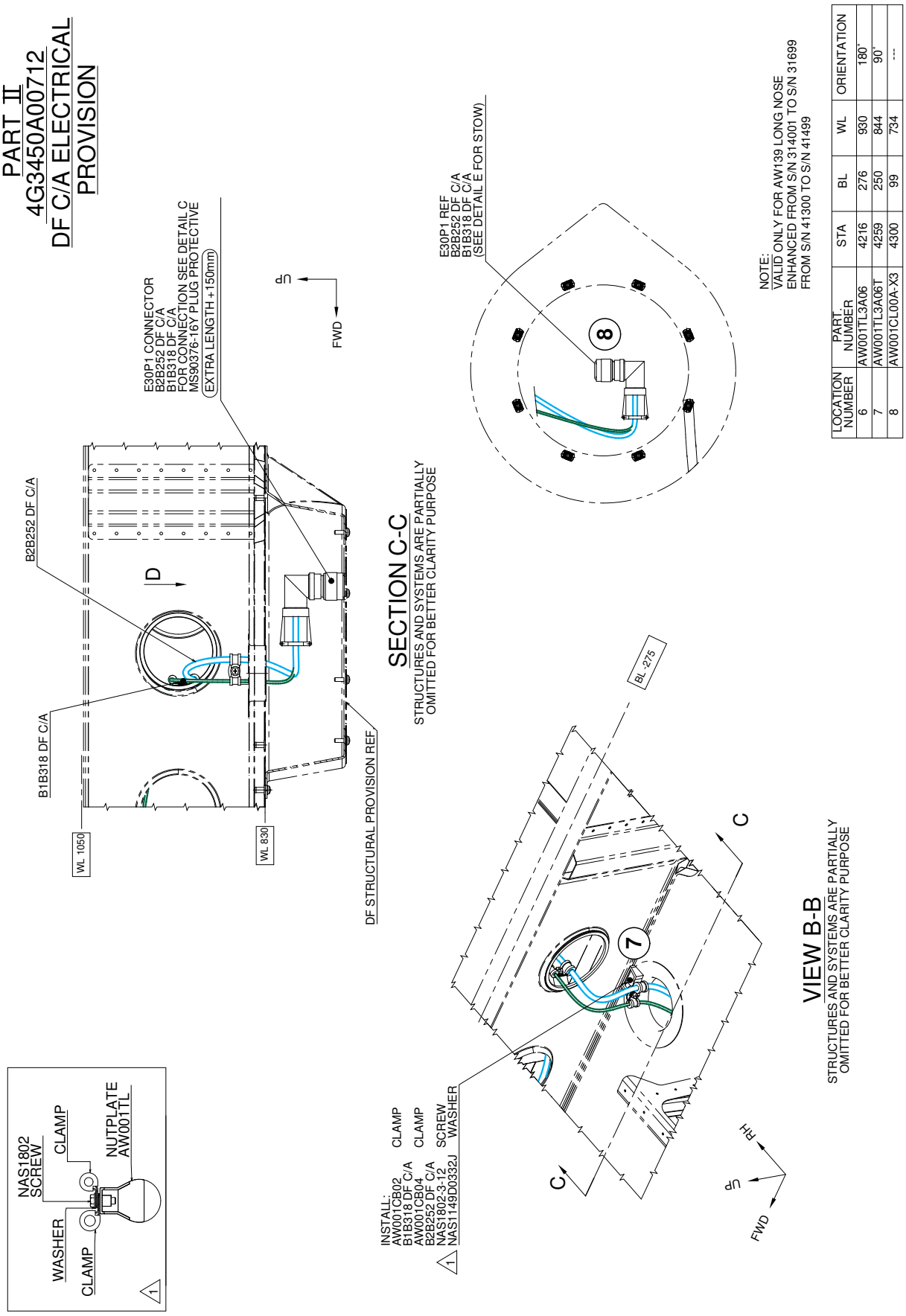
VIEW LOOKING DOWN FLOOR RH SIDE FROM STA 4000 TO STA 3120

STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

NOTE:
VALID ONLY FOR AW139 LONG NOSE
ENHANCED FROM S/N 314001 TO S/N 31699
FROM S/N 41300 TO S/N 41499

LOCATION NUMBER	PART. NUMBER	STA	BL	WL	ORIENTATION
6	AW001TL3A06	4216	276	930	180°
7	AW001TL3A06T	4259	250	844	90°
8	AW001CL00A-X3	4300	99	734	---

Figure 21



LOCATION NUMBER	PART NUMBER	STA	BL	WL	ORIENTATION
6	AW001TL3A06	4216	276	930	180°
7	AW001TL3A06T	4259	250	844	90°
8	AW001CL00A-X3	4300	99	734	---

