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AgustaWestland Products

SERVICE BULLETIN

OPTIONAL

N° 139-687

DATE: October 24, 2023

REV. : /

TITLE

ATA 34 - DIGITAL MAP IMPROVEMENT

REVISION LOG

First Issue

An appropriate entry should be made in the aircraft log book upon accomplishment.
If ownership of aircraft has changed, please, forward to new owner.

1. PLANNING INFORMATION

A. EFFECTIVITY

Part I:

AB139/AW139 helicopters S/N 31048, 31059, 31076, 31078, 31137 and 31145 equipped with kit DMAP P/N 3G9310F00112.

Part II:

AW139 helicopters S/N 31403, 31413, 31420, 31427, 31434, 31439, 31448, 31469, 31481, 31489, 31521, 31526 and 31528 equipped with kit DMAP P/N 3G9310F00112.

B. COMPLIANCE

At Customer's option.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

Due to logistic issues with control panel P/N OB2106-001 and processor unit P/N OB2101-003, this Service Bulletin provides the instructions to perform the upgrade of the DMAP system hardware with the installation of the new versions of the components (the control panel P/N OB2106-003 and the processor unit P/N OB2101-004).

Part I provide instructions to apply the electrical variant P/N 3G9310P02312, to replace the control panel P/N OB2106-001 with P/N OB2106-003 and to replace the processor P/N OB2101-003 with P/N OB2101-004 on Short Nose helicopters.

Part II provide instructions to apply the installation of the electrical variant P/N 3G9310P02311, to replace the control panel P/N OB2106-001 with P/N OB2106-003 and to replace processor P/N OB2101-003 with P/N OB2101-004 on the remaining AW139 helicopters.

The SB instructions apply also for control panel P/N OB2106-002 NVG version of P/N OB2106-001.

The replacement of either P/N OB2106-001 or P/N OB2101-003 does require the mandatory replacement of the other component.

LH issued this SB for the following reason:

Helicopter Reliability/Maintainability	
Product Improvement	
Obsolescence	
Customization	✓
Product/Capability Enhancement	

E. DESCRIPTION

This Service Bulletin is issued to provide the necessary instructions to perform the installation of the Digital Map variant P/N 3G9310P04412 and P/N 3G9310P04411.

F. APPROVAL

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

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

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

G. MANPOWER

To comply with this Service Bulletin the following MMH are deemed necessary:

Part I: approximately twenty-four (24) MMH;

Part II: approximately twenty-four (24) MMH;

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

H. WEIGHT AND BALANCE

PART I

WEIGHT (Kg)		0.45
	ARM (mm)	**MOMENT (Kgmm)**
LONGITUDINAL BALANCE	6951	3127.95
LATERAL BALANCE	-409	-184.05

PART II

N.A.

I. REFERENCES

I.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.	I, II
DM02	39-A-06-41-00-00A-010A-A	Access doors and panels – General data	I, II
DM03	39-A-34-57-01-00A-520A-K	Processor unit - Remove procedure	I, II
DM04	39-A-34-57-02-00A-520A-K	Control unit - Remove procedure	I, II
DM05	39-A-34-57-01-00A-720A-K	Processor unit - Install procedure	I, II
DM06	39-A-34-57-02-00A-720A-K	Control unit - Install procedure	I, II
DM07	39-A-34-57-00-00A-320A-K	Moving map system – Operation test	I, II
DM08	39-A-20-10-18-00A-691A-A	Electrical wires and cables – Marking	I, II
DM09	39-A-20-10-08-00A-622A-A	Electrical contacts - Crimp	I, II
DM10	39-A-11-00-01-00A-720A-A	Decal – Install procedure	I, II
DM11	39-A-20-10-01-00A-259A-A	Ground connections - Other procedures to protect surfaces	I

I.2 ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency

IPD	Illustrated Parts Data
LH	Leonardo Helicopters
MMH	Maintenance Man Hours
PCMCIA	Personal Computer Memory Card Association
P/N	Part Number
S/N	Serial Number
TB	Terminal Board

I.3 ANNEX

N.A.

J. PUBLICATIONS AFFECTED

N.A.

K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

A.1 PARTS

PART I

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	**3G9310P04412**		**DIGITAL MAP INSTALLATION VARIANT**	**REF**	.		-
2	**3G9310P02312**		**DIGITAL MAP SKYFORCE ELECT VARIANT**	**REF**	..		-
3	**3G5310P23811**		**DIGITAL MAP STRUCTURAL VARIANT**	**REF**	...		-
4	999-5000-30-108	AW007TE-30-108	Insert	4	…		139-687L1
5	NAS1836-3-15M		Insert	2	…		139-687L1
6	**3G9310A17831**		**SWITCH DMAP PANEL ASSY**	**REF**	...		-
7	**3G5317A81651**		**SWITCH DMAP PANEL**	**REF**	....		-
8	999-0500-85-137		Panel	1	…..		139-687L1
9	AW001DF117B		Decal	1	….		139-687L1
10	ED300S363		Decal	1	….		139-687L1
11	MS27722-23		Switch	1	….		139-687L1
12	**3G9C02A14701**		**DIGITAL MAP READER SKYFORCE (C2A147)**	**REF**	...		-
13	05-20-110-0-00GAD		Contact	4	….		139-687L1
14	A556A-T20		Wire	5 m	….		139-687L1
15	A556A-T22		Wire	5 m	….		139-687L1
16	A561A-T1-20		Wire	5 m	….		139-687L1
17	A561A-T2-22		Wire	10 m	….		139-687L1
18	A590A02		Ferrule	9	….		139-687L1
19	A590A03		Ferrule	1	….		139-687L1
20	AB050029-10-070000		Adapter	1	….		139-687L1
21	AB056100-10-07PN01		Connector	1	….		139-687L1
22	AW002WC01-24		Wire	5 m	….		139-687L1
23	M23053/8-004-C		Insulation sleeving	10 m	….		139-687L1
24	M24308/2-15F		Connector	1	….		139-687L1
25	M24308/25-10F		Screw	2	….		139-687L1
26	M39029/1-101		Contact	2	….		139-687L1
27	M39029/12-149		Contact	3	….		139-687L1
28	M39029/56-351		Contact	1	….		139-687L1
29	M39029/57-354		Contact	12	….		139-687L1
30	M81824/1-1		Splice insulated	2	….		139-687L1
31	M85049/48-2-5F		Backshell	1	….		139-687L1
32	MS25036-148		Terminal lug	3	….		139-687L1
33	MS27488-16-2		Sealing plug	1	…		139-687L1
34	OB2106-003		Control panel	1	..		139-687L1
35	OB2101-004		Processor unit	1	..		-
36	OB2700-XXX		Hard Drive Data Cartridge	1	..	(1)	-
37	OB2400-XXX		PCMCIA card (SW V4)	1	..	(1)	-

PART II

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
38	**3G9310P04411**		**DIGITAL MAP INSTALLATION VARIANT**	**REF**	**.**		**-**
39	**3G9310P02311**		**DIGITAL MAP SKYFORCE ELECT VARIANT**	**REF**	**..**		**-**
40	**3G9310A17831**		**SWITCH DMAP PANEL ASSY**	**REF**	**...**		**-**
41	**3G5317A81651**		**SWITCH DMAP PANEL**	**REF**	**....**		**-**
42	999-0500-85-137		Panel	1	.....		139-687L2
43	AW001DF117B		Decal	1	....		139-687L2
44	ED300S363		Decal	1	....		139-687L2
45	MS27722-23		Switch	1	....		139-687L2
46	**3G9C02A41401**		**DIGITAL MAP READER SKYFORCE (C2A414)**	**REF**	**...**	**(2)**	139-687L2
47	05-20-110-0-00GAD		Contact (pin)	4	....	(2)	-
48	A561A-T2-24		Wire	5 m	....	(2)	-
49	AB050029-10-070000		Adapter	1	....	(2)	-
50	AB056100-10-07PN01		Connector	1	....	(2)	-
51	M23053/8-004-C		Insulation sleeving	20 m	....	(2)	-
52	M39029/58-363		Contact	4	....	(2)	-
53	**3G9C02A41501**		**DIGITAL MAP READER SKYFORCE (C2A415)**	**REF**	**...**	**(2)**	139-687L2
54	05-20-110-0-00GAD		Contact	4	....	(2)	-
55	A523A-A02		Contact	1	....	(2)	-
56	A556A-T20		Wire	5 m	....	(2)	-
57	A556A-T22		Wire	2,5 m	....	(2)	-
58	A561A-T1-20		Wire	5 m	....	(2)	-
59	A561A-T2-22		Wire	10 m	....	(2)	-
60	A590A02		Ferrule	9	....	(2)	-
61	A590A03		Ferrule	1	....	(2)	-
62	AB050029-10-070000		Adapter	1	....	(2)	-
63	AB056100-10-07PN01		Connector	1	....	(2)	-
64	M23053/8-004-C		Insulation sleeving	20 m	....	(2)	-
65	M24308/2-15F		Connector	1	....	(2)	-
66	M24308/25-10F		Screw	2	....	(2)	-
67	M39029/1-102		Contact	2	....	(2)	-
68	M39029/12-149		Contact	3	....	(2)	-
69	M39029/57-354		Contact	12	....	(2)	-
70	M81824/1-1		Splice insulated	2	....	(2)	-
71	M85049/48-2-5F		Backshell	1	....	(2)	-
72	MS25036-148		Terminal lug	3	....	(2)	-
73	AW002WC01-24	NF24Q100-01	Cable	4 m	....	(2)	-
74	AW001CL008-CM		Support	1	...		139-687L2
75	MS27488-16-2		Sealing plug	1	...		139-687L2
76	OB2106-003		Control panel	1	..		139-687L2
77	OB2101-004		Processor unit	1	..		-
78	OB2700-XXX		Hard Drive Data Cartridge	1	..	(1)	-
79	OB2400-XXX		PCMCIA card (SW V4)	1	..	(1)	-
80	MS25036-148		Electrical contact	1	.	(3)	139-687L3
81	M39029/57-354		Electrical contact	4	.	(3)	139-687L3
82	A590A02		Ferrule	2	.	(3)	139-687L3
83	M23053/8-004-C		Insulation sleeving	1 m	.	(3)	139-687L3
84	A556A-T22		Wire	1 m	.	(3)	139-687L3

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

A.2 CONSUMABLES

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

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
85	A236A01AB	Edging	AR	(4)	I, II
86	199-05-002 TY II CL 2, Code No. 900004603	Adhesive EA 934NA AERO (C397)	AR	(5)	I

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

A.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
139-687L1	1		Part I
OB2101-004	1		
OB2700-XXX	1	(1)	
OB2400-XXX	1	(1)	
139-687L2	1		Part II
139-687L3	1	(3)	
OB2101-004	1		
OB2700-XXX	1	(1)	
OB2400-XXX	1	(1)	

NOTE

(1) This P/N is NOT complete, the final P/N is depending upon helicopter configuration that can be different from the one reported in relevant helicopter “Commessa di Vendita” Customers must contact Product Support Engineering (engineering.support.lhd@leonardo.com) to request the correct P/N at least three months in advance from the scheduled application of this Service Bulletin.

(2) Qty 1 of C/A 3G9C02A41401 and qty 1 of C/A 3G9C02A41501 can be provided already assembled with qty 1 of P/N 3G9310P02311A2R

(3) Item to be procured only if helicopter is equipped with mission console.

(4) Indicated P/N refer to a specific size. The last digits can be different based on the actual required installation.

(5) Item to be procured as local supply.

B. SPECIAL TOOLS

N.A.

C. INDUSTRY SUPPORT INFORMATION

Customization.

3. ACCOMPLISHMENT INSTRUCTIONS

GENERAL NOTES

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

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

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

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

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

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

g) Exposed thread surface and nut must be protected using a layer of tectyl according to MIL-C-16173 grade I.

h) All lengths are in mm.

PART I

1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 1 thru 4 and Figures 8 thru 10 wiring diagram, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform digital map installation variant P/N 3G9310P04412 as described in the following procedure:

   2.1 With reference to Figure 2 View B and Figure 8 wiring diagram WAS and in

accordance with AMP DM 39-A-34-57-02-00A-520A-K, remove the control panel P/N OB2106-001 (A104).

2.2 With reference to Figure 2 View A and Figure 8 wiring diagram BECOMES, remark the connector A104P1 as A104PS2.

2.3 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figures 1-2 and Figure 8 wiring diagram BECOMES, remark the cable assy C2A126 as C2A146 by means of marker sleeves.

2.4 With reference to Figure 2 View B and in accordance with AMP DM 39-A-34-57-02-00A-720A-K, install the control panel P/N OB2106-003 (A104).

2.5 With reference to Figure 2 View A and Figure 8 wiring diagram BECOMES, perform the electrical connection of the connector A104PS2 to the control panel P/N OB2106-003.

NOTE

Use the edging P/N A236A on edges which are liable to cause damage to cable assemblies or where abrasion may occur.

2.6 With reference to Figures 1 thru 4 and Figure 10 wiring diagram, perform digital map skyforce electrical variant P/N 3G9310P02312 as described in the following procedure:

2.6.1 With reference to Figure 3, perform digital map structural variant P/N 3G5310P23811 as follows:

2.6.1.1 With reference to Figure 2 View B, remove the existing control panel support and the relevant hardware. Retain the panel and the hardware for later reuse.

2.6.1.2 With reference to Figure 3, temporarily locate the control panel support in the indicated position on the panel assy P/N 3G5315A10931.

2.6.1.3 With reference to Figure 3, drill n°4 holes Ø20.00 in the previously countermarked positions.

2.6.1.4 With reference to Figure 3 Section E-E, install n°4 inserts P/N 999-5000-30-108 by means of adhesive EA 934NA AERO.

2.6.1.5 With reference to Figure 2 View A, remove the existing connector J190 and relevant hardware. Retain the connector and the hardware for later reuse.

2.6.1.6 With reference to Figure 3, temporarily locate the bracket P/N A426A01V110A in the indicated position on the panel assy P/N 3G5315A10931.

2.6.1.7 With reference to Figure 3 Detail F, drill n°2 holes Ø11.48÷11.61 in the previously countermarked positions.

2.6.1.8 With reference to Figure 3 Detail F, install n°2 inserts P/N NAS1836-3-15M by means of adhesive EA 934NA AERO.

2.6.1.9 With reference to Figure 3 and in accordance with AMP DM 39-A-20-10-01-00A-259A-A, prepare and protect the indicated areas to assure the correct electrical grounding.

2.6.1.10 With reference to Figure 2 View B, install the control panel support in the new position by means of existing hardware.

2.6.1.11 With reference to Figure 2 View A, install the connector J190 in the new position by means of existing hardware.

2.6.2 With reference to Figure 4, assemble switch DMAP panel assy P/N 3G9310A17831 as described in the following procedure:

2.6.2.1 Rework the panel P/N 999-0500-85-137 as shown in “999-0500-85-137 PANEL REWORK”, obtaining the panel P/N 3G5317A81651.

2.6.2.2 Install the switch P/N MS27722-23 on the panel P/N 3G5317A81651.

2.6.2.3 In accordance with AMP DM 39-A-11-00-01-00A-720A-A, install the decal P/N ED300S363 on the panel P/N 3G5317A81651.

2.6.2.4 In accordance with AMP DM 39-A-11-00-01-00A-720A-AA, install the decal P/N AW001DF117B on the panel P/N 3G5317A81651.

2.6.2.5 Mark the switch DMAP panel so obtained as 3G9310A17831.

2.6.2.6 Install the switch DMAP panel assy P/N 3G9310A17831 on the structure.

2.6.3 With reference to Figures 1 thru 4 and Figure 10 wiring diagram, assemble digital map reader variant C/A (C2A147) P/N 3G9C02A14701 as described in the following procedure:

2.6.3.1 With reference to Figures 1-2 and Figure 10 wiring diagram, cut n°6 wires P/N A561A-T2-22 of adequate length and lay them down between connector A103PA and the control panel A104.

2.6.3.2 With reference to Figures 2 View B, Table 1 and Figure 10 wiring diagram, connect the wires previously laid down with the two

splices P/N M81824/1-1 (SP3566 and SP3567). Apply n°6 ferrules P/N A590A02.

2.6.3.3 Assemble the connector A104P1. Use the connector P/N M24308/2-15F, the backshell P/N M85049/48-2-5F and the screw assy P/N M24308/25-10F.

2.6.3.4 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 1, Figures 1-2 and Figure 10 wiring diagram, perform electrical connections of the wires previously laid down to connector A103PA and to the connector A104P1.

2.6.3.5 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 10 wiring diagram, mark the wires as U7204A22-S (WH), U7204A22-S (BL), U7204B22-S (WH), U7204B22-S (BL), U7204C22-S (WH) and U7204C22-S (BL) by means of marker sleeves.

2.6.3.6 With reference to Figures 1-2 and Figure 10 wiring diagram, cut n°1 wire P/N A561A-T1-20 of adequate length and lay it down between the connector A103PA and the switch S363.

2.6.3.7 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 1, Figures 1-2 and Figure 10 wiring diagram, perform electrical connections of the wire laid down at the previous step to connector A103PA and to the switch S363. Apply n°1 ferrule P/N A590A02.

2.6.3.8 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 10 wiring diagram, mark the wire as U7203A20-S by means of marker sleeve.

2.6.3.9 With reference to Figure 2 View C and Figure 10 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay it down between ground stud A103GS1A and the connector A103PA.

2.6.3.10 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 1, Figure 2 View C and Figure 10 wiring diagram, perform electrical connections of the wire laid down at the previous step to the ground stud A103GS1A.

2.6.3.11 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 10 wiring diagram, mark the wire as U7202A22N-S by means of marker sleeve.

2.6.3.12 With reference to Figures 1-2 and Figure 10 wiring diagram, cut n°1 wire P/N A556A-T20 of adequate length and lay it down between the switch S363 and the ground module TB149.

2.6.3.13 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 1, Figures 1-2 and Figure 10 wiring diagram, perform electrical connections of the wire laid down at the previous step to the TB149 and to the switch S363.

2.6.3.14 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 10 wiring diagram, mark the wire as U7208A20N-S by means of marker sleeve.

2.6.3.15 With reference to Figures 2 View B and Figure 10 wiring diagram, cut n°3 wires P/N A561A-T2-22 of adequate length and lay it down adjacent to the connector A104P1 (pins 77, 78, 35, 56 and VSER).

2.6.3.16 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 1, Figure 2 View B and Figure 10 wiring diagram, perform electrical connections of the wires laid down at the previous step to the connector A104P1. Apply n°2 ferrules P/N A590A02.

2.6.3.17 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 10 wiring diagram, mark the wires as U7205A22-S (WH), U7205A22-S (BL), U7210A22-S by means of marker sleeves.

2.6.3.18 With reference to Figures 1-2 and Figure 10 wiring diagram, cut n°4 wires P/N AW002WC01-24 of adequate length and lay it down between the connector A104P1 and the processor unit (A103) and a wire P/N A561A-T2-22 adjacent to the connector A104P1.

2.6.3.19 Assemble the connector A103P1. Use the connector P/N AB056100-10-07PN01 and the backshell P/N AB050029-10-070000.

2.6.3.20 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 1, Figures 1-2 and Figure 10 wiring diagram, perform electrical connections of the wires laid down at the step 2.6.3.18 to the connector A104P1 and to the connector A103P1. Apply n°1 ferrule P/N A590A03.

2.6.3.21 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 10 wiring diagram, mark the wires as

U7206A24-S (RD), U7206A24-S (BL), U7206A24-S (YE), U7206A24-S (GN) and U7207A22-S by means of marker sleeves.

2.6.3.22 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figures 1-2 and Figure 10 wiring diagram, mark the cable assy so obtained as C2A147 by means of marker sleeves.

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

2.7 With reference to Figure 2 View B, install the sealing plug P/N MS27488-16-2 on the unused pin of the switch S363.

2.8 With reference to Figure 2 View C and Figure 9 wiring diagram WAS and in accordance with AMP DM 39-A-34-57-01-00A-520A-K, remove the processor unit P/N OB2101-003 (A103) and its relevant wires and connectors.

2.9 With reference to Figure 7 View A, remove the PCMCIA card P/N OBXXXX-XXX and the Hard Drive Data Cartridge P/N OB2111-XXX or P/N OB2700-XXX from processor unit P/N OB2101-003.

CAUTION

Be careful during the insertion of the PCMCIA card into the connector of the processor.

2.10 With reference to Figure 7 View A, install the new PCMCIA card (SW V4) P/N OB2400-XXX and the new Hard Drive Data Cartridge P/N OB2700-XXX in the new processor unit P/N OB2101-004.

2.11 With reference to Figure 2 View C and in accordance with AMP DM 39-A-34-57-01-00A-720A-K, install the processor unit P/N OB2101-004 (A103).

2.12 With reference to Figure 2 View C, perform the electrical connection of the connector A103P1 to the processor unit P/N OB2101-004.

3. In accordance with AMP DM 39-A-34-57-00-00A-320A-K, perform moving map system operation test.
4. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
5. Return the helicopter to flight configuration and record for compliance with Part I of this Service Bulletin on the helicopter logbook.
6. Gain access to My Communications section on Leonardo WebPortal and compile the “Service Bulletin Application Communication”.
   As an alternative, send the attached compliance form to the following mail box:
   engineering.support.lhd@leonardo.com

and (for North, Central and South America) also to:

AWPC.Engineering.Support@leonardocompany.us

PART II

1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 4 thru 6 and Figures 11 thru 13 wiring diagram, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform digital map installation variant P/N 3G9310P04411 as described in the following procedure:

2.1 With reference to Figure 6 View B and Figure 11 wiring diagram WAS and in accordance with AMP DM 39-A-34-57-02-00A-520A-K, remove the control panel P/N OB2106-001 (A104) and its relevant wires and connectors.

NOTE

Use the edging P/N A236A on edges which are liable to cause damage to cable assemblies or where abrasion may occur.

2.2 With reference to Figures 4 thru 6 and Figures 11 thru 13 wiring diagram, perform digital map skyforce electrical variant P/N 3G9310P02311 as described in the following procedure:

2.2.1 With reference to Figure 6 View B, install the support AW001CL008-CM.

2.2.2 With reference to Figure 4, assemble switch DMAP panel assy P/N 3G9310A17831 as described in the following procedure:

2.2.2.1 Rework the panel P/N 999-0500-85-137 as shown in “999-0500-85-137 PANEL REWORK”, obtaining the panel P/N 3G5317A81651.

2.2.2.2 Install the switch P/N MS27722-23 on the panel P/N 3G5317A81651.

2.2.2.3 In accordance with AMP DM 39-A-11-00-01-00A-720A-A, install the decal P/N ED300S363 on the panel P/N 3G5317A81651.

2.2.2.4 In accordance with AMP DM 39-A-11-00-01-00A-720A-A, install the decal P/N AW001DF117B on the panel P/N 3G5317A81651.

2.2.2.5 Mark the switch DMAP panel so obtained as 3G9310A17831.

2.2.2.6 Install the switch DMAP panel assy P/N 3G9310A17831 on the structure.

2.2.3 With reference to Figures 5-6 and Figure 11 wiring diagram, assemble digital map reader skyforce C/A (C2A414) P/N 3G9C02A41401 as described in the following procedure:

2.2.3.1 With reference to Figures 5-6 and Figure 11 wiring diagram BECOMES, cut n°4 wires P/N A561A-T2-24 of adequate length and lay them down between connector P219 and the control panel A104.

2.2.3.2 Assemble the connector A104PS2. Use the connector P/N AB056100-10-07PN01 and the adapter P/N AB050029-10-070000.

2.2.3.3 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 2, Figures 5-6 and Figure 11 wiring diagram BECOMES, perform electrical connections of the wires previously laid down to connector P219 and to the connector A104PS2.

2.2.3.4 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 11 wiring diagram BECOMES, mark the wires as U7200A24-S (WH), U7200A24-S (BL), U7201A24-S (WH) and U7201A24-S (BL) by means of marker sleeves.

2.2.3.5 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figures 5-6 and Figure 11 wiring diagram BECOMES, mark the cable assy so obtained as C2A414 by means of marker sleeves.

2.2.3.6 With reference to Figure 6 View A and Figure 11 wiring diagram BECOMES, perform the electrical connection of the connectors A104PS2 to the control panel.

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

2.2.4 With reference to Figures 5-6 and Figure 13 wiring diagram, assemble digital map reader skyforce C/A (C2A415) P/N 3G9C02A41501 as described in the following procedure:

2.2.4.1 With reference to Figures 5-6 and Figure 13 wiring diagram, cut n°6 wires P/N A561A-T2-22 of adequate length and lay them down between connector A103PA and the control panel A104.

2.2.4.2 With reference to Figure 6 View B and Figure 13 wiring diagram, connect the wires previously laid down with the two splices P/N M81824/1-1 (SP3566 and SP3567).

2.2.4.3 Assemble the connector A104P1. Use the connector P/N M24308/2-15F, the backshell P/N M85049/48-2-5F and the screw assy P/N M24308/25-10F.

2.2.4.4 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 3, Figures 1-2 and Figure 13 wiring diagram, perform electrical connections of the wires previously laid down to connector A103PA and to the connector A104P1. Apply n°6 ferrules P/N A590A02.

2.2.4.5 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 13 wiring diagram, mark the wires as U7204A22-S (WH), U7204A22-S (BL), U7204B22-S (WH), U7204B22-S (BL), U7204C22-S (WH) and U7204C22-S (BL) by means of marker sleeves.