Figure 22

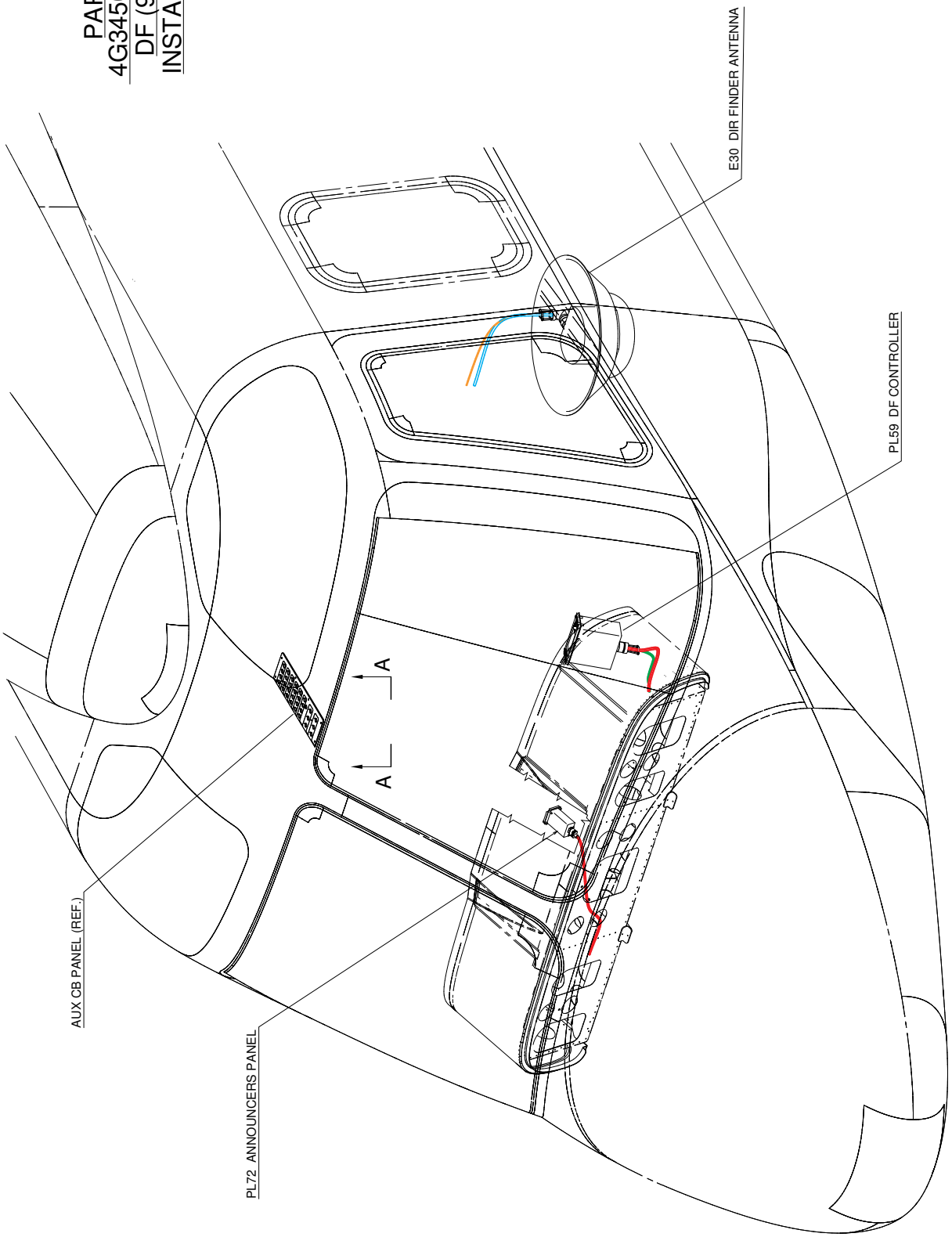

E30 DIR FINDER ANTENNA
PL59 DF CONTROLLER
A
A
AUX CB PANEL (REF.)
PL72 ANNOUNCERS PANEL

Figure 23

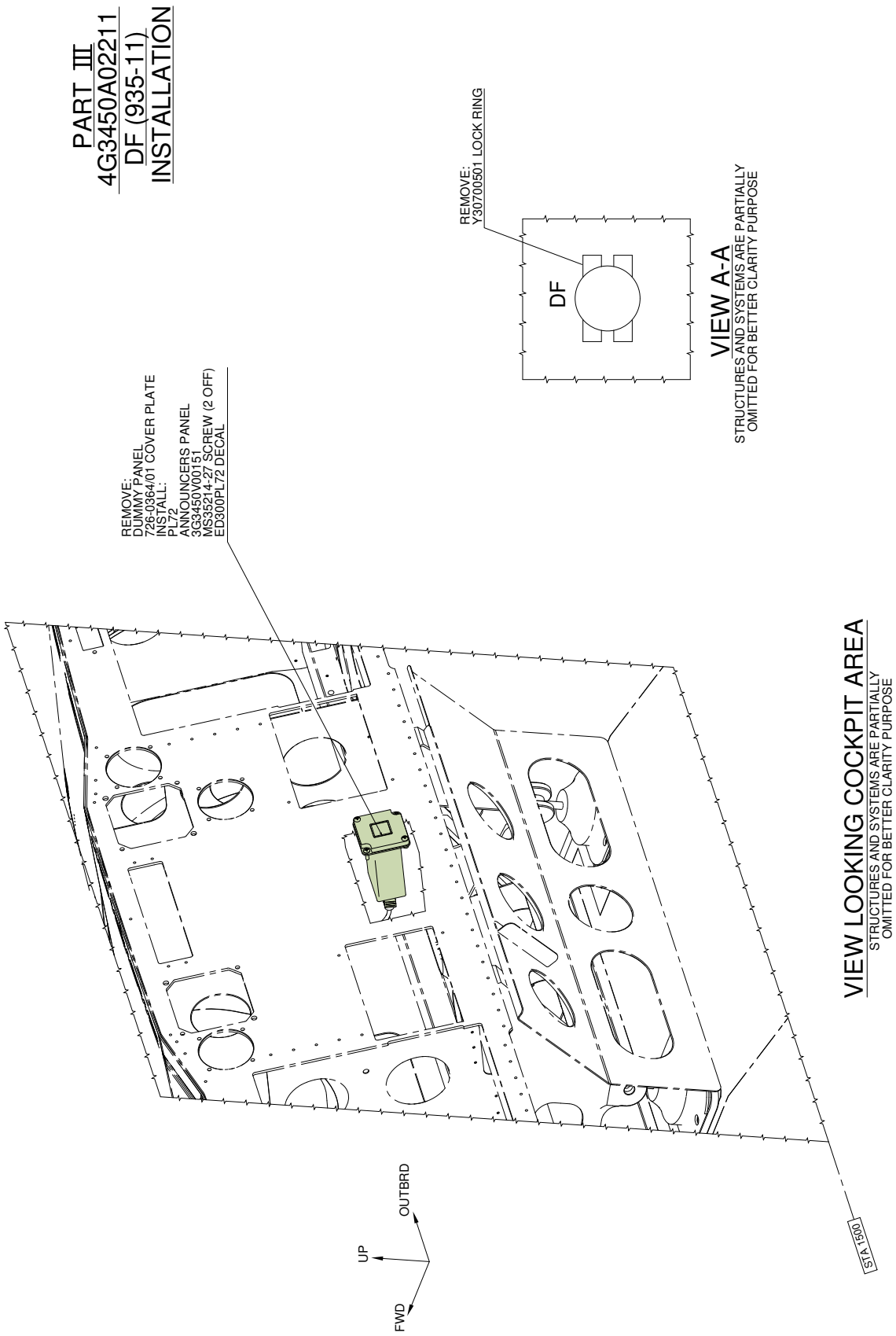

PART III
4G3450A02211
DF (935-11)
INSTALLATION
REMOVE:
Y30700501 LOCK RING
DF
VIEW A-A
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
REMOVE:
DUMMY PANEL
726-0364/01 COVER PLATE
INSTALL:
PL72
ANNOUNCERS PANEL
3G3450V00151
MS35214-27 SCREW (2 OFF)
ED300PL72 DECAL
VIEW LOOKING COCKPIT AREA
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
OUTBRD
UP
FWD
STA 1500

Figure 24

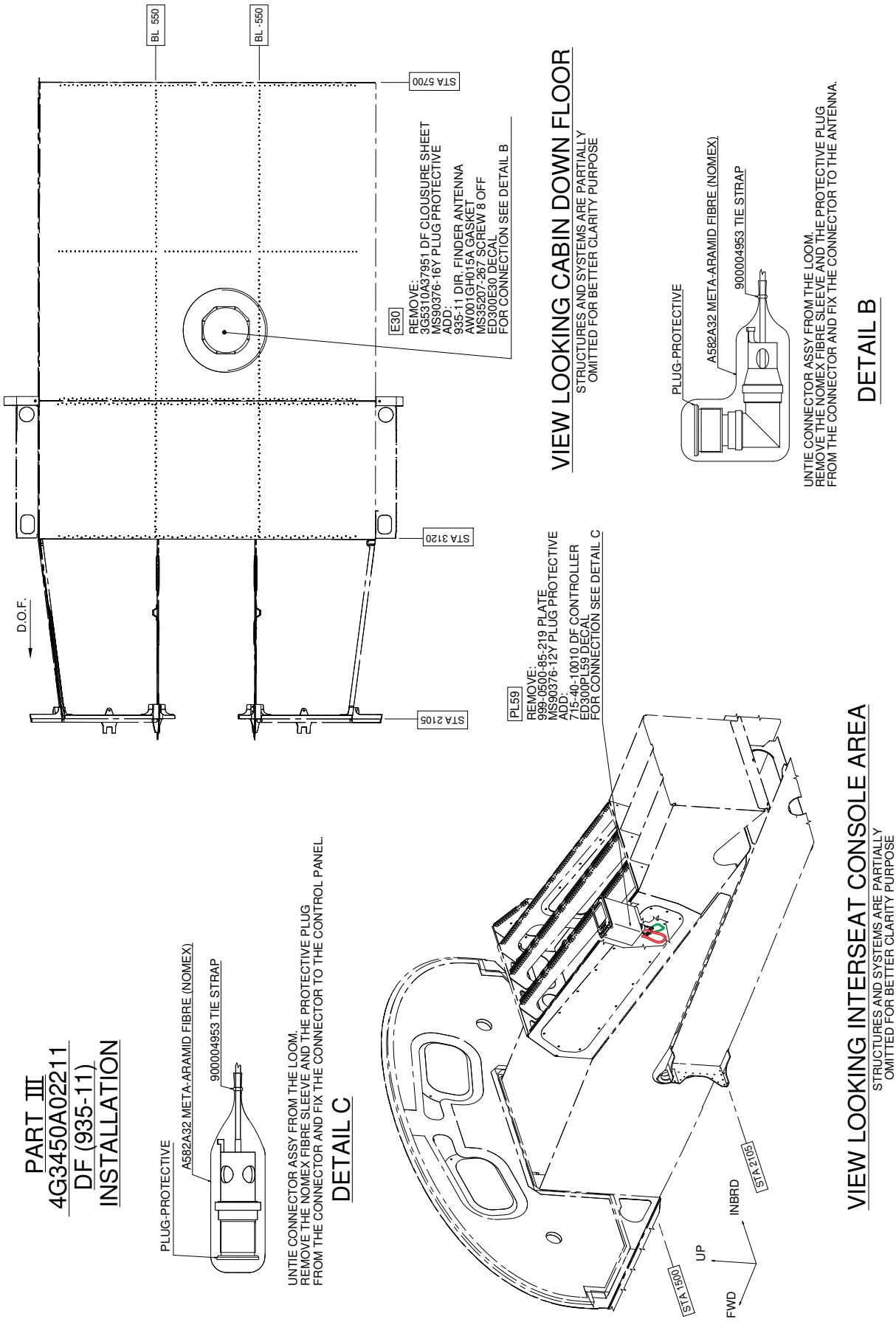
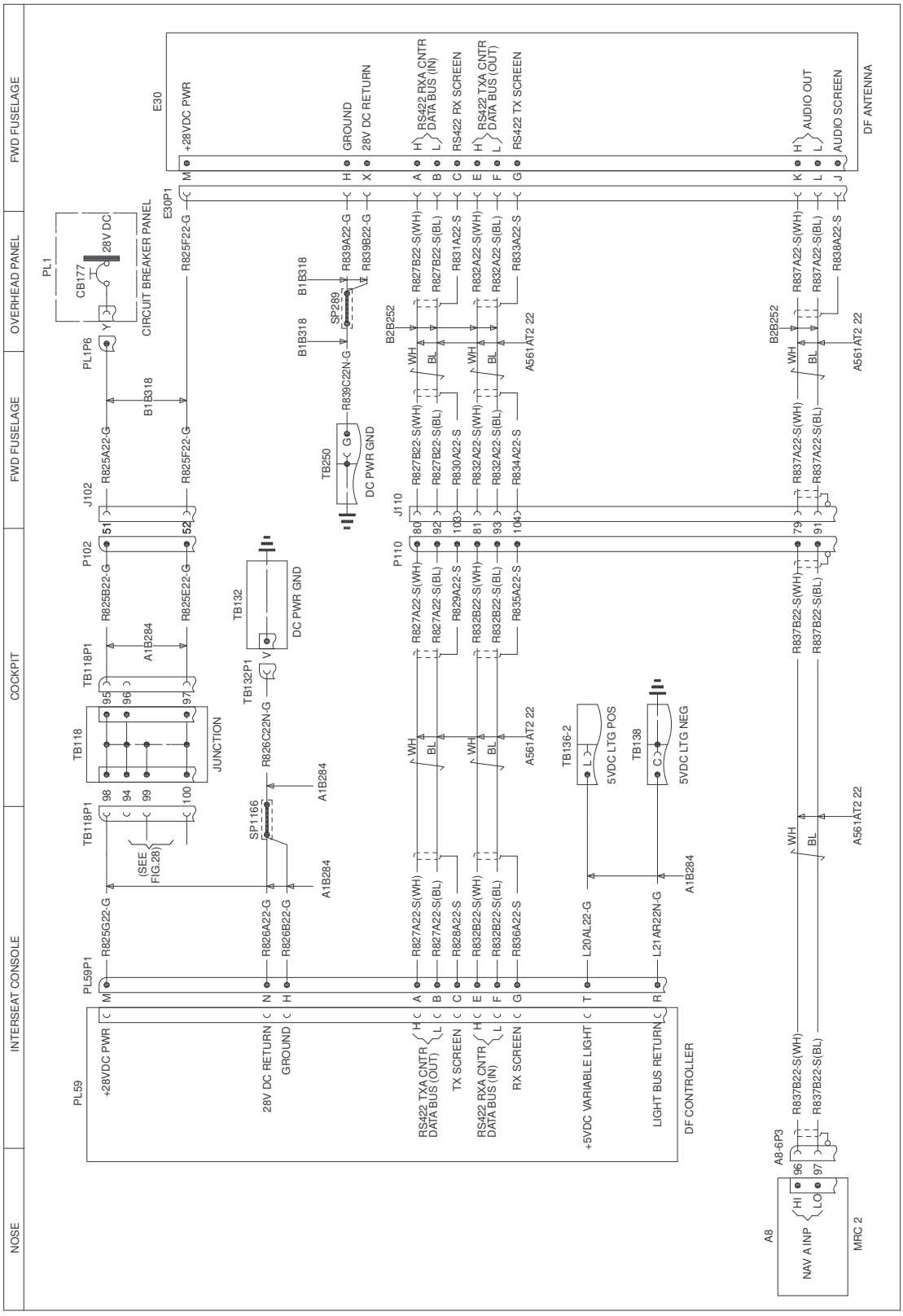
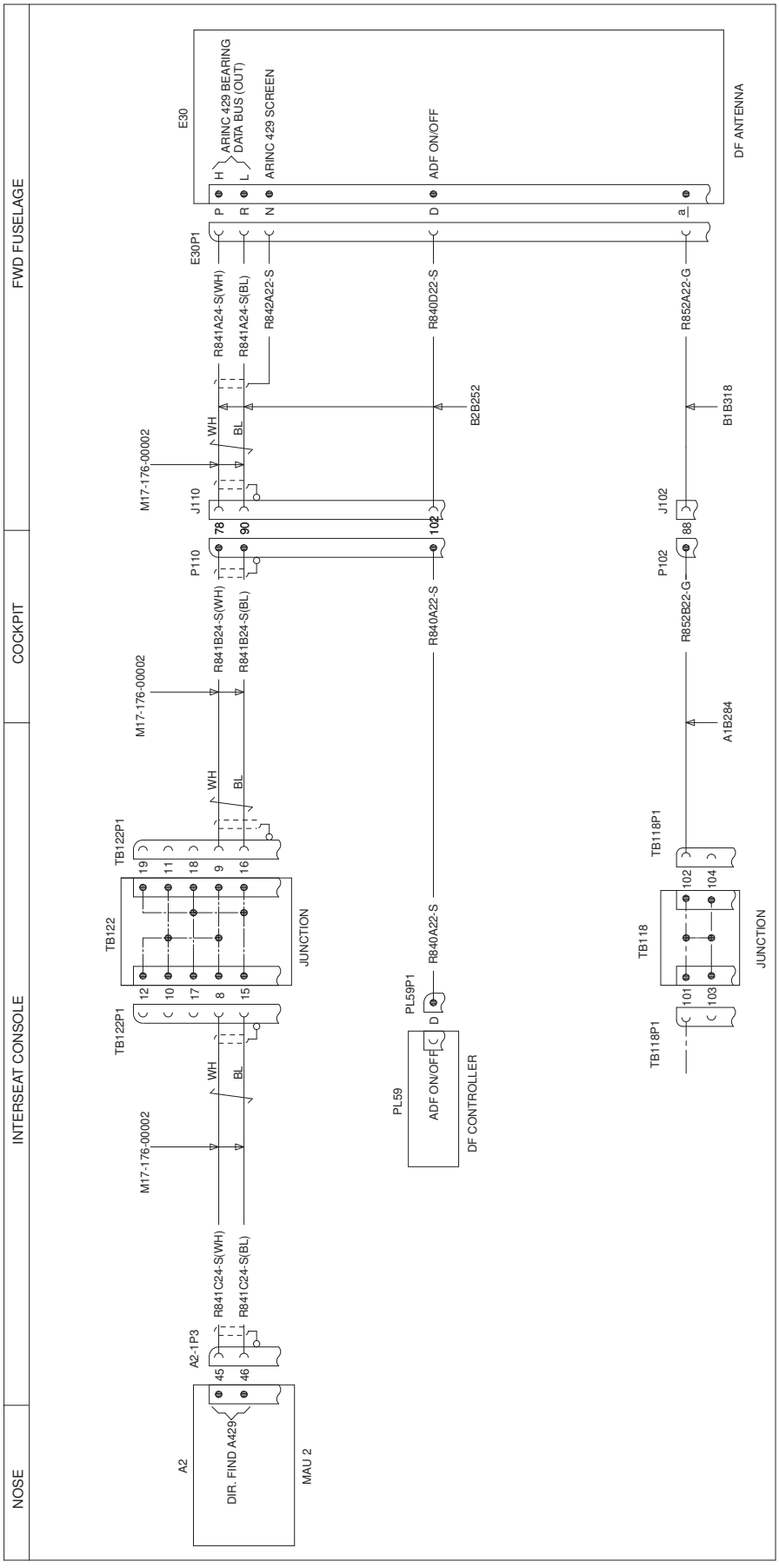