2.2.4.6 With reference to Figures 5-6 and Figure 13 wiring diagram, cut n°1 wire P/N A561A-T1-20 of adequate length and lay it down between the connector A103PA and the switch S363.

2.2.4.7 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 3, Figures 5-6 and Figure 13 wiring diagram, perform electrical connections of the wire laid down at the previous step to connector A103PA and to the switch S363. Apply n°1 ferrule P/N A590A02.

2.2.4.8 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 13 wiring diagram, mark the wire as U7203A20-S by means of marker sleeve.

2.2.4.9 With reference to Figure 6 View C and Figure 13 wiring diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay it down between ground stud A103GS1A and the connector A103PA.

2.2.4.10 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 3, Figure 6 View C and Figure 13 wiring diagram, perform electrical connections of the wire laid down at the previous step to the ground stud A103GS1A.

2.2.4.11 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 13 wiring diagram, mark the wire as U7202A22N-S by means of marker sleeve.

2.2.4.12 With reference to Figures 5-6 and Figure 13 wiring diagram, cut n°1 wire P/N A556A-T20 of adequate length and lay it down between the switch S363 and the ground module TB305.

2.2.4.13 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 3, Figures 5-6 and Figure 13 wiring diagram, perform electrical connections of the wire laid down at the previous step to the TB305 and to the switch S363.

2.2.4.14 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 13 wiring diagram, mark the wire as U7208A20N-S by means of marker sleeve.

2.2.4.15 With reference to Figure 6 View B and Figure 13 wiring diagram, cut n°3 wires P/N A561A-T2-22 of adequate length and lay it down adjacent to the connector A104P1 (pins 77, 78, 35, 56 and VSER).

2.2.4.16 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 3, Figure 6 View B and Figure 13 wiring diagram, perform electrical connections of the wires laid down at the previous step to the connector A104P1. Apply n°2 ferrules P/N A590A02.

2.2.4.17 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 13 wiring diagram, mark the wires as U7205A22-S (WH), U7205A22-S (BL), U7210A22-S by means of marker sleeves.

2.2.4.18 With reference to Figures 5-6 and Figure 13 wiring diagram, cut n°4 wires P/N NF24Q100-01 of adequate length and lay it down between the connector A104P1 and the processor unit (A103) and a wire P/N A561A-T2-22 adjacent to the connector A104P1.

2.2.4.19 Assemble the connector A103P1. Use the connector P/N AB056100-10-07PN01 and the backshell P/N AB050029-10-070000.

2.2.4.20 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 3, Figures 5-6 and Figure 13 wiring diagram, perform electrical connections of the wires laid down at the step 2.2.4.18 to the connector A104P1 and to the connector A103P1. Apply n°1 ferrule P/N A590A03.

2.2.4.21 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 13 wiring diagram, mark the wires as U7206A24-S (RD), U7206A24-S (BL), U7206A24-S (YE), U7206A24-S (GN) and U7207A22-S by means of marker sleeves.

2.2.4.22 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figures 5-6 and Figure 13 wiring diagram, mark the cable assy so obtained as C2A415 by means of marker sleeves.

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

NOTE

Perform the step 2.3 only if helicopter is equipped with mission console.

2.3 With reference to Figure 14 wiring diagram, rework the C/A C2A277 as described in the following procedure:

2.3.1 With reference to Figure 14 wiring diagram WAS, disconnect the four wires from the pins F, B, D, E of the connector A104P2.

2.3.2 With reference to Figure 14 wiring diagram BECOMES, cut n°1 wire P/N A556A-T22 of adequate length and lay it down adjacent to the connector A104P1 (VSER).

2.3.3 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Table 4 and Figure 14 wiring diagram BECOMES, perform electrical connections of the wires disconnected and laid down at the previous steps to the connector A104P1. Apply n°2 ferrules P/N A590A02.

2.3.4 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 14 wiring diagram BECOMES, mark the wires as U7225A22-S (WH), U7225A22-S (BL), U7226A22-S (WH), U7226A22-S (BL) and U7227A22-S by means of marker sleeves.

2.3.5 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 14 wiring diagram, mark the cable assy so obtained as C2A416 by means of marker sleeves.

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

2.4 With reference to Figure 6 View B, install the sealing plug P/N MS27488-16-2 on the unused pin of the switch S363.

2.5 With reference to Figure 2 View C and Figure 9 wiring diagram WAS and in accordance with AMP DM 39-A-34-57-01-00A-520A-K, remove the processor unit P/N OB2101-003 (A103) and its relevant wires and connectors.

2.6 With reference to Figure 7 View A, remove the PCMCIA card P/N OBXXXX-XXX and the Hard Drive Data Cartridge P/N OB2111-XXX from processor unit

P/N OB2101-003.

CAUTION

Be careful during the insertion of the PCMCIA card into the connector of the processor.

2.7 With reference to Figure 7 View A, install the new PCMCIA card (SW V4) P/N OB2400-XXX and the new Hard Drive Data Cartridge P/N OB2700-XXX in the new processor unit P/N OB2101-004.

2.8 With reference to Figure 2 View C and in accordance with AMP DM 39-A-34-57-01-00A-720A-K, install the processor unit P/N OB2101-004 (A103).

2.9 With reference to Figure 6 and Figure 13 wiring diagram, perform the electrical connection of the connectors A103P1 to the processor unit P/N OB2101-004 and the connector A104P1 to the control panel P/N OB2106-003.

3. In accordance with AMP DM 39-A-34-57-00-00A-320A-K, perform moving map system operation test.
4. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
5. Return the helicopter to flight configuration and record for compliance with Part II of this Service Bulletin on the helicopter logbook.
6. Gain access to My Communications section on Leonardo WebPortal and compile the “Service Bulletin Application Communication”.

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   and (for North, Central and South America) also to:

   AWPC.Engineering.Support@leonardocompany.us

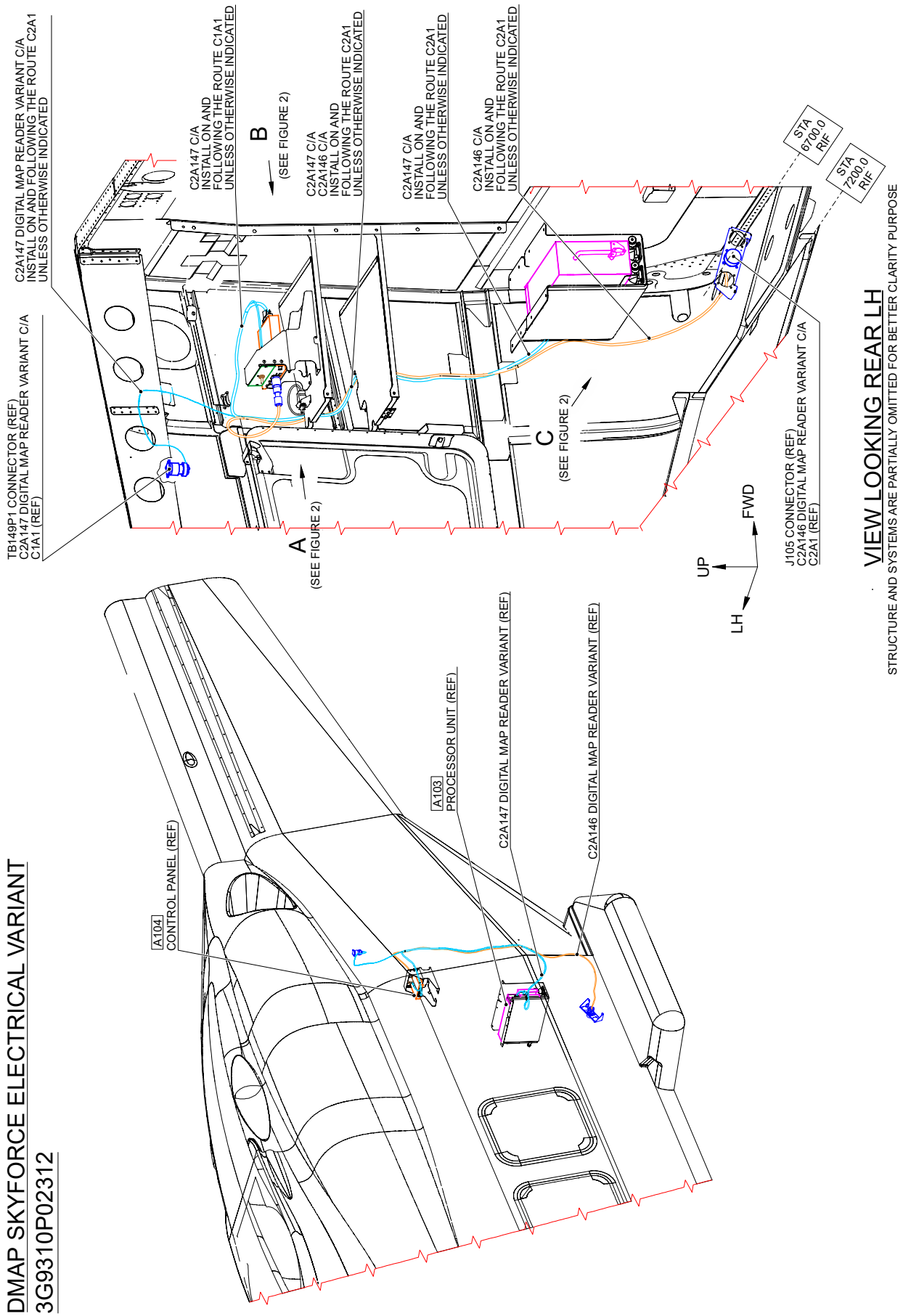

DMAP SKYFORCE ELECTRICAL VARIANT
3G9310P02312
VIEW LOOKING REAR LH
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
C2A147 DIGITAL MAP READER VARIANT C/A
INSTALL ON AND FOLLOWING THE ROUTE C2A1
UNLESS OTHERWISE INDICATED
TB149P1 CONNECTOR (REF)
C2A147 DIGITAL MAP READER VARIANT C/A
C1A1 (REF)
C2A147 C/A
INSTALL ON AND
FOLLOWING THE ROUTE C1A1
UNLESS OTHERWISE INDICATED
B
(SEE FIGURE 2)
C2A147 C/A
C2A146 C/A
INSTALL ON AND
FOLLOWING THE ROUTE C2A1
UNLESS OTHERWISE INDICATED
C2A147 C/A
INSTALL ON AND
FOLLOWING THE ROUTE C2A1
UNLESS OTHERWISE INDICATED
C2A146 C/A
INSTALL ON AND
FOLLOWING THE ROUTE C2A1
UNLESS OTHERWISE INDICATED
STA
6700.0
RIF
STA
7200.0
RIF
A
(SEE FIGURE 2)
C
(SEE FIGURE 2)
J105 CONNECTOR (REF)
C2A146 DIGITAL MAP READER VARIANT C/A
C2A1 (REF)
UP
FWD
LH
A104
CONTROL PANEL (REF)
A103
PROCESSOR UNIT (REF)
C2A147 DIGITAL MAP READER VARIANT (REF)
C2A146 DIGITAL MAP READER VARIANT (REF)

Figure 1

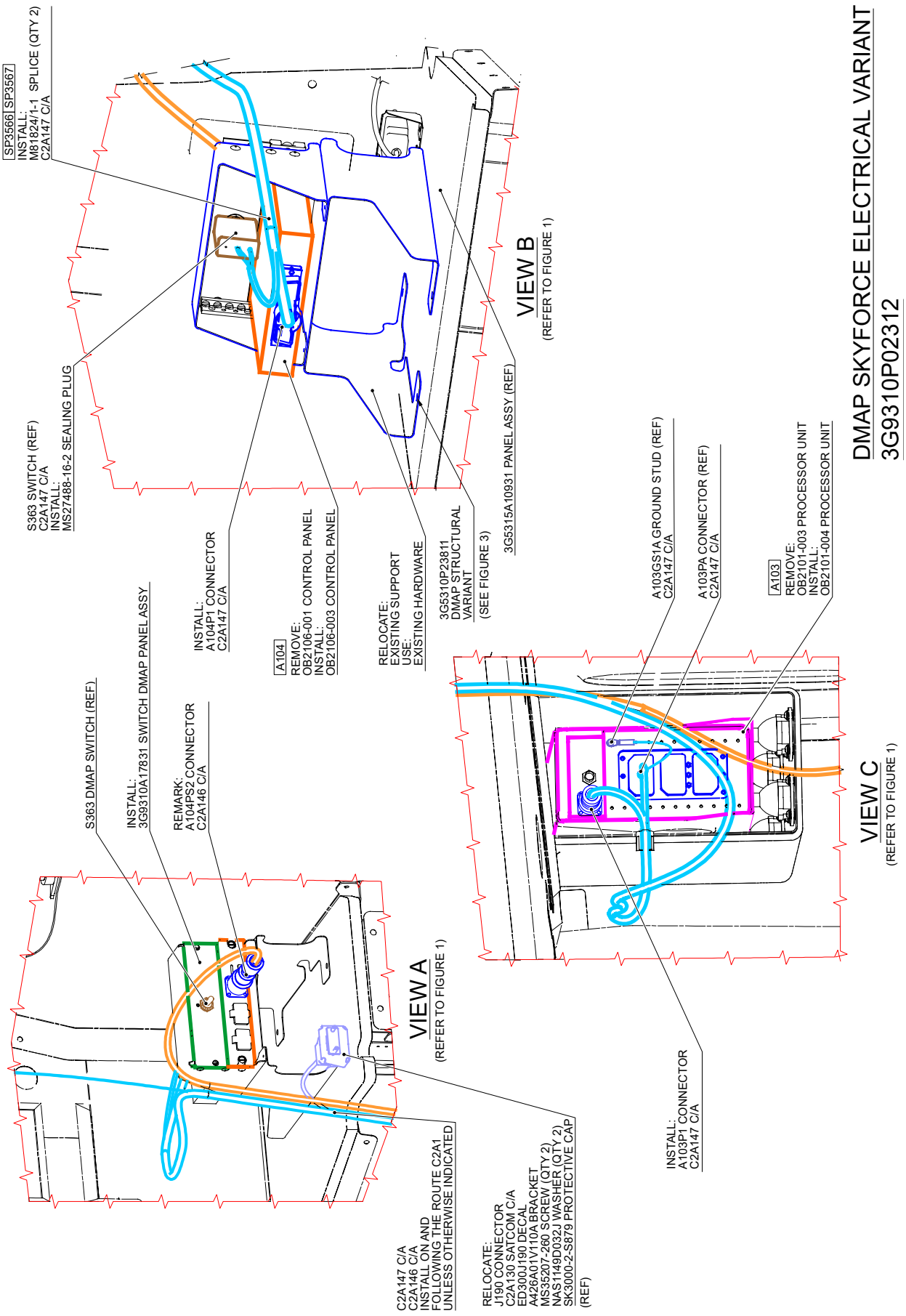

DMAP SKYFORCE ELECTRICAL VARIANT
3G9310P02312
SP3566 SP3567
INSTALL:
M81824/1-1 SPLICE (QTY 2)
C2A147 C/A
S363 SWITCH (REF)
C2A147 C/A
INSTALL:
MS27488-16-2 SEALING PLUG
INSTALL:
A104P1 CONNECTOR
C2A147 C/A
A104
REMOVE:
OB2106-001 CONTROL PANEL
INSTALL:
OB2106-003 CONTROL PANEL
RELOCATE:
EXISTING SUPPORT
USE:
EXISTING HARDWARE
3G5310P23811
DMAP STRUCTURAL
VARIANT
(SEE FIGURE 3)
3G5315A10931 PANEL ASSY (REF)
VIEW B
(REFER TO FIGURE 1)
A103GS1A GROUND STUD (REF)
C2A147 C/A
A103PA CONNECTOR (REF)
C2A147 C/A
A103
REMOVE:
OB2101-003 PROCESSOR UNIT
INSTALL:
OB2101-004 PROCESSOR UNIT
VIEW C
(REFER TO FIGURE 1)
S363 DMAP SWITCH (REF)
INSTALL:
3G9310A17831 SWITCH DMAP PANEL ASSY
REMARK:
A104PS2 CONNECTOR
C2A146 C/A
VIEW A
(REFER TO FIGURE 1)
INSTALL:
A103P1 CONNECTOR
C2A147 C/A
C2A147 C/A
C2A146 C/A
INSTALL ON AND
FOLLOWING THE ROUTE C2A1
UNLESS OTHERWISE INDICATED
RELOCATE:
J190 CONNECTOR
C2A130 SATCOM C/A
ED300J190 DECAL
A426A01V110A BRACKET
MS35207-260 SCREW (QTY 2)
NAS1149D032J WASHER (QTY 2)
SK3000-2-S879 PROTECTIVE CAP
(REF)

Figure 2

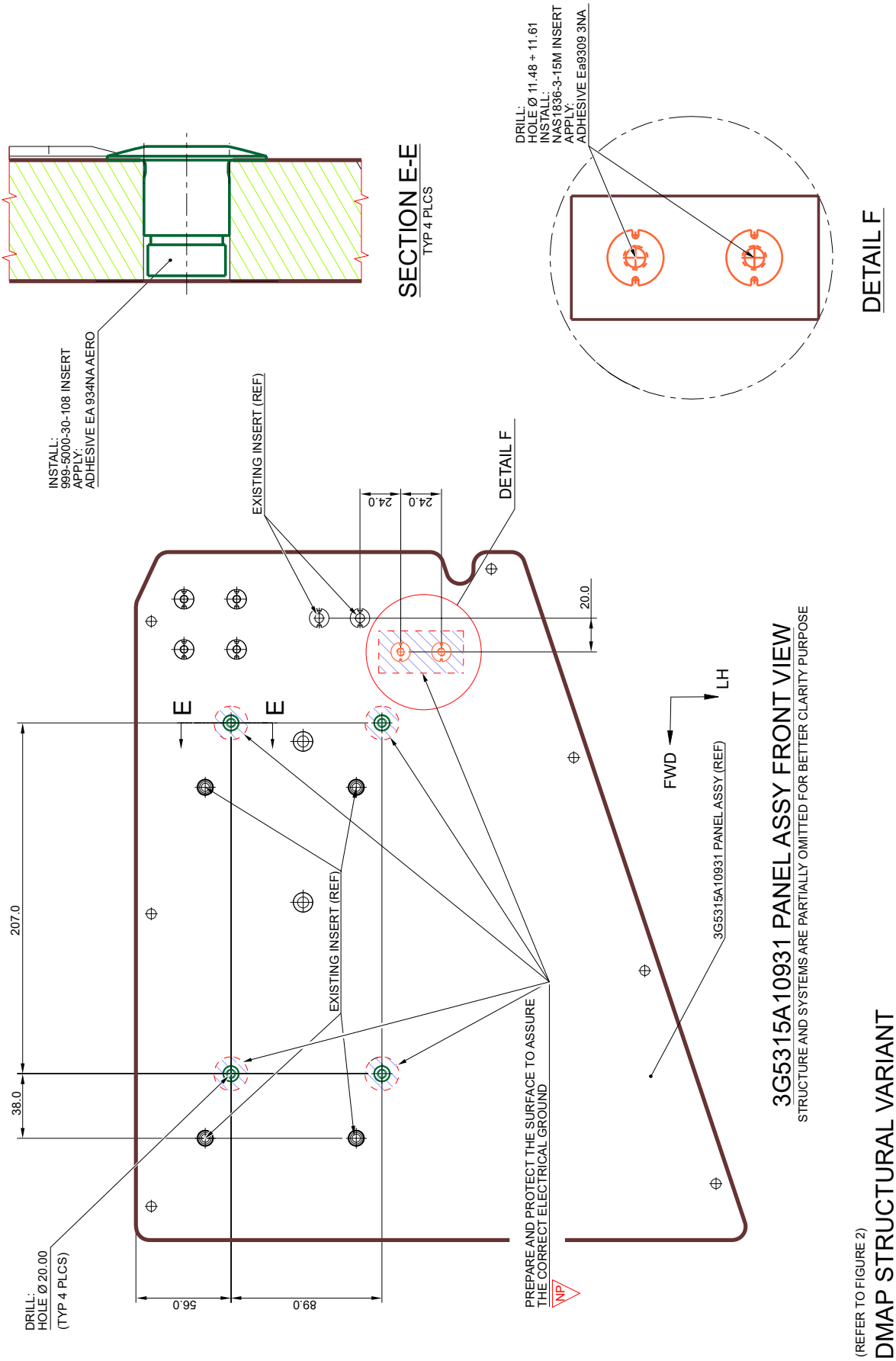
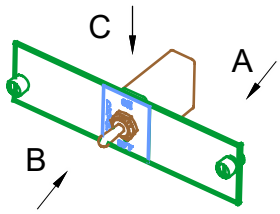
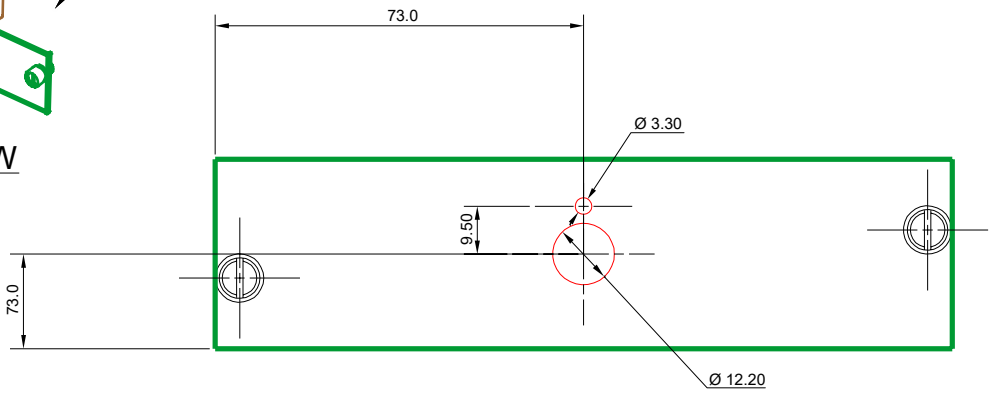

SECTION E-E
TYP 4 PLCS
INSTALL:
999-5000-30-108 INSERT
APPLY:
ADHESIVE EA 934NA AERO
DRILL:
HOLE Ø 11.48 ÷ 11.61
INSTALL:
NAS1836-3-15M INSERT
APPLY:
ADHESIVE Ea9309 3NA
DETAIL F
EXISTING INSERT (REF)
DETAIL F
24.0
24.0
20.0
E
E
FWD
LH
207.0
38.0
EXISTING INSERT (REF)
3G5315A10931 PANEL ASSY (REF)
DRILL:
HOLE Ø 20.00
(TYP 4 PLCS)
56.0
89.0
PREPARE AND PROTECT THE SURFACE TO ASSURE
THE CORRECT ELECTRICAL GROUND
NP
3G5315A10931 PANEL ASSY FRONT VIEW
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 2)
DMAP STRUCTURAL VARIANT
3G5310P23811