PART III
4G3450A02211
DF (935-11)
INSTALLATION
BL 550
BL -550
STA 5700
STA 3120
STA 2105
D.O.F.
E30
REMOVE:
3G5310A37951 DF CLOUSURE SHEET
MS90376-16Y PLUG PROTECTIVE
ADD:
935-11 DIR. FINDER ANTENNA
AW001GH0015A GASKET
MS35207-267 SCREW 8 OFF
ED300E30 DECAL
FOR CONNECTION SEE DETAIL B
VIEW LOOKING CABIN DOWN FLOOR
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
PLUG-PROTECTIVE
A582A32 META-ARAMID FIBRE (NOMEX)
900004953 TIE STRAP
UNTIE CONNECTOR ASSY FROM THE LOOM.
REMOVE THE NOMEX FIBRE SLEEVE AND THE PROTECTIVE PLUG
FROM THE CONNECTOR AND FIX THE CONNECTOR TO THE ANTENNA.
DETAIL B
PL59
REMOVE:
999-0500-85-219 PLATE
MS90376-12Y PLUG PROTECTIVE
ADD:
715-40-10010 DF CONTROLLER
ED300PL59 DECAL
FOR CONNECTION SEE DETAIL C
PLUG-PROTECTIVE
A582A32 META-ARAMID FIBRE (NOMEX)
900004953 TIE STRAP
UNTIE CONNECTOR ASSY FROM THE LOOM.
REMOVE THE NOMEX FIBRE SLEEVE AND THE PROTECTIVE PLUG
FROM THE CONNECTOR AND FIX THE CONNECTOR TO THE CONTROL PANEL.
DETAIL C
VIEW LOOKING INTERSEAT CONSOLE AREA
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
STA 1500
STA 2105
UP
INBRD
FWD

Figure 25



FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A2B259 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556 22 UNLESS SPECIFIED

Figure 26



FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A2B259 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

Figure 27

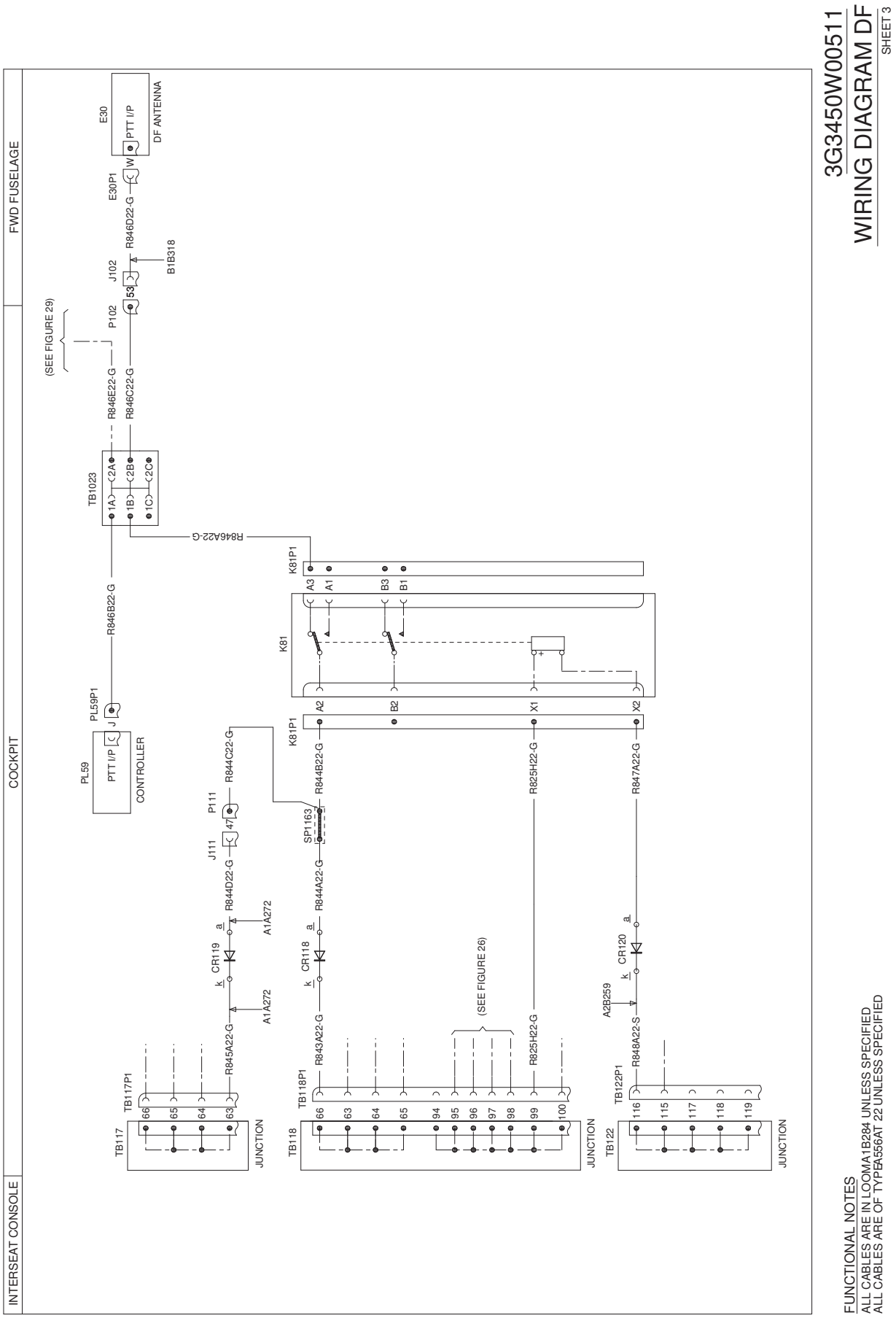
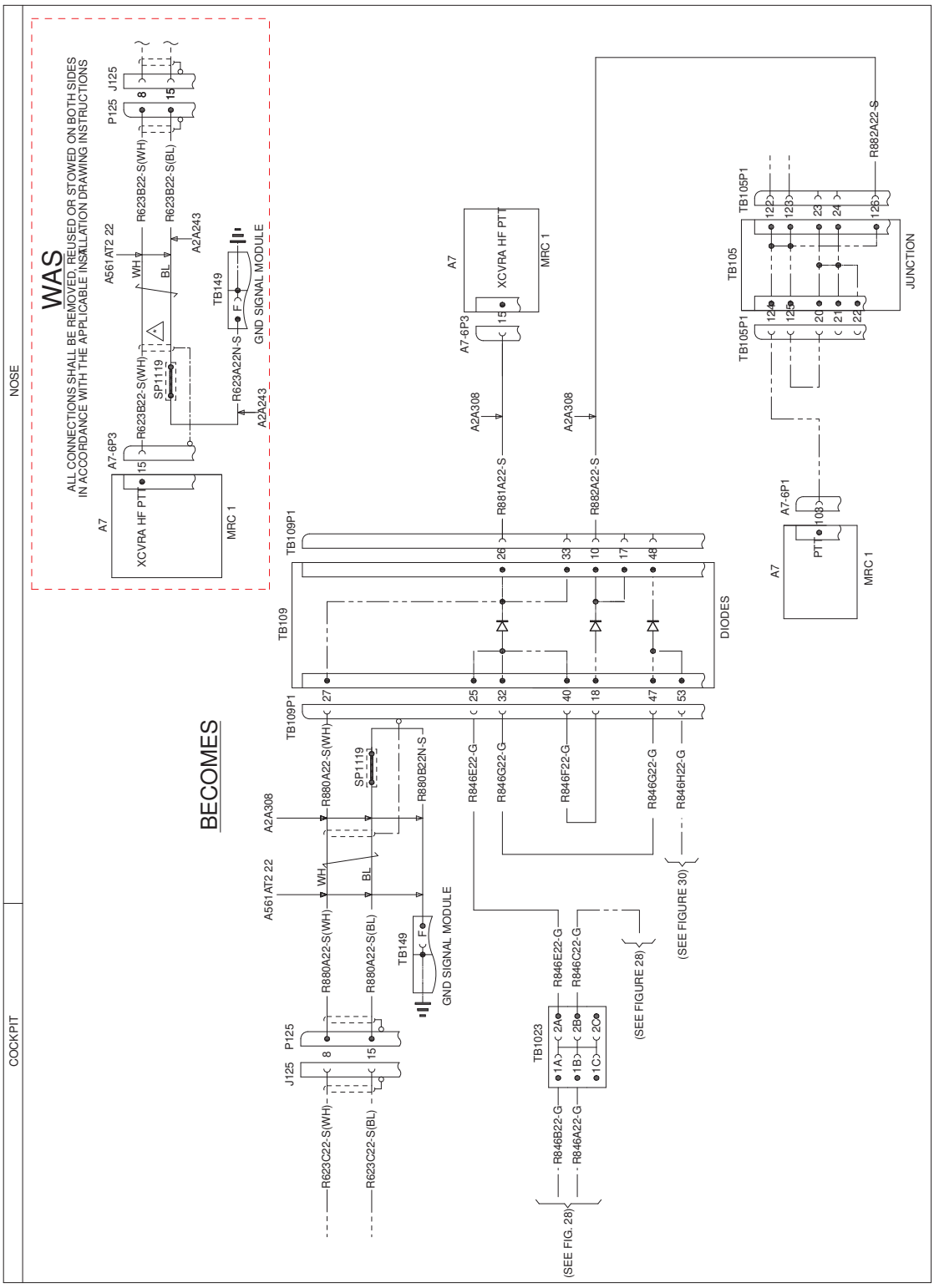
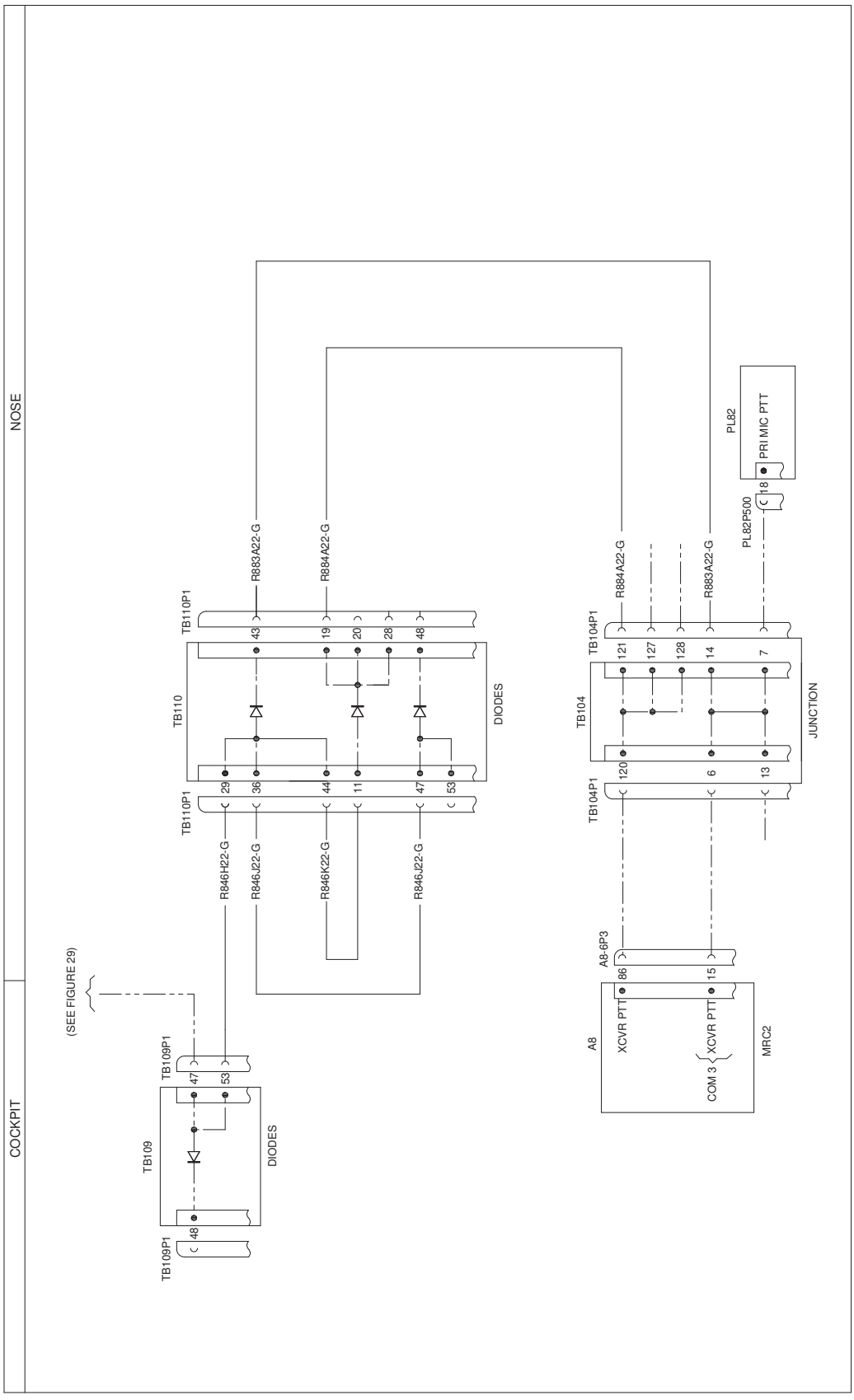