Figure 3

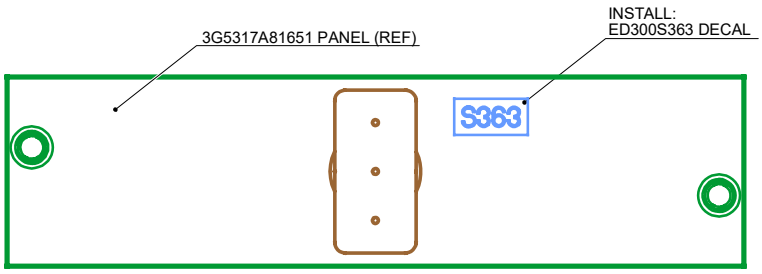
3G9310A17831 SWITCH DMAP PANEL ASSY



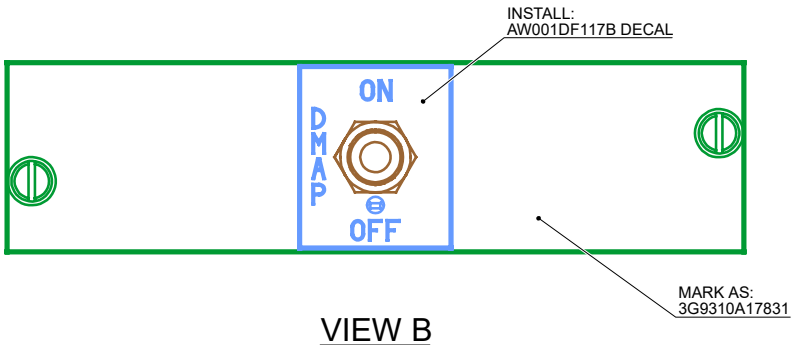
ISOVIEW



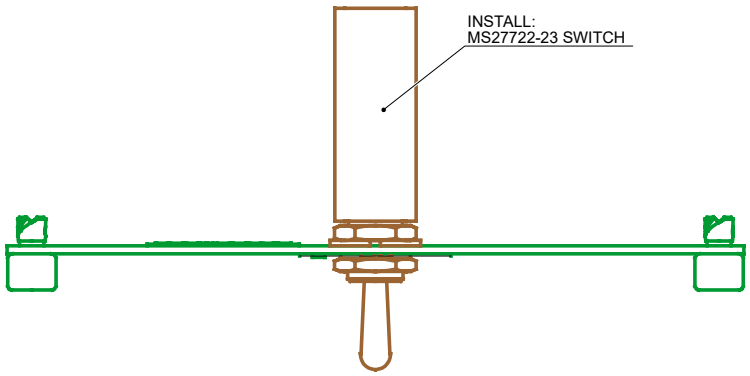
999-0500-85-137 PANEL REWORK



VIEW A



VIEW B



VIEW C

Figure 4

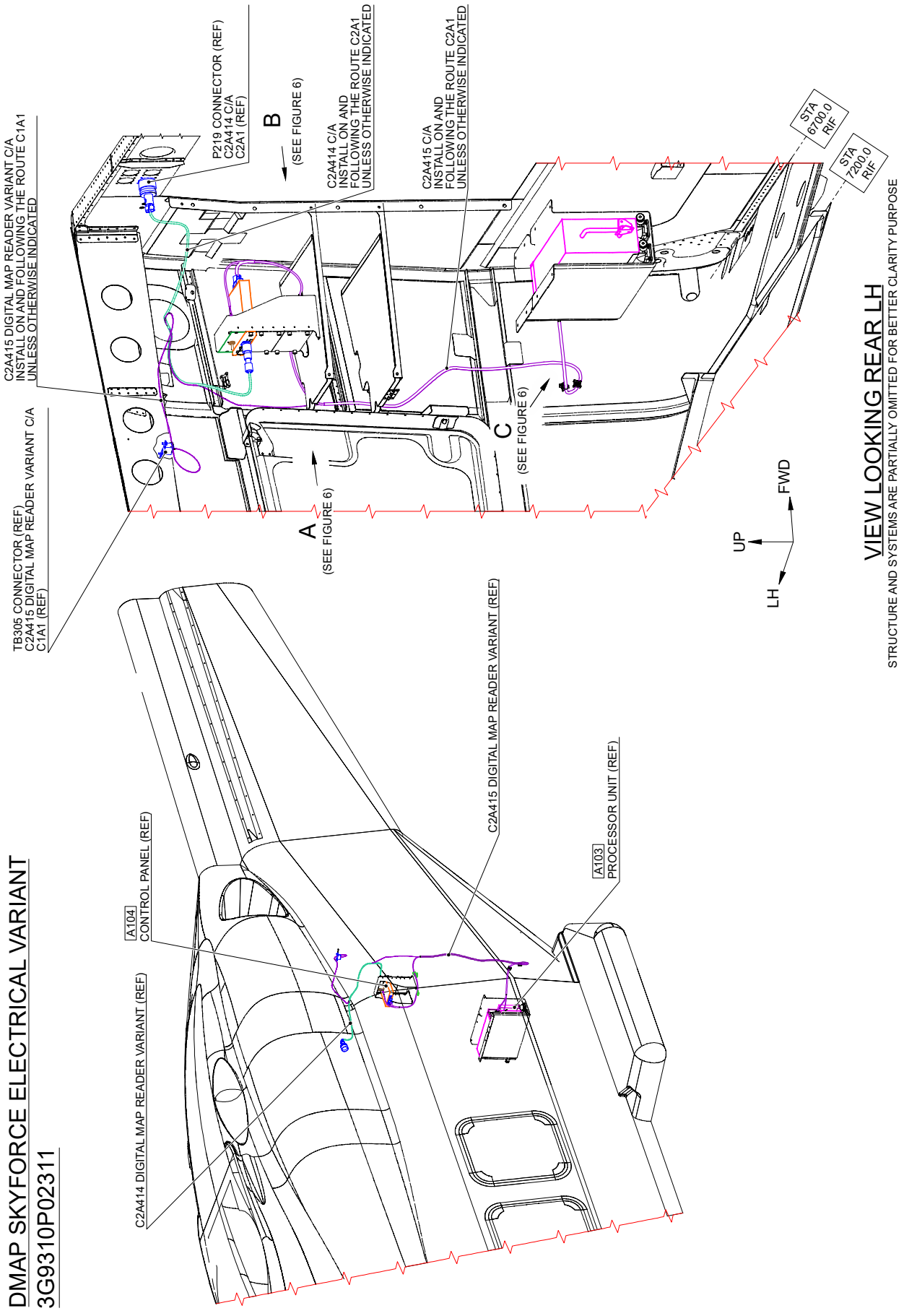

DMAP SKYFORCE ELECTRICAL VARIANT
3G9310P02311
VIEW LOOKING REAR LH
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
C2A415 DIGITAL MAP READER VARIANT C/A
INSTALL ON AND FOLLOWING THE ROUTE C1A1
UNLESS OTHERWISE INDICATED
TB305 CONNECTOR (REF)
C2A415 DIGITAL MAP READER VARIANT C/A
C1A1 (REF)
P219 CONNECTOR (REF)
C2A414 C/A
C2A1 (REF)
B
(SEE FIGURE 6)
C2A414 C/A
INSTALL ON AND
FOLLOWING THE ROUTE C2A1
UNLESS OTHERWISE INDICATED
C2A415 C/A
INSTALL ON AND
FOLLOWING THE ROUTE C2A1
UNLESS OTHERWISE INDICATED
STA
6700.0
RIF
STA
7200.0
RIF
A
(SEE FIGURE 6)
C
(SEE FIGURE 6)
UP
FWD
LH
C2A414 DIGITAL MAP READER VARIANT (REF)
A104
CONTROL PANEL (REF)
C2A415 DIGITAL MAP READER VARIANT (REF)
A103
PROCESSOR UNIT (REF)

Figure 5

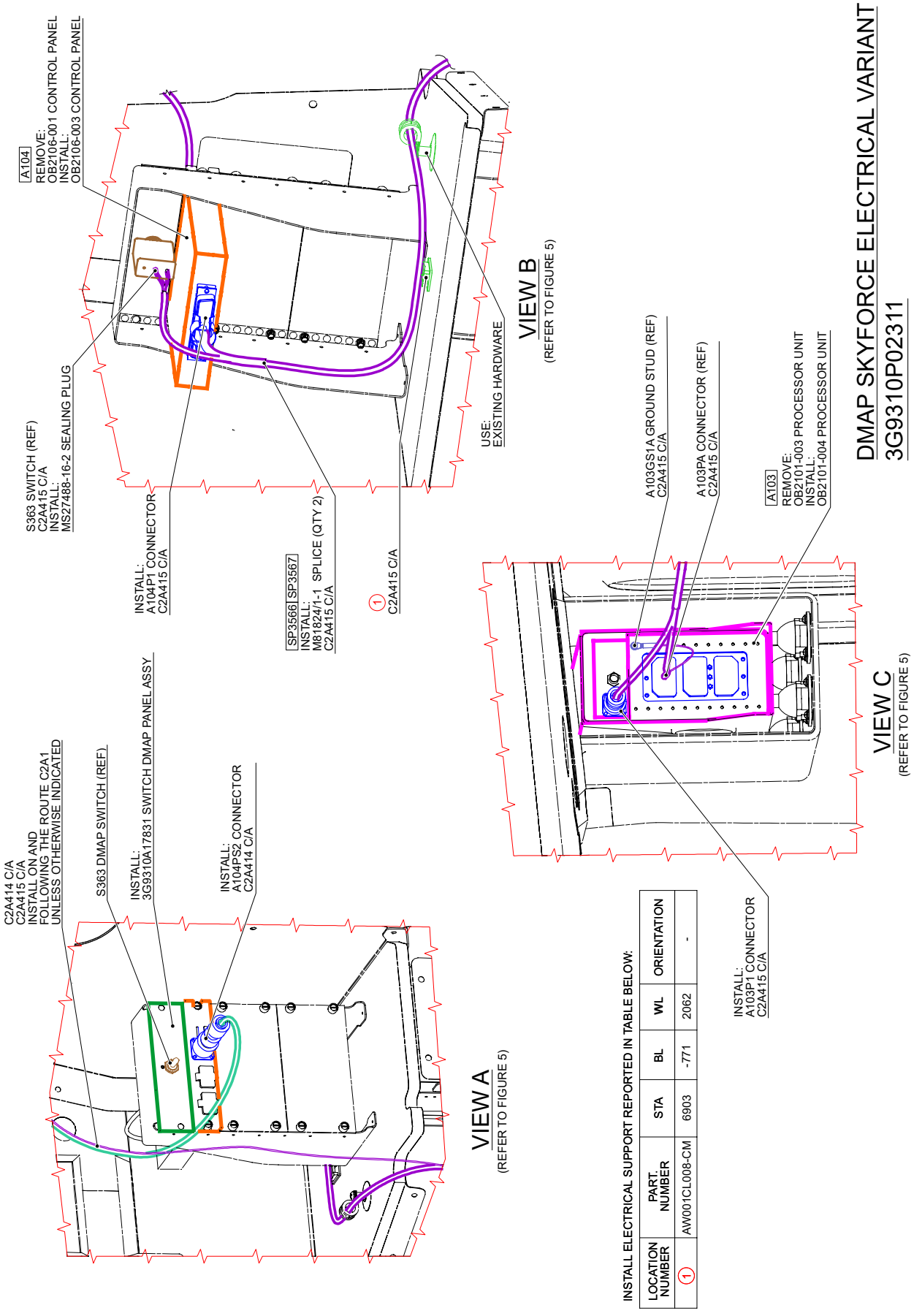
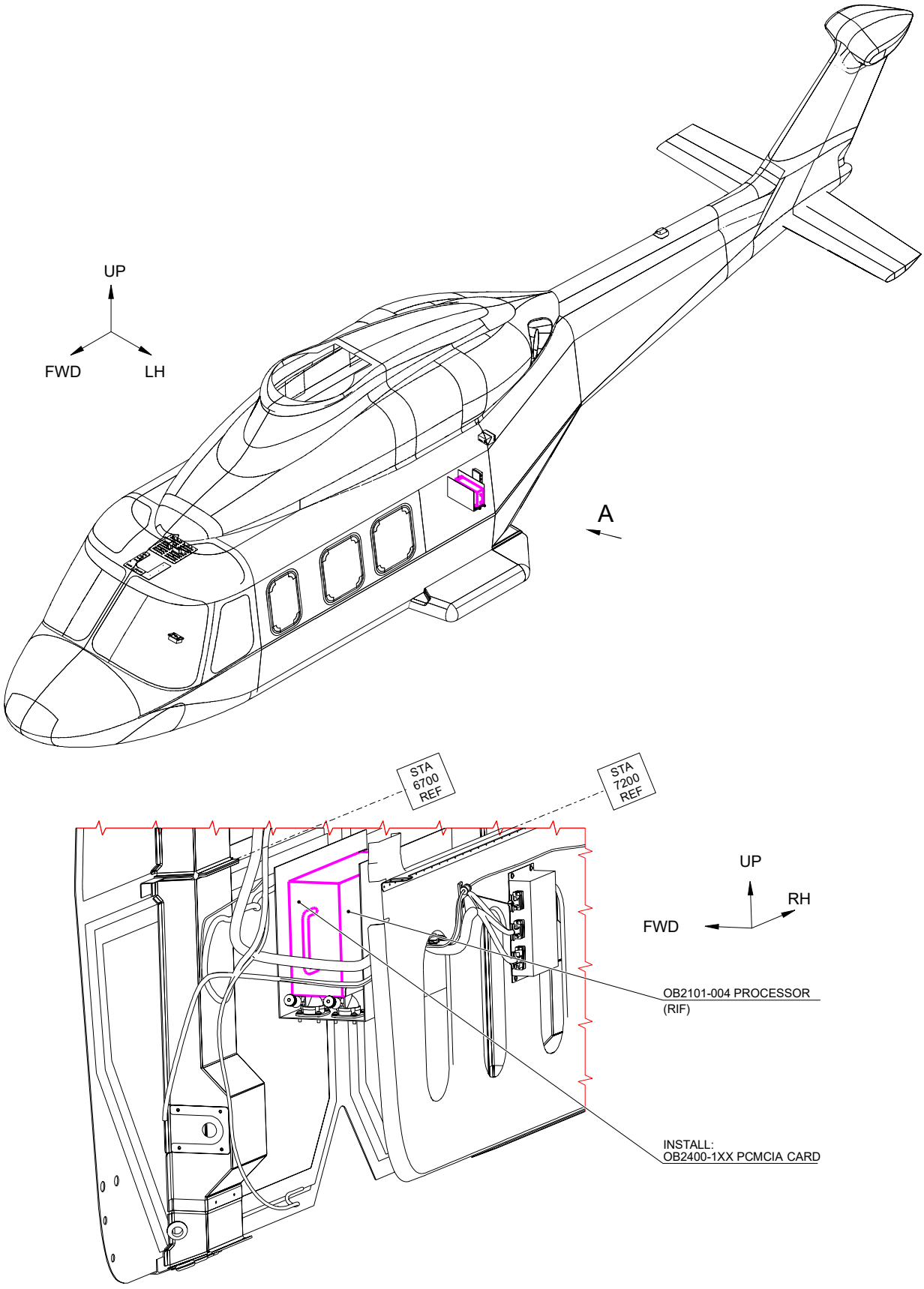

DMAP SKYFORCE ELECTRICAL VARIANT
3G9310P02311
A104
REMOVE:
OB2106-001 CONTROL PANEL
INSTALL:
OB2106-003 CONTROL PANEL
S363 SWITCH (REF)
C2A415 C/A
INSTALL:
MS27488-16-2 SEALING PLUG
INSTALL:
A104P1 CONNECTOR
C2A415 C/A
SP3566 SP3567
INSTALL:
M81824/1-1 SPLICE (QTY 2)
C2A415 C/A
1
C2A415 C/A
USE:
EXISTING HARDWARE
VIEW B
(REFER TO FIGURE 5)
A103GS1A GROUND STUD (REF)
C2A415 C/A
A103PA CONNECTOR (REF)
C2A415 C/A
A103
REMOVE:
OB2101-003 PROCESSOR UNIT
INSTALL:
OB2101-004 PROCESSOR UNIT
VIEW C
(REFER TO FIGURE 5)
INSTALL:
A103P1 CONNECTOR
C2A415 C/A
C2A414 C/A
C2A415 C/A
INSTALL ON AND
FOLLOWING THE ROUTE C2A1
UNLESS OTHERWISE INDICATED
S363 DMAP SWITCH (REF)
INSTALL:
3G9310A17831 SWITCH DMAP PANEL ASSY
INSTALL:
A104PS2 CONNECTOR
C2A414 C/A
VIEW A
(REFER TO FIGURE 5)
INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:
LOCATION NUMBER | PART NUMBER | STA | BL | WL | ORIENTATION
1 | AW001CL008-CM | 6903 | -771 | 2062 | -

Figure 6



VIEW A

STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 7

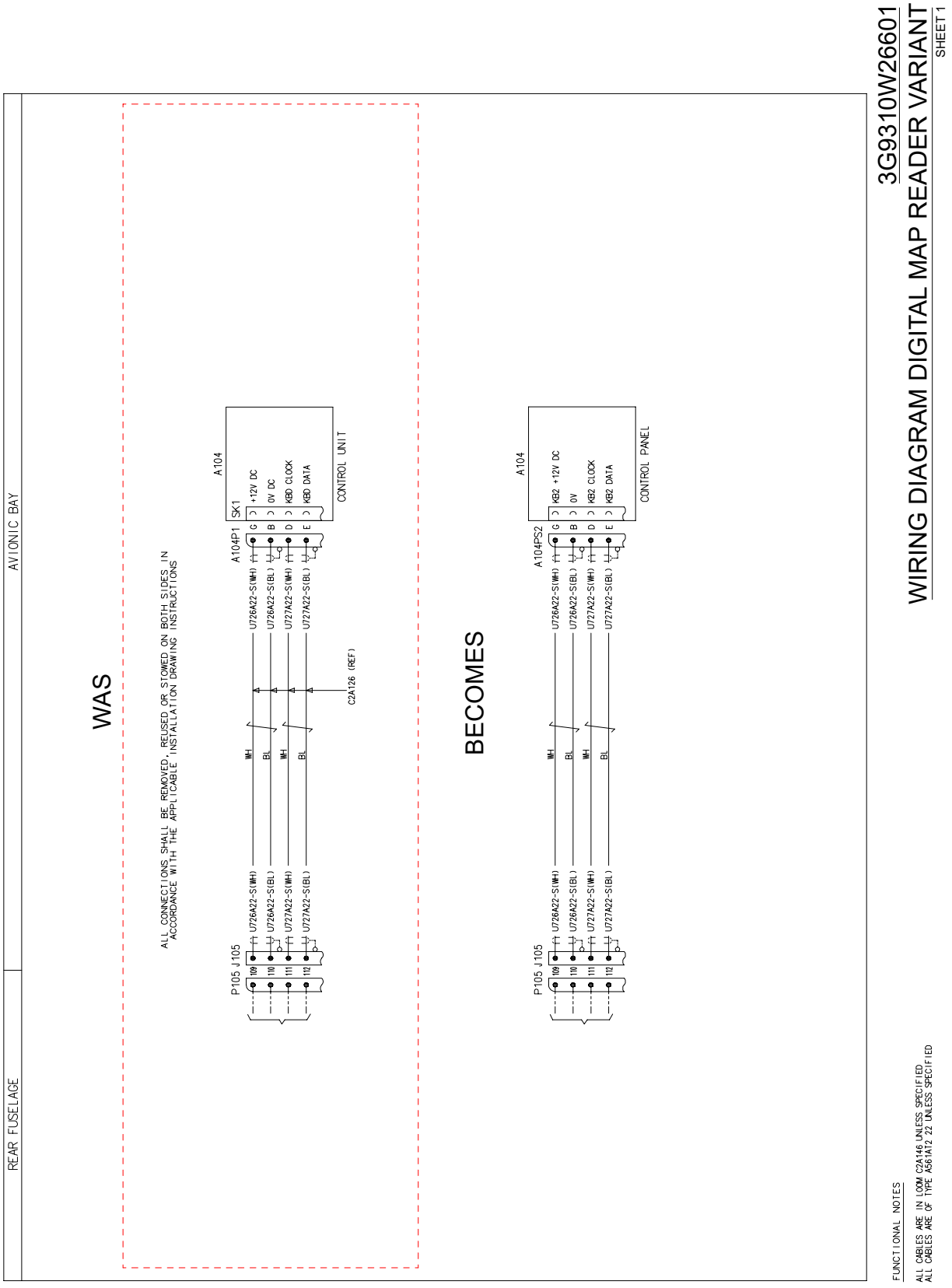

3G9310W26601
WIRING DIAGRAM DIGITAL MAP READER VARIANT
SHEET 1
REAR FUSELAGE
AVIONIC BAY
WAS
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS
P105 J105
109
110
111
112
U726A22-S(WH)
U726A22-S(BL)
U727A22-S(WH)
U727A22-S(BL)
WH
BL
WH
BL
C2A126 (REF)
A104P1
A104
SK1
G
B
D
E
+12V DC
0V DC
KBD CLOCK
KBD DATA
CONTROL UNIT
BECOMES
P105 J105
A104PS2
A104
KB2 +12V DC
0V
KB2 CLOCK
KB2 DATA
CONTROL PANEL
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM C2A146 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A561AT2 22 UNLESS SPECIFIED

Figure 8

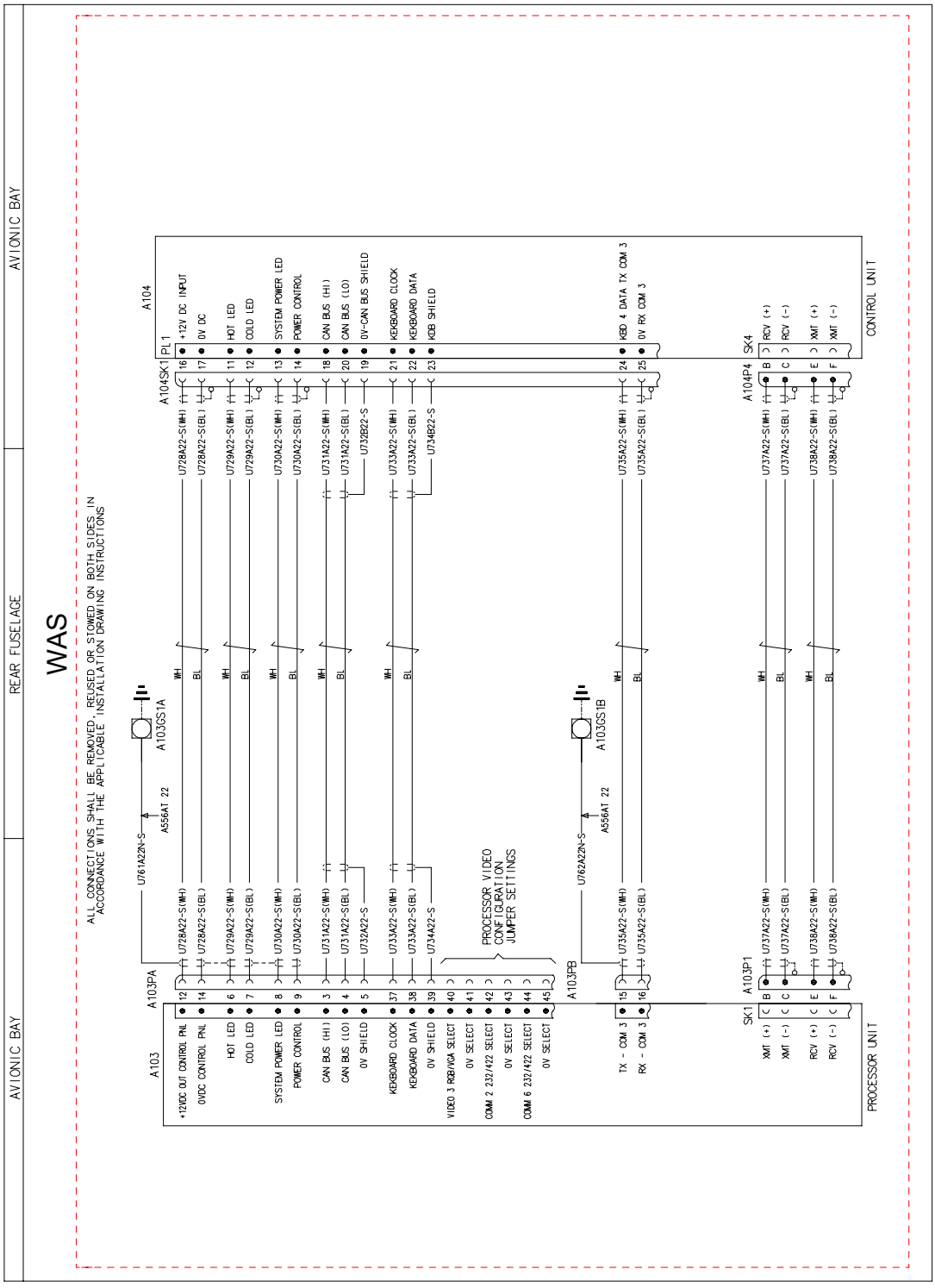

3G9310W26601
WIRING DIAGRAM DIGITAL MAP READER VARIANT
SHEET 2
AVIONIC BAY
REAR FUSELAGE
AVIONIC BAY
WAS
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES IN ACCORDANCE WITH THE APPLICABLE 'INSTALLATION DRAWING' INSTRUCTIONS
A103
A103PA
A103PB
A103GS1A
A103GS1B
A556A1 22
U761A22N-S
U762A22N-S
A104
A104SK1
PL1
A104P4
SK4
SK1
A103P1
+12VDC OUT CONTROL PNL
0VDC CONTROL PNL
HOT LED
COLD LED
SYSTEM POWER LED
POWER CONTROL
CAN BUS (HI)
CAN BUS (LO)
0V SHIELD
KEYBOARD CLOCK
KEYBOARD DATA
0V SHIELD
VIDEO 3 RGB/VGA SELECT
0V SELECT
COMM 2 232/422 SELECT
0V SELECT
COMM 6 232/422 SELECT
0V SELECT
TX - COM 3
RX - COM 3
XMT (+)
XMT (-)
RCV (+)
RCV (-)
PROCESSOR VIDEO CONFIGURATION JUMPER SETTINGS
+12V DC INPUT
0V DC
HOT LED
COLD LED
SYSTEM POWER LED
POWER CONTROL
CAN BUS (HI)
CAN BUS (LO)
0V-CAN BUS SHIELD
KEYBOARD CLOCK
KEYBOARD DATA
KDB SHIELD
KBD 4 DATA TX COM 3
0V RX COM 3
RCV (+)
RCV (-)
XMT (+)
XMT (-)
PROCESSOR UNIT
CONTROL UNIT
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM C2A10 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A561AT2 22 UNLESS SPECIFIED