3G3450W00511
WIRING DIAGRAM DF
SHEET 3
INTERSEAT CONSOLE
COCKPIT
FWD FUSELAGE
(SEE FIGURE 29)
P102
J102
E30P1
E30
PTT I/P
DF ANTENNA
B1B318
R846E22-G
R846C22-G
R846D22-G
TB1023
1A
1B
1C
2A
2B
2C
R846A22-G
R846B22-G
PL59P1
PL59
PTT I/P
CONTROLLER
K81P1
K81
A3
A1
B3
B1
A2
B2
X1
X2
R844B22-G
R825H22-G
R847A22-G
SP1163
P111
J111
R844C22-G
R844D22-G
R844A22-G
CR119
CR118
CR120
A1A272
A2B259
R845A22-G
R843A22-G
R848A22-S
TB117P1
TB118P1
TB122P1
TB117
TB118
TB122
JUNCTION
(SEE FIGURE 26)
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1B284 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

Figure 28



FUNCTIONAL NOTES
ALL CABLES ARE IN LOOMA1B284 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

Figure 29



FUNCTIONAL NOTES
ALL CABLES ARE IN LOOMA1B284 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

Figure 30

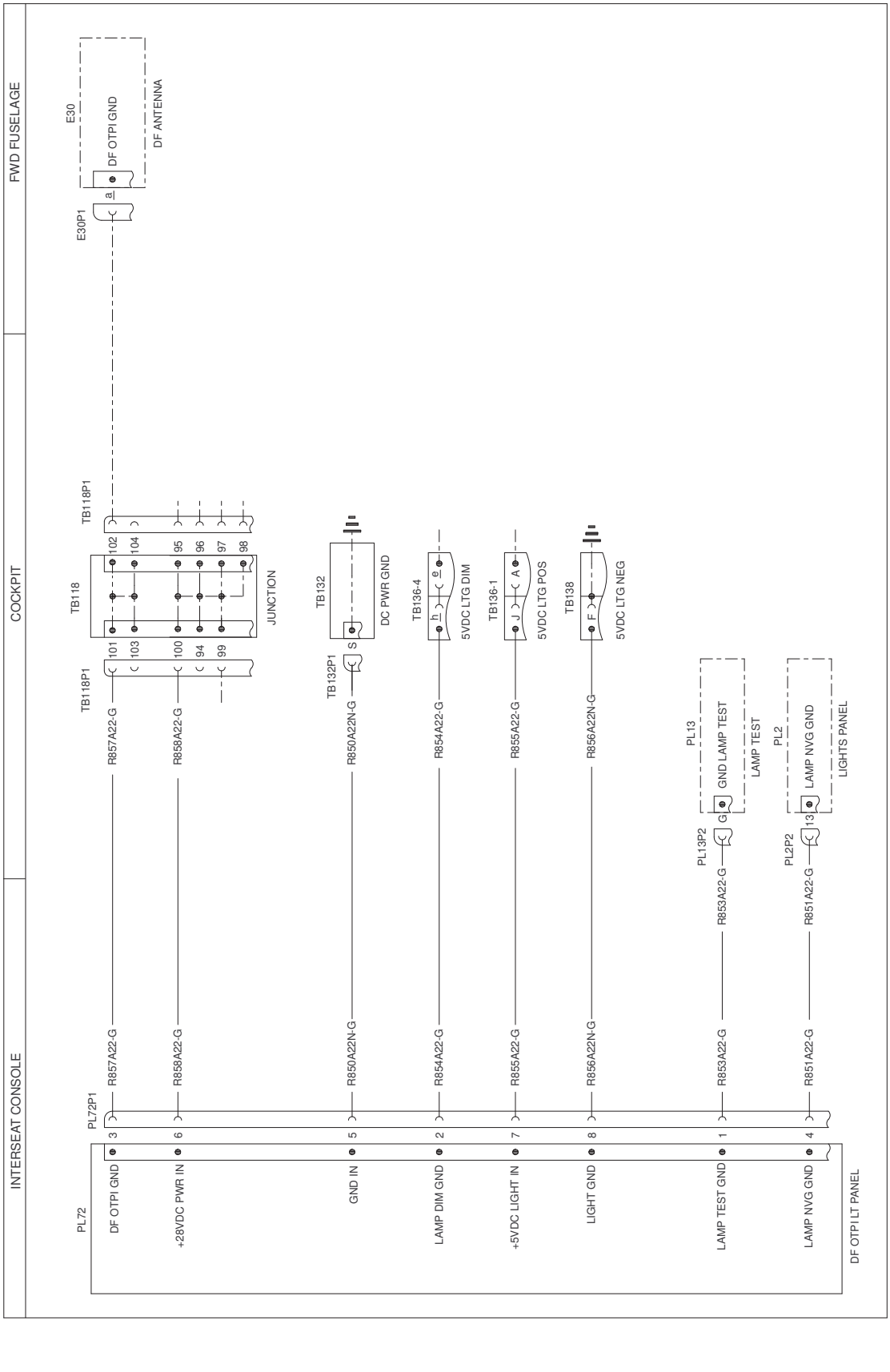

INTERSEAT CONSOLE
COCKPIT
FWD FUSELAGE
3G3450W01211
WIRING DIAGRAM DF OTPI LT PANEL (935-11)
SHEET 1
E30
DF OTPI GND
DF ANTENNA
E30P1
a
TB118P1
TB118
JUNCTION
102
104
95
96
97
98
101
103
100
94
99
TB132
DC PWR GND
TB132P1
S
TB136-4
5VDC LTG DIM
h
e
TB136-1
5VDC LTG POS
J
A
TB138
5VDC LTG NEG
F
PL13
GND LAMP TEST
G
LAMP TEST
PL2
LAMP NVG GND
13
LIGHTS PANEL
PL13P2
PL2P2
R857A22-G
R858A22-G
R850A22N-G
R854A22-G
R855A22-G
R856A22N-G
R853A22-G
R851A22-G
PL72P1
3
6
5
2
7
8
1
4
PL72
DF OTPI GND
+28VDC PWR IN
GND IN
LAMP DIM GND
+5VDC LIGHT IN
LIGHT GND
LAMP TEST GND
LAMP NVG GND
DF OTPI LT PANEL
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1B298 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED

Figure 31

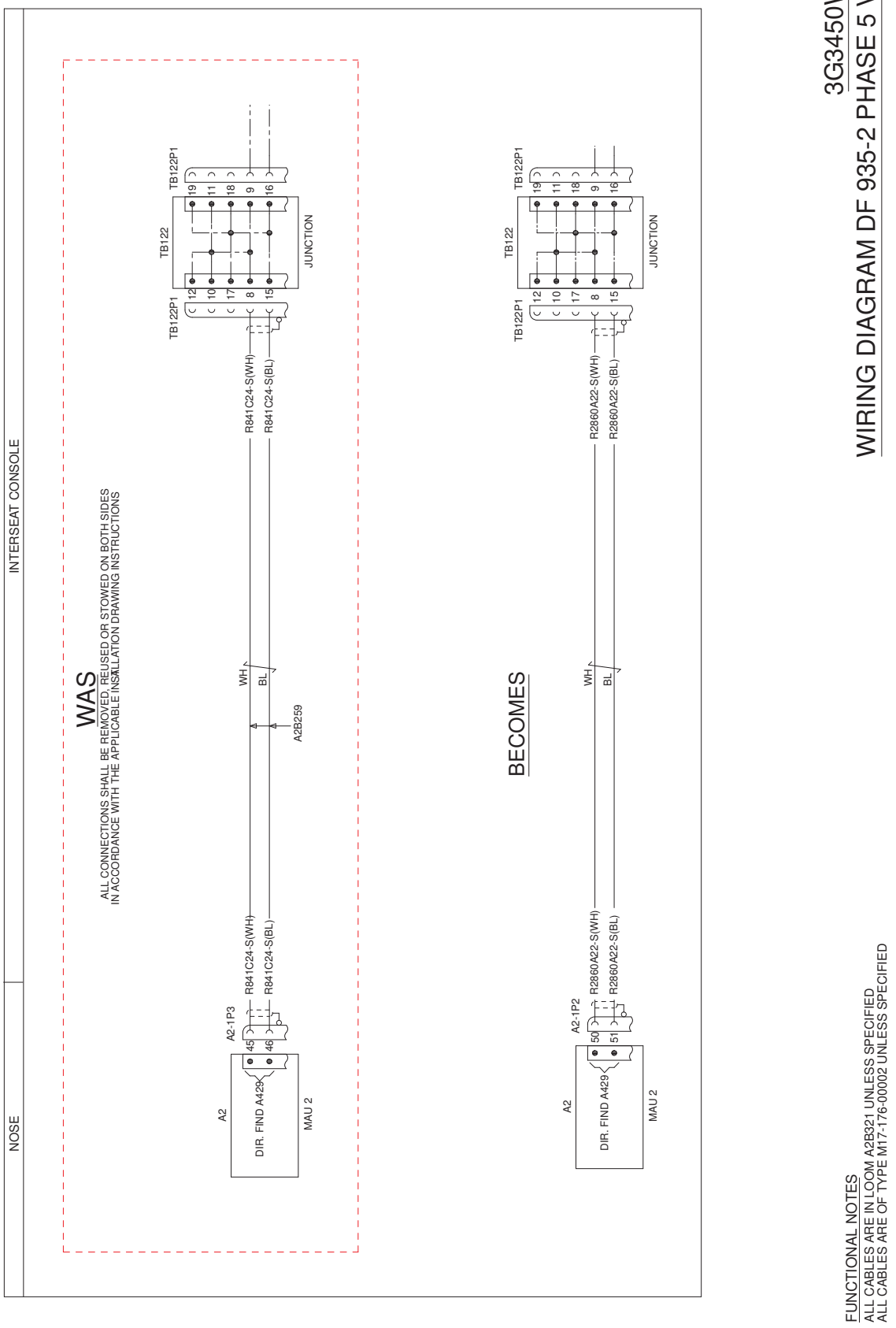

3G3450W02111
WIRING DIAGRAM DF 935-2 PHASE 5 VARIANT
SHEET 1
NOSE
INTERSEAT CONSOLE
WAS
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS
A2
DIR. FIND A429
MAU 2
A2-1P3
45
46
R841C24-S(WH)
R841C24-S(BL)
WH
BL
A2B259
TB122P1
12
10
17
8
15
TB122
19
11
18
9
16
JUNCTION
BECOMES
A2-1P2
50
51
R2860A22-S(WH)
R2860A22-S(BL)
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A2B321 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE M17-176-00002 UNLESS SPECIFIED

Figure 32

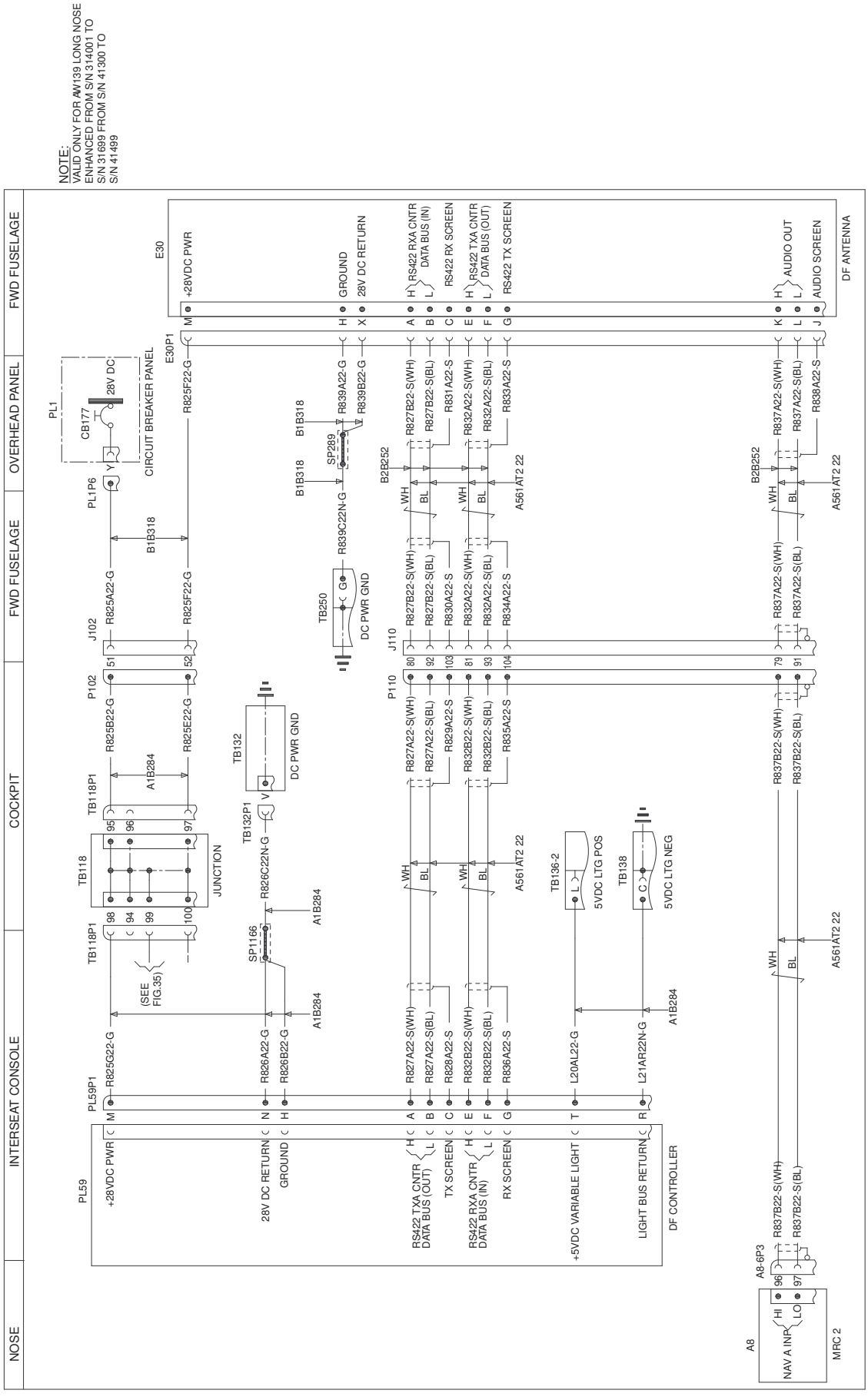
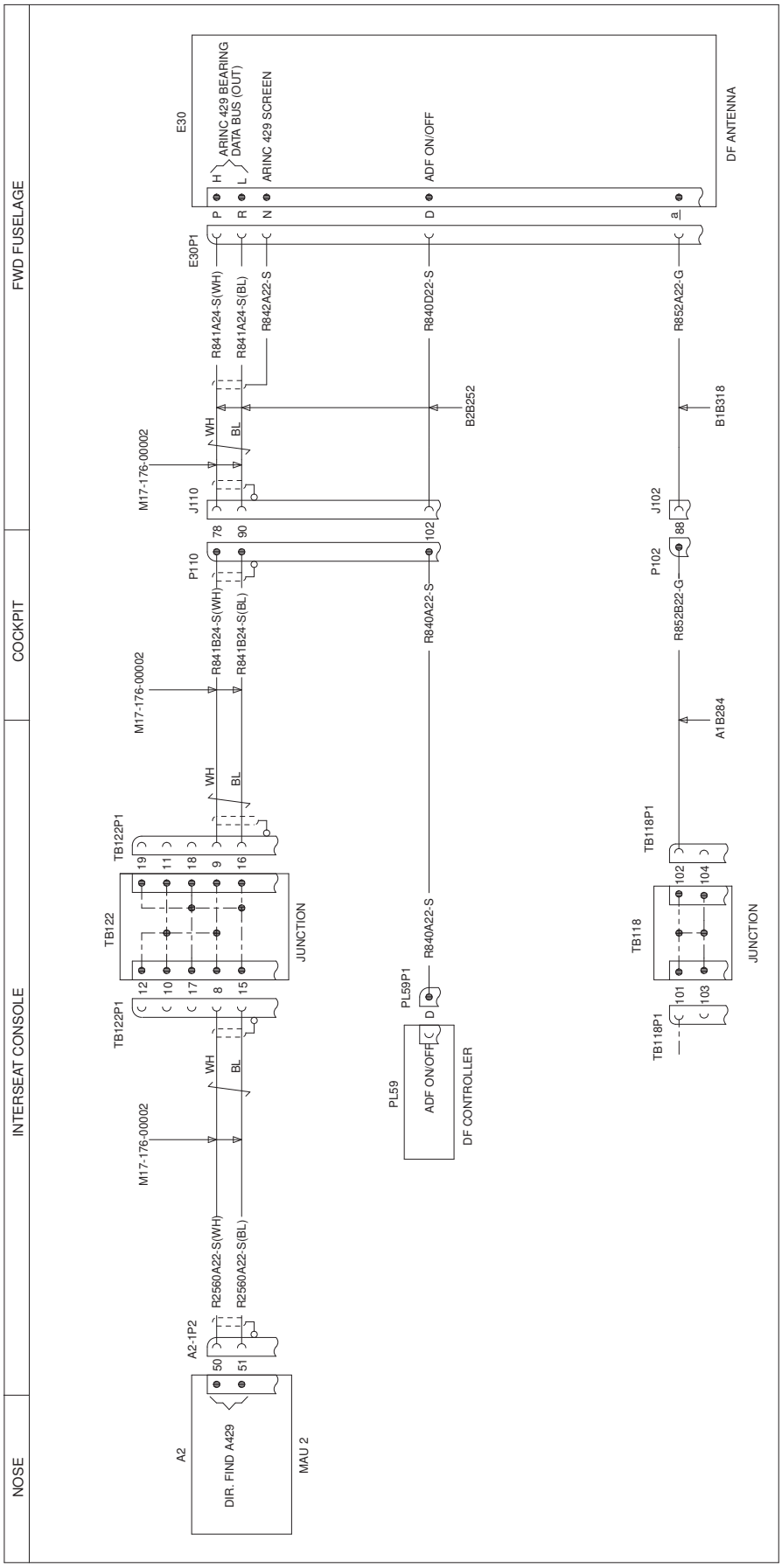

NOTE:
VALID ONLY FOR AW139 LONG NOSE
ENHANCED FROM S/N 31400 TO
S/N 31699 FROM S/N 41300 TO
S/N 41499
NOSE
INTERSEAT CONSOLE
COCKPIT
FWD FUSELAGE
OVERHEAD PANEL
FWD FUSELAGE
PL59
+28VDC PWR
28V DC RETURN
GROUND
RS422 TXA CNTR DATA BUS (OUT)
TX SCREEN
RS422 RXA CNTR DATA BUS (IN)
RX SCREEN
+5VDC VARIABLE LIGHT
LIGHT BUS RETURN
DF CONTROLLER
PL59P1
R825G22-G
R826A22-G
R826B22-G
R827A22-S(WH)
R827A22-S(BL)
R828A22-S
R832B22-S(WH)
R832B22-S(BL)
R836A22-S
L20AL22-G
L21AR22N-G
A1B284
(SEE FIG.35)
TB118P1
TB118
JUNCTION
TB118P1
95
96
97
98
94
99
100
A1B284
R825B22-G
R825E22-G
P102
J102
51
52
R825A22-G
R825F22-G
TB132
TB132P1
DC PWR GND
SP11166
R826C22N-G
A1B284
A1B284
P110
J110
80
92
103
81
93
104
R827A22-S(WH)
R827A22-S(BL)
R829A22-S
R832B22-S(WH)
R832B22-S(BL)
R835A22-S
WH
BL
A561AT2 22
TB136-2
5VDC LTG POS
TB138
5VDC LTG NEG
PL1
CB177
28V DC
PL1P6
CIRCUIT BREAKER PANEL
B1B318
E30P1
R825F22-G
B1B318
B1B318
SP289
R839A22-G
R839B22-G
R839C22N-G
TB250
DC PWR GND
E30
+28VDC PWR
GROUND
28V DC RETURN
RS422 RXA CNTR DATA BUS (IN)
RS422 RX SCREEN
RS422 TXA CNTR DATA BUS (OUT)
RS422 TX SCREEN
M
H
X
A
B
C
E
F
G
R827B22-S(WH)
R827B22-S(BL)
R831A22-S
R832A22-S(WH)
R832A22-S(BL)
R833A22-S
R834A22-S
B2B252
WH
BL
A561AT2 22
DF ANTENNA
AUDIO OUT
AUDIO SCREEN
K
L
J
R837A22-S(WH)
R837A22-S(BL)
R838A22-S
R837B22-S(WH)
R837B22-S(BL)
A8
A8-6P3
NAV A INP
HI
LO
96
97
MRC 2
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A2B259 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556 22 UNLESS SPECIFIED

Figure 33

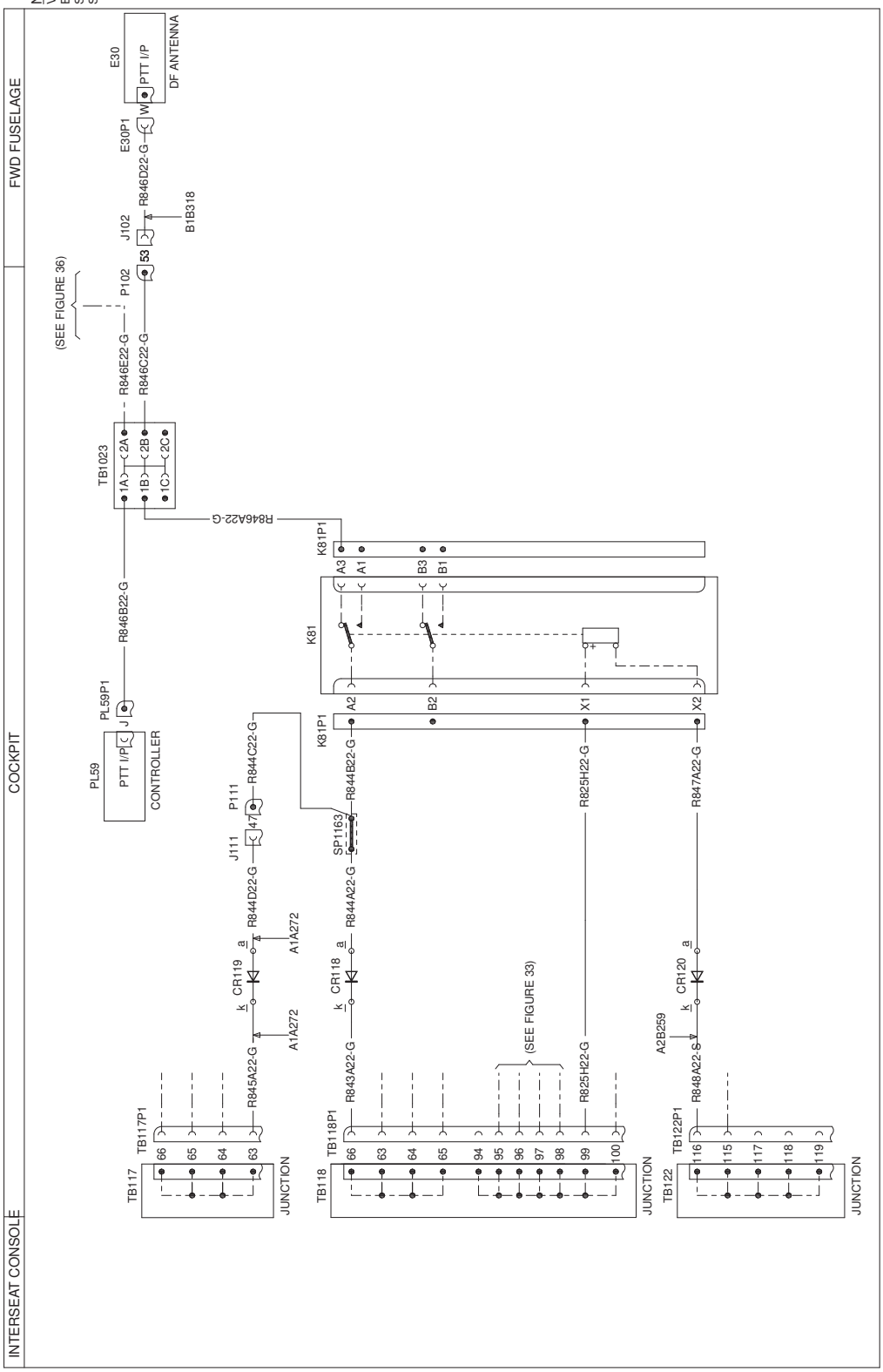


NOTE:
VALID ONLY FOR AW139 LONG NOSE
ENHANCED FROM S/N 314001 TO
S/N 31699 FROM S/N 41300 TO
S/N 41499

FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A2B259 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556M 22 UNLESS SPECIFIED

3G3450W00512
WIRING DIAGRAM DF
SHEET 2

Figure 34



FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1B284 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556 22 UNLESS SPECIFIED