Figure 9

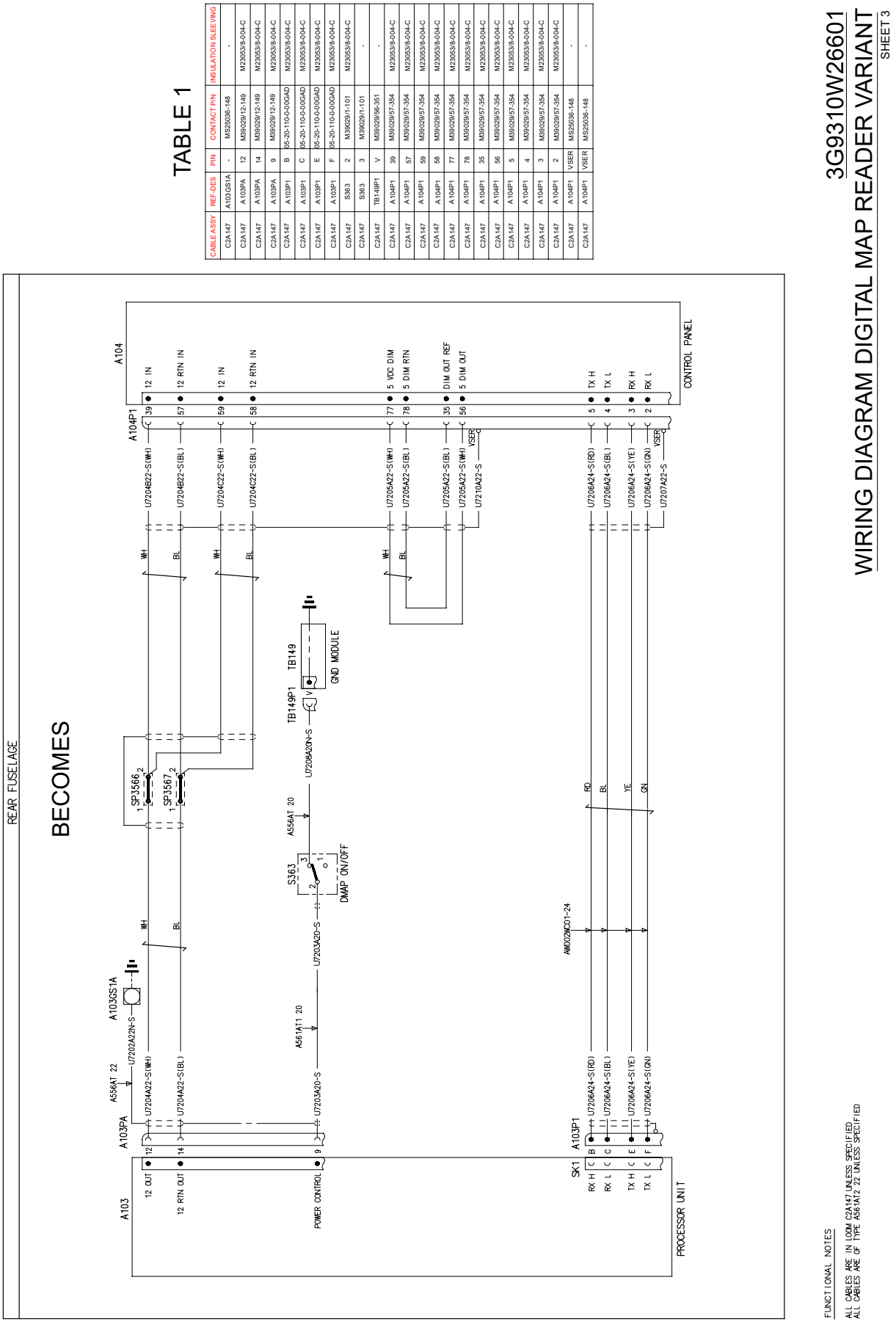
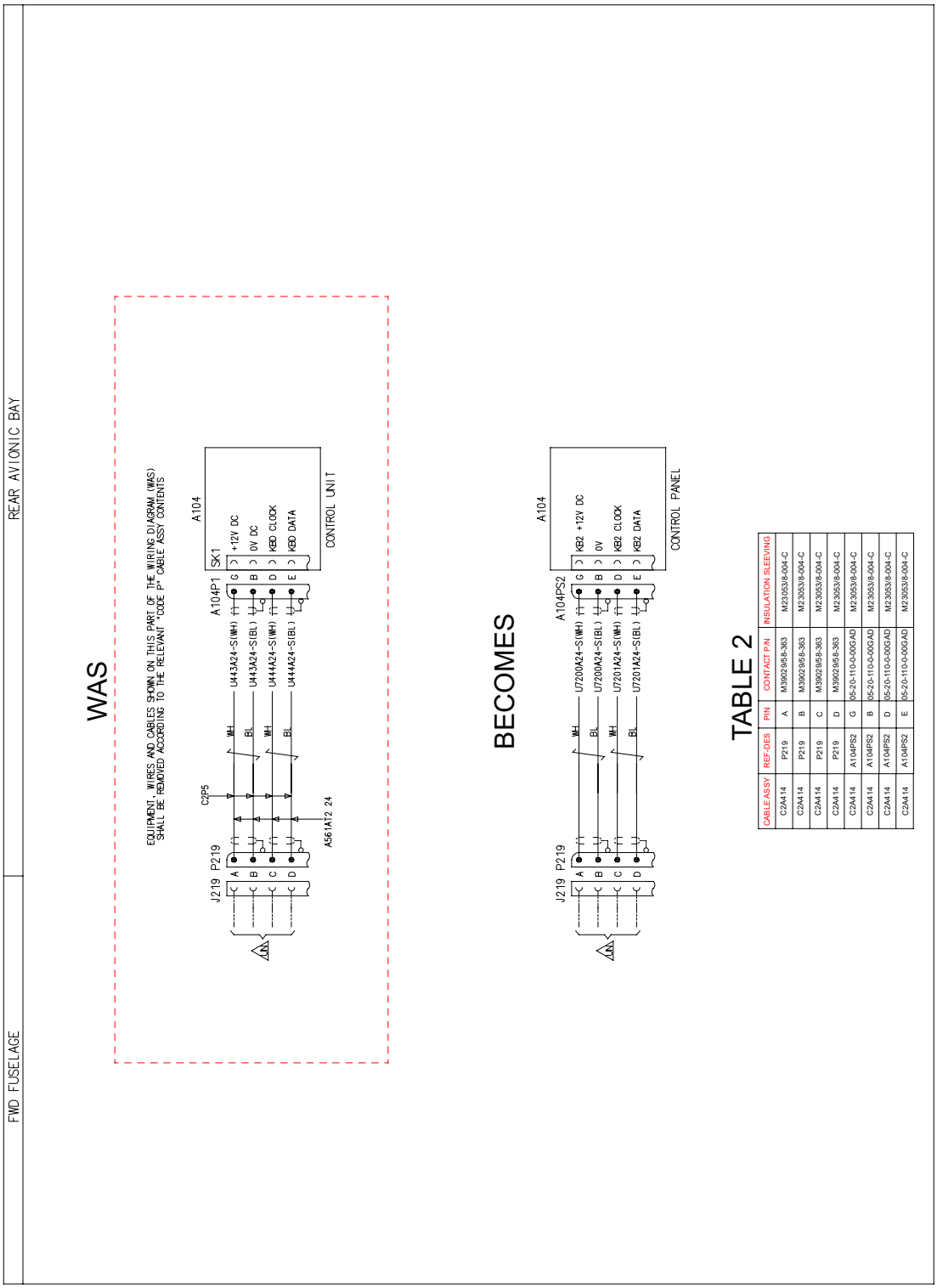


TABLE 1

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
C2A147	A103GS1A	-	MS25036-148	-
C2A147	A103PA	12	M39029/12-149	M23053/8-004-C
C2A147	A103PA	14	M39029/12-149	M23053/8-004-C
C2A147	A103PA	9	M39029/12-149	M23053/8-004-C
C2A147	A103P1	B	05-20-110-0-00GAD	M23053/8-004-C
C2A147	A103P1	C	05-20-110-0-00GAD	M23053/8-004-C
C2A147	A103P1	E	05-20-110-0-00GAD	M23053/8-004-C
C2A147	A103P1	F	05-20-110-0-00GAD	M23053/8-004-C
C2A147	S363	2	M39029/1-101	M23053/8-004-C
C2A147	S363	3	M39029/1-101	-
C2A147	TB149P1	V	M39029/56-351	-
C2A147	A104P1	39	M39029/57-354	M23053/8-004-C
C2A147	A104P1	57	M39029/57-354	M23053/8-004-C
C2A147	A104P1	59	M39029/57-354	M23053/8-004-C
C2A147	A104P1	58	M39029/57-354	M23053/8-004-C
C2A147	A104P1	77	M39029/57-354	M23053/8-004-C
C2A147	A104P1	78	M39029/57-354	M23053/8-004-C
C2A147	A104P1	35	M39029/57-354	M23053/8-004-C
C2A147	A104P1	56	M39029/57-354	M23053/8-004-C
C2A147	A104P1	5	M39029/57-354	M23053/8-004-C
C2A147	A104P1	4	M39029/57-354	M23053/8-004-C
C2A147	A104P1	3	M39029/57-354	M23053/8-004-C
C2A147	A104P1	2	M39029/57-354	M23053/8-004-C
C2A147	A104P1	VSER	MS25036-148	-
C2A147	A104P1	VSER	MS25036-148	-

Figure 10



CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
C2A414	P219	A	M39029/58-363	M23053/8-004-C
C2A414	P219	B	M39029/58-363	M23053/8-004-C
C2A414	P219	C	M39029/58-363	M23053/8-004-C
C2A414	P219	D	M39029/58-363	M23053/8-004-C
C2A414	A104PS2	G	05-20-110-0-00GAD	M23053/8-004-C
C2A414	A104PS2	B	05-20-110-0-00GAD	M23053/8-004-C
C2A414	A104PS2	D	05-20-110-0-00GAD	M23053/8-004-C
C2A414	A104PS2	E	05-20-110-0-00GAD	M23053/8-004-C

Figure 11

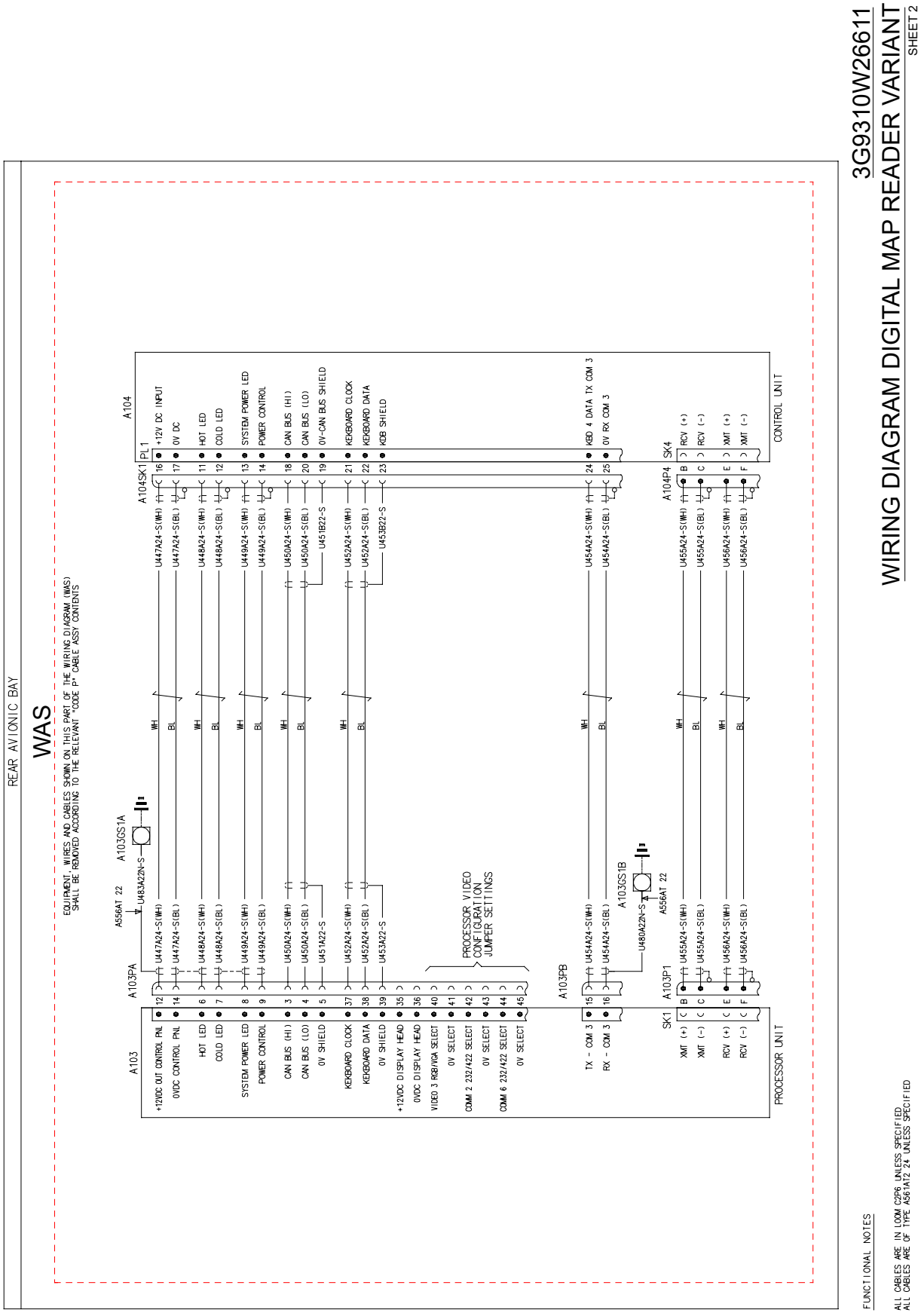

3G9310W26611
WIRING DIAGRAM DIGITAL MAP READER VARIANT
SHEET 2
REAR AVIONIC BAY
WAS
EQUIPMENT, WIRES AND CABLES SHOWN ON THIS PART OF THE WIRING DIAGRAM (WAS) SHALL BE REMOVED ACCORDING TO THE RELEVANT "CODE P" CABLE ASSY CONTENTS
A103
PROCESSOR UNIT
A104
CONTROL UNIT
A103JPA
A103GS1A
A556AT 22
A103JPB
A103GS1B
A556AT 22
A104SK1 PL1
A104P4 SK4
A103P1 SK1
+12VDC OUT CONTROL PNL
0VDC CONTROL PNL
HOT LED
COLD LED
SYSTEM POWER LED
POWER CONTROL
CAN BUS (HI)
CAN BUS (LO)
0V SHIELD
KEYBOARD CLOCK
KEYBOARD DATA
0V SHIELD
+12VDC DISPLAY HEAD
0VDC DISPLAY HEAD
VIDEO 3 RGB/VGA SELECT
0V SELECT
COMM 2 232/422 SELECT
0V SELECT
COMM 6 232/422 SELECT
0V SELECT
PROCESSOR VIDEO CONFIGURATION JUMPER SETTINGS
TX - COM 3
RX - COM 3
XMT (+)
XMT (-)
RCV (+)
RCV (-)
+12V DC INPUT
0V DC
HOT LED
COLD LED
SYSTEM POWER LED
POWER CONTROL
CAN BUS (HI)
CAN BUS (LO)
0V-CAN BUS SHIELD
KEYBOARD CLOCK
KEYBOARD DATA
KDB SHIELD
KBD 4 DATA TX COM 3
0V RX COM 3
RCV (+)
RCV (-)
XMT (+)
XMT (-)
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM C2P6 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A561A12 24 UNLESS SPECIFIED

Figure 12

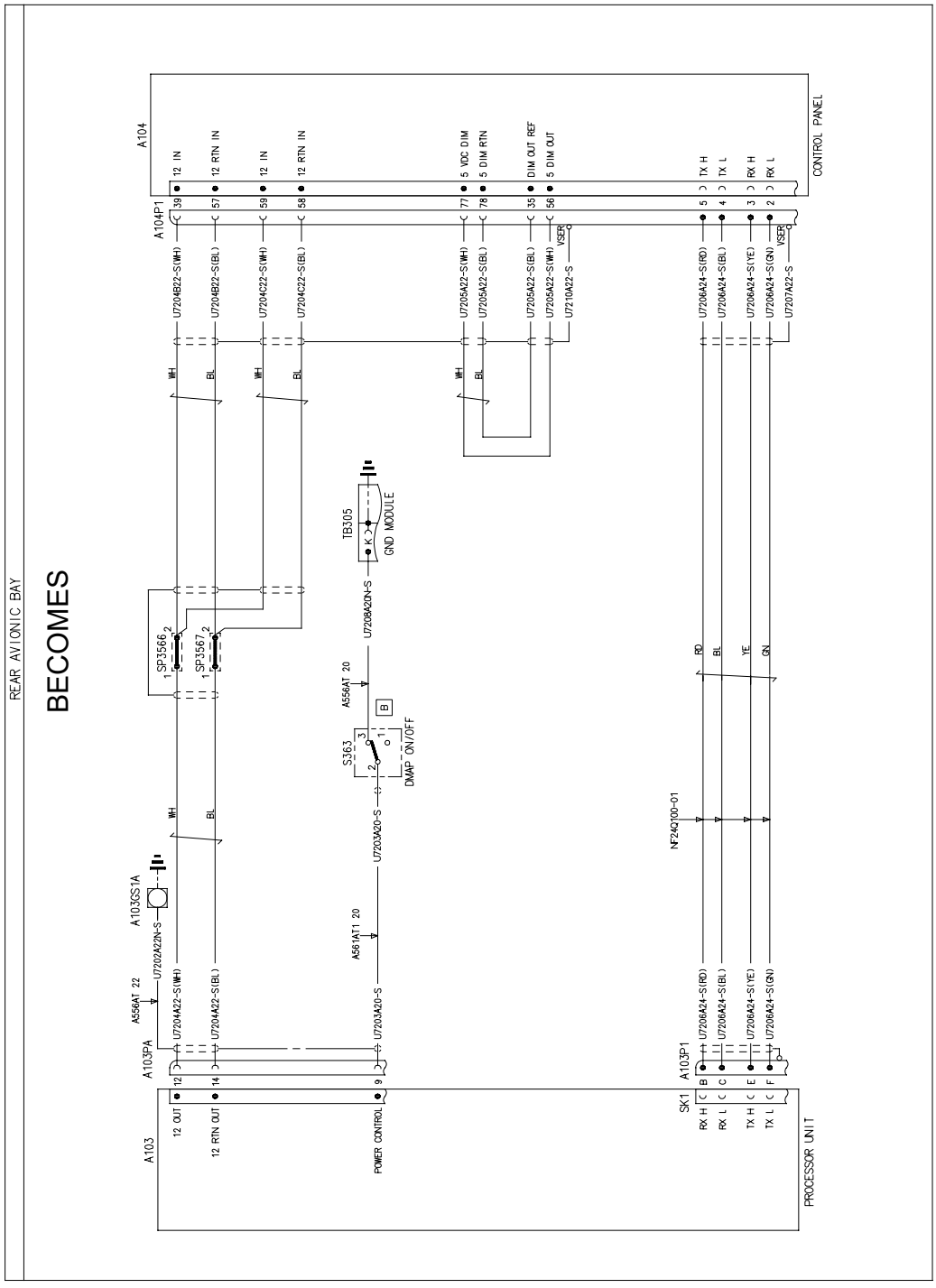
WIRING DIAGRAM DIGITAL MAP READER VARIANT

3G9310W26611

SHEET 3

TABLE 3

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
C2A415	A103GS1A	-	MS25036-148	-
C2A415	A103PA	12	M39029/12-149	M23053/8-004-C
C2A415	A103PA	14	M39029/12-149	M23053/8-004-C
C2A415	A103PA	9	M39029/12-149	M23053/8-004-C
C2A415	A103P1	B	05-20-1110-0-00GAD	M23053/8-004-C
C2A415	A103P1	C	05-20-1110-0-00GAD	M23053/8-004-C
C2A415	A103P1	E	05-20-1110-0-00GAD	M23053/8-004-C
C2A415	A103P1	F	05-20-1110-0-00GAD	M23053/8-004-C
C2A415	S363	2	M39029/1-102	M23053/8-004-C
C2A415	S363	3	M39029/1-102	-
C2A415	TB305	K	A523A-A02	-
C2A415	A104P1	39	M39029/57-354	M23053/8-004-C
C2A415	A104P1	57	M39029/57-354	M23053/8-004-C
C2A415	A104P1	59	M39029/57-354	M23053/8-004-C
C2A415	A104P1	58	M39029/57-354	M23053/8-004-C
C2A415	A104P1	77	M39029/57-354	M23053/8-004-C
C2A415	A104P1	78	M39029/57-354	M23053/8-004-C
C2A415	A104P1	35	M39029/57-354	M23053/8-004-C
C2A415	A104P1	56	M39029/57-354	M23053/8-004-C
C2A415	A104P1	5	M39029/57-354	M23053/8-004-C
C2A415	A104P1	4	M39029/57-354	M23053/8-004-C
C2A415	A104P1	3	M39029/57-354	M23053/8-004-C
C2A415	A104P1	2	M39029/57-354	M23053/8-004-C
C2A415	A104P1	VSER	MS25036-148	-
C2A415	A104P1	VSER	MS25036-148	-



FUNCTIONAL NOTES

ALL CABLES ARE IN LOOM C2A415 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A561AT2 22 UNLESS SPECIFIED

Figure 13

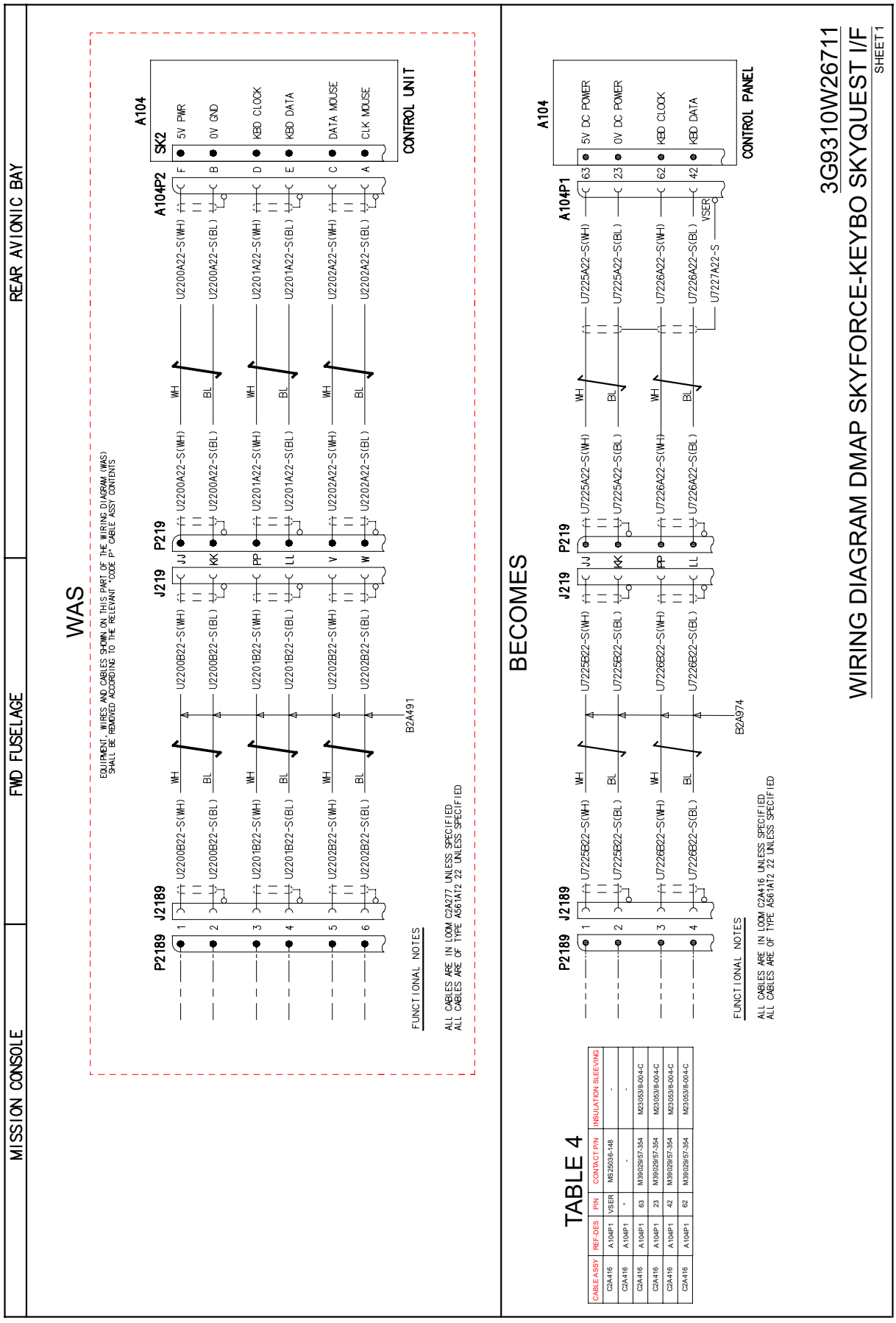

MISSION CONSOLE
FWD FUSELAGE
REAR AVIONIC BAY
WAS
EQUIPMENT, WIRES AND CABLES SHOWN ON THIS PART OF THE WIRING DIAGRAM (WAS) SHALL BE REMOVED ACCORDING TO THE RELEVANT "CODE P" CABLE ASSY CONTENTS
P2189
J2189
J219
P219
A104P2
A104
SK2
5V PWR
0V GND
KBD CLOCK
KBD DATA
DATA MOUSE
CLK MOUSE
CONTROL UNIT
B2A491
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM C2A277 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A561A12 22 UNLESS SPECIFIED
BECOMES
A104P1
A104
5V DC POWER
0V DC POWER
KBD CLOCK
KBD DATA
CONTROL PANEL
B2A974
TABLE 4
CABLE ASSY
REF-DES
PIN
CONTACT P/N
INSULATION SLEEVING
C2A416
A104P1
VSER
MS25036-148
-
M39029/57-354
63
23
42
62
M83053/8-004-C
3G9310W26711
WIRING DIAGRAM DMAP SKYFORCE-KEYBO SKYQUEST I/F
SHEET 1

Figure 14

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.