Figure 35

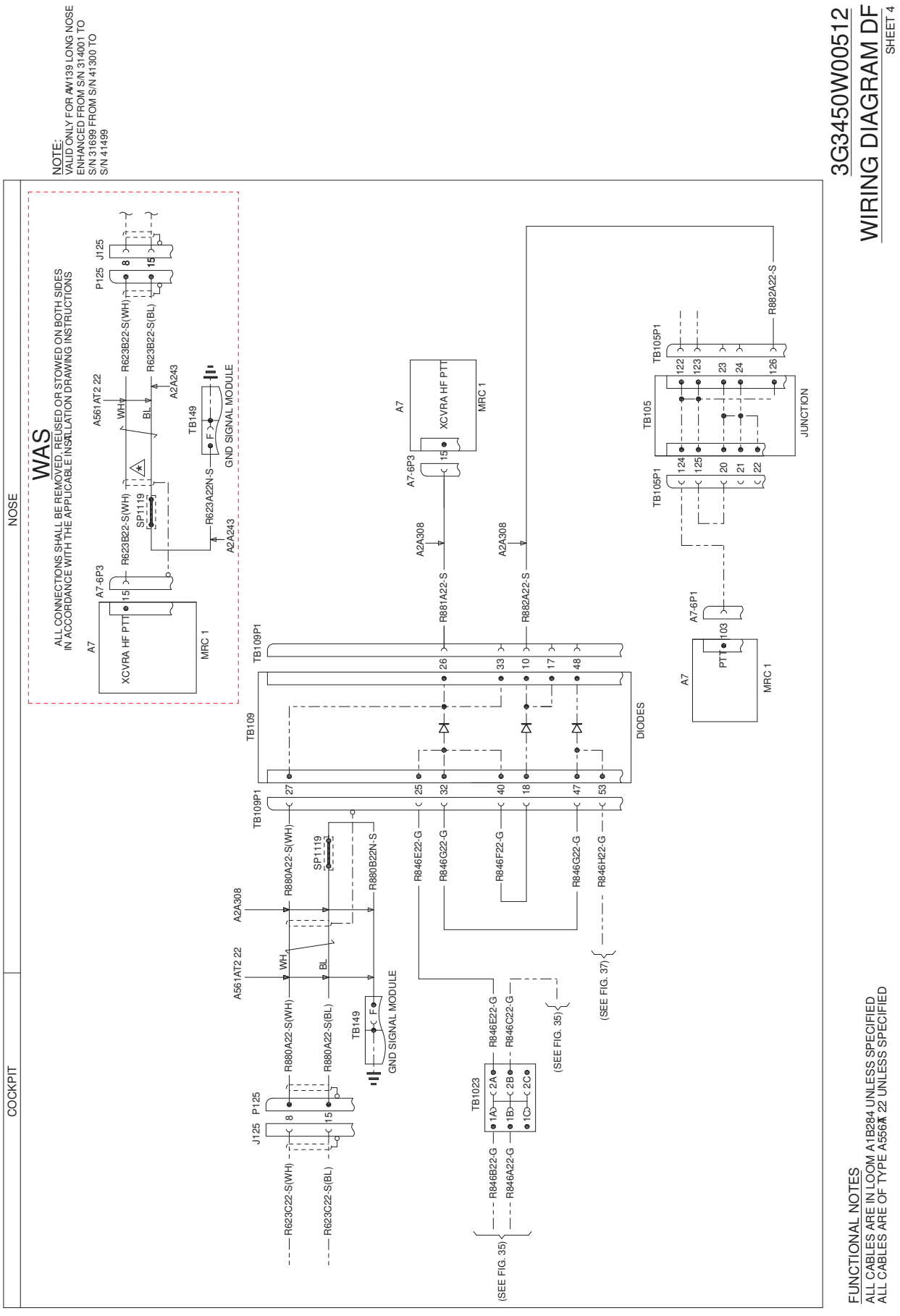
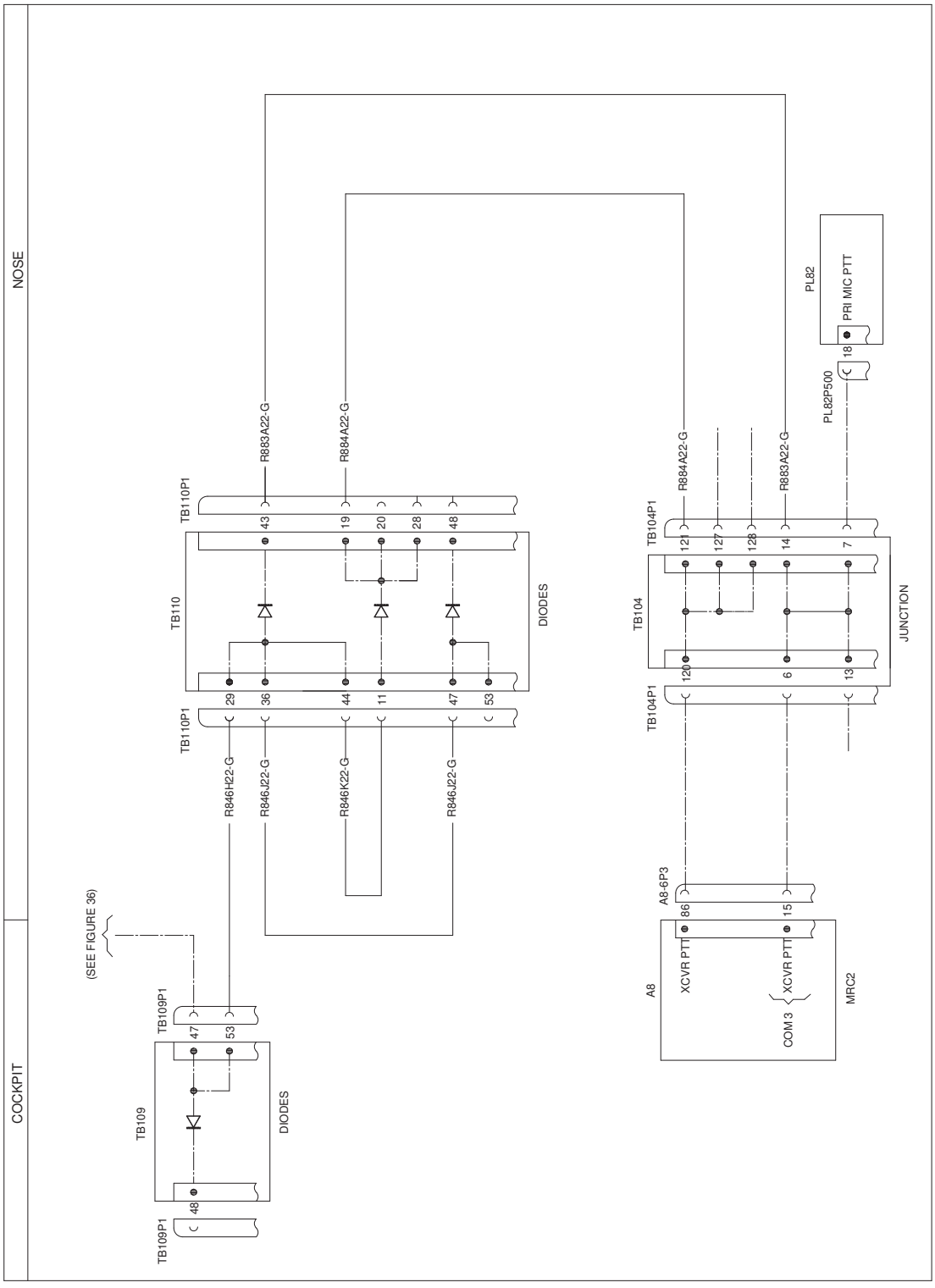

3G3450W00512
WIRING DIAGRAM DF
SHEET 4
NOTE:
VALID ONLY FOR AW139 LONG NOSE
ENHANCED FROM S/N 314001 TO
S/N 31699 FROM S/N 41300 TO
S/N 41499
NOSE
COCKPIT
WAS
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES
IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS
A7
XCVRA HF PTT
A7-6P3
15
MRC 1
R623B22-S(WH)
R623B22-S(BL)
SP1119
A561AT2 22
WH
BL
A2A243
TB149
F
GND SIGNAL MODULE
R623A22N-S
P125
J125
8
15
R623C22-S(WH)
R623C22-S(BL)
TB109P1
TB109
27
R880A22-S(WH)
R880A22-S(BL)
R880B22N-S
A2A308
R881A22-S
R882A22-S
26
33
10
17
48
25
32
40
18
47
53
R846E22-G
R846G22-G
R846F22-G
R846H22-G
DIODES
(SEE FIG. 37)
(SEE FIG. 35)
TB1023
1A
2A
1B
2B
1C
2C
R846B22-G
R846A22-G
TB105P1
TB105
JUNCTION
122
123
23
24
126
124
125
20
21
22
R882A22-S
A7-6P1
103
PTT
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1B284 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556A 22 UNLESS SPECIFIED

Figure 36



FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1B284 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556A 22 UNLESS SPECIFIED

Figure 37

4G3450A00711 DF C/A ELECTRICAL PROVISION

Cable Assy	Wire		From Ref Des	Pin From	Electrical Contact	To Ref Des	Pin To	Electrical Contact
	ID	Col.						
A1A272	R845A22-G		CR119	k	A523A-A02	TB117P1	63	M39029/56-348
	R844D22-G		J111	47	M39029/56-348	CR119	a	A523A-A02
A1B284	R843A22-G		CR118	k	A523A-A02	TB118P1	66	M39029/56-348
	R844A22-G		CR118	a	A523A-A02	SP1163	*	N.A.
	R847A22-G		CR120	a	A523A-A02	K81P1	X2	A656A03
	R825H22-G		K81P1	X1	A656A03	TB118P1	99	M39029/56-348
	R846A22-G		K81P1	A3	A656A03	TB1023	1B	001104-200-02
	L20AL22-G		PL59P1	T	M39029/5-115	TB136/2	L	001104-202-02
	L21AR22N-G		PL59P1	R	M39029/5-115	TB138	C	001104-202-02
	R825G22-G		PL59P1	M	M39029/5-115	TB118P1	98	M39029/56-348
	R826A22-G		PL59P1	N	M39029/5-115	SP1166	*	N.A.
	R844B22-G		SP1163	*	N.A.	K81P1	A2	A656A03
	R844C22-G		SP1163	*	N.A.	P111	47	M39029/58-360
	R826B22-G		SP1166	*	N.A.	PL59P1	H	M39029/5-115
	R826C22N-G		SP1166	*	N.A.	TB132P1	V	M39029/56-351
	R846B22-G		TB1023	1A	001104-200-02	PL59P1	J	M39029/5-115
	R846C22-G		TB1023	2B	001104-200-02	P102	53	M39029/58-360
	R846E22-G		TB1023	2A	001104-200-02	TB109P1	25	M39029/56-348
	R846F22-G		TB109P1	40	M39029/56-348	TB109P1	18	M39029/56-348
	R846G22-G		TB109P1	32	M39029/56-348	TB109P1	47	M39029/56-348
	R846H22-G		TB109P1	53	M39029/56-348	TB110P1	29	M39029/56-348
	R846J22-G		TB110P1	36	M39029/56-348	TB110P1	47	M39029/56-348
	R846K22-G		TB110P1	44	M39029/56-348	TB110P1	11	M39029/56-348
	R883A22-G		TB110P1	43	M39029/56-348	TB104P1	14	M39029/56-348
	R884A22-G		TB110P1	19	M39029/56-348	TB104P1	121	M39029/56-348
	R825B22-G		TB118P1	95	M39029/56-348	P102	51	M39029/58-360
	R825E22-G		TB118P1	97	M39029/56-348	P102	52	M39029/58-360
	R852B22-G		TB118P1	102	M39029/56-348	P102	88	M39029/58-360
A2A308	R881A22-S		A7-6P3	15	M39029/57-354	TB109P1	26	M39029/56-348
	R880A22-S	BL	P125	15	M39029/58-360	SP1119	*	N.A.
		WH	P125	8	M39029/58-360	TB109P1	27	M39029/56-348
	R882A22-S		TB105P1	126	M39029/56-348	TB109P1	10	M39029/56-348
	R880B22N-S		TB149	F	001104-202-02	SP1119	*	N.A.

Figure 38

4G3450A00711 DF C/A ELECTRICAL PROVISION

Cable Assy	Wire ID	Wire Col.	From Ref Des	Pin From	Electrical Contact	To Ref Des	Pin To	Electrical Contact
A2B259	R841C24-S	WH	A2-1P3	45	M39029/57-354	TB122P1	8	M39029/56-348
		BL	A2-1P3	46	M39029/57-354	TB122P1	15	M39029/56-348
	R837B22-S	WH	A8-6P3	96	M39029/57-354	P110	79	M39029/58-360
		BL	A8-6P3	97	M39029/57-354	P110	91	M39029/58-360
	R829A22-S		P110	103	M39029/58-360	P110	*	N.A.
	R832B22-S	WH	P110	81	M39029/58-360	PL59P1	E	M39029/5-115
		BL	P110	93	M39029/58-360	PL59P1	F	M39029/5-115
	R835A22-S		P110	104	M39029/58-360	P110	*	N.A.
	R827A22-S	WH	PL59P1	A	M39029/5-115	P110	80	M39029/58-360
		BL	PL59P1	B	M39029/5-115	P110	92	M39029/58-360
	R828A22-S		PL59P1	C	M39029/5-115	PL59P1	*	N.A.
	R836A22-S		PL59P1	G	M39029/5-115	PL59P1	*	N.A.
	R840A22-S		PL59P1	D	M39029/5-115	P110	102	M39029/58-360
	R841B24-S	WH	TB122P1	9	M39029/56-348	P110	78	M39029/58-360
		BL	TB122P1	16	M39029/56-348	P110	90	M39029/58-360
	R848A22-S		TB122P1	116	M39029/56-348	CR120	k	A523A-A02
B1B318	R825A22-G		J102	51	M39029/56-348	PL1P6	Y	M39029/58-363
	R825F22-G		J102	52	M39029/56-348	E30P1	M	M39029/5-115
	R846D22-G		J102	53	M39029/56-348	E30P1	W	M39029/5-115
	R852A22-G		J102	88	M39029/56-348	E30P1	a	M39029/5-115
	R839A22-G		SP289	*	N.A.	E30P1	H	M39029/5-115
	R839B22-G		SP289	*	N.A.	E30P1	X	M39029/5-115
	R839C22N-G		TB250	G	A523A-A02	SP289	*	N.A.
B2B252	R831A22-S		E30P1	C	M39029/5-115	E30P1	*	N.A.
	R833A22-S		E30P1	G	M39029/5-115	E30P1	*	N.A.
	R838A22-S		E30P1	J	M39029/5-115	E30P1	*	N.A.
	R842A22-S		E30P1	N	M39029/5-115	E30P1	*	N.A.
	R827B22-S	WH	J110	80	M39029/56-348	E30P1	A	M39029/5-115
		BL	J110	92	M39029/56-348	E30P1	B	M39029/5-115
	R830A22-S		J110	103	M39029/56-348	J110	*	N.A.
	R832A22-S	WH	J110	81	M39029/56-348	E30P1	E	M39029/5-115
		BL	J110	93	M39029/56-348	E30P1	F	M39029/5-115
	R834A22-S		J110	104	M39029/56-348	J110	*	N.A.
	R837A22-S	WH	J110	79	M39029/56-348	E30P1	K	M39029/5-115
		BL	J110	91	M39029/56-348	E30P1	L	M39029/5-115
	R840D22-S		J110	102	M39029/56-348	E30P1	D	M39029/5-115
	R841A24-S	WH	J110	78	M39029/56-348	E30P1	P	M39029/5-115
		BL	J110	90	M39029/56-348	E30P1	R	M39029/5-115

Figure 39

4G3450A00712 DF C/A ELECTRICAL PROVISION

Cable Assy	Wire		From Ref Des	Pin From	Electrical Contact	To Ref Des	Pin To	Electrical Contact
	ID	Col.						
A1A272	R845A22-G		CR119	k	A523A-A02	TB117P1	63	M39029/56-348
	R844D22-G		J111	47	M39029/56-348	CR119	a	A523A-A02
A1B284	R843A22-G		CR118	k	A523A-A02	TB118P1	66	M39029/56-348
	R844A22-G		CR118	a	A523A-A02	SP1163	*	N.A.
	R847A22-G		CR120	a	A523A-A02	K81P1	X2	A656A03
	R825H22-G		K81P1	X1	A656A03	TB118P1	99	M39029/56-348
	R846A22-G		K81P1	A3	A656A03	TB1023	1B	001104-200-02
	L20AL22-G		PL59P1	T	M39029/5-115	TB136/2	L	001104-202-02
	L21AR22N-G		PL59P1	R	M39029/5-115	TB138	C	001104-202-02
	R825G22-G		PL59P1	M	M39029/5-115	TB118P1	98	M39029/56-348
	R826A22-G		PL59P1	N	M39029/5-115	SP1166	*	N.A.
	R844B22-G		SP1163	*	N.A.	K81P1	A2	A656A03
	R844C22-G		SP1163	*	N.A.	P111	47	M39029/58-360
	R826B22-G		SP1166	*	N.A.	PL59P1	H	M39029/5-115
	R826C22N-G		SP1166	*	N.A.	TB132P1	V	M39029/56-351
	R846B22-G		TB1023	1A	001104-200-02	PL59P1	J	M39029/5-115
	R846C22-G		TB1023	2B	001104-200-02	P102	53	M39029/58-360
	R846E22-G		TB1023	2A	001104-200-02	TB109P1	25	M39029/56-348
	R846F22-G		TB109P1	40	M39029/56-348	TB109P1	18	M39029/56-348
	R846G22-G		TB109P1	32	M39029/56-348	TB109P1	47	M39029/56-348
	R846H22-G		TB109P1	53	M39029/56-348	TB110P1	29	M39029/56-348
	R846J22-G		TB110P1	36	M39029/56-348	TB110P1	47	M39029/56-348
	R846K22-G		TB110P1	44	M39029/56-348	TB110P1	11	M39029/56-348
	R883A22-G		TB110P1	43	M39029/56-348	TB104P1	14	M39029/56-348
	R884A22-G		TB110P1	19	M39029/56-348	TB104P1	121	M39029/56-348
	R825B22-G		TB118P1	95	M39029/56-348	P102	51	M39029/58-360
	R825E22-G		TB118P1	97	M39029/56-348	P102	52	M39029/58-360
	R852B22-G		TB118P1	102	M39029/56-348	P102	88	M39029/58-360
A2A308	R881A22-S		A7-6P3	15	M39029/57-354	TB109P1	26	M39029/56-348
	R880A22-S	BL	P125	15	M39029/58-360	SP1119	*	N.A.
		WH	P125	8	M39029/58-360	TB109P1	27	M39029/56-348
	R882A22-S		TB105P1	126	M39029/56-348	TB109P1	10	M39029/56-348
	R880B22N-S		TB149	F	001104-202-02	SP1119	*	N.A.

Figure 40

4G3450A00712 DF C/A ELECTRICAL PROVISION

Cable Assy	Wire		From Ref Des	Pin From	Electrical Contact	To Ref Des	Pin To	Electrical Contact
	ID	Col.						
A2B259	R841C24-S	WH	A2-1P2	50	M39029/57-354	TB122P1	8	M39029/56-348
		BL	A2-1P2	51	M39029/57-354	TB122P1	15	M39029/56-348
	R837B22-S	WH	A8-6P3	96	M39029/57-354	P110	79	M39029/58-360
		BL	A8-6P3	97	M39029/57-354	P110	91	M39029/58-360
	R829A22-S		PL59P1	A	M39029/5-115	P110	80	M39029/58-360
	R832B22-S	WH	PL59P1	B	M39029/5-115	P110	92	M39029/58-360
		BL	PL59P1	C	M39029/5-115	PL59P1	*	N.A.
	R835A22-S		PL59P1	G	M39029/5-115	PL59P1	*	N.A.
	R827A22-S	WH	PL59P1	D	M39029/5-115	P110	102	M39029/58-360
		BL	P110	103	M39029/58-360	P110	*	N.A.
	R828A22-S		P110	81	M39029/58-360	PL59P1	E	M39029/5-115
	R836A22-S		P110	93	M39029/58-360	PL59P1	F	M39029/5-115
	R840A22-S		P110	104	M39029/58-360	P110	*	N.A.
	R841B24-S	WH	TB122P1	16	M39029/56-348	P110	90	M39029/58-360
		BL	TB122P1	9	M39029/56-348	P110	78	M39029/58-360
	R848A22-S		TB122P1	116	M39029/56-348	CR120	k	A523A-A02
B1B318	R825A22-G		J102	51	M39029/56-348	PL1P6	Y	M39029/58-363
	R825F22-G		J102	52	M39029/56-348	E30P1	M	M39029/5-115
	R846D22-G		J102	53	M39029/56-348	E30P1	W	M39029/5-115
	R852A22-G		J102	88	M39029/56-348	E30P1	a	M39029/5-115
	R839A22-G		SP289	*	N.A.	E30P1	H	M39029/5-115
	R839B22-G		SP289	*	N.A.	E30P1	X	M39029/5-115
	R839C22N-G		TB250	G	A523A-A02	SP289	*	N.A.
B2B252	R831A22-S		E30P1	C	M39029/5-115	E30P1	*	N.A.
	R833A22-S		E30P1	G	M39029/5-115	E30P1	*	N.A.
	R838A22-S		E30P1	J	M39029/5-115	E30P1	*	N.A.
	R842A22-S		E30P1	N	M39029/5-115	E30P1	*	N.A.
	R827B22-S	WH	J110	80	M39029/56-348	E30P1	A	M39029/5-115
		BL	J110	92	M39029/56-348	E30P1	B	M39029/5-115
	R830A22-S		J110	103	M39029/56-348	J110	*	N.A.
	R832A22-S	WH	J110	81	M39029/56-348	E30P1	E	M39029/5-115
		BL	J110	93	M39029/56-348	E30P1	F	M39029/5-115
	R834A22-S		J110	104	M39029/56-348	J110	*	N.A.
	R837A22-S	WH	J110	79	M39029/56-348	E30P1	K	M39029/5-115
		BL	J110	91	M39029/56-348	E30P1	L	M39029/5-115
	R840D22-S		J110	102	M39029/56-348	E30P1	D	M39029/5-115
	R841A24-S	WH	J110	78	M39029/56-348	E30P1	P	M39029/5-115
		BL	J110	90	M39029/56-348	E30P1	R	M39029/5-115

Figure 41

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.