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AgustaWestland Products

SERVICE BULLETIN

N° 139-688

DATE: April 26, 2023

REV. : /

TITLE

ATA 31 - KIT FAMILY HUMS INSTALLATION

REVISION LOG

First issue

1. PLANNING INFORMATION

A. EFFECTIVITY

AW139 helicopters from S/N 31400 to S/N 31699, from S/N 41300 thru S/N 41499, from S/N 31700 onwards and from S/N 41501 onwards.

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 perform the installation of the Kit Family HUMS P/N 4G3130F00611.

E. DESCRIPTION

Leonardo Helicopters has developed the Service Bulletin in order to install the Kit Family HUMS P/N 4G3130F00611.

Part I of this Service Bulletin provides the information to perform the installation of the Kit Family HUMS complete provision P/N 3G3130A03111, that includes:

- the tail rotor pick-up installation P/N 3G3130A00711, which perform the installation of the tail rotor;
- the MGB family HUMS sensors installation P/N 3G3130A01215, which performs the installation of the sensors;
- the HUMS fuselage electrical provision P/N 3G3130A03412, which performs the lay down and the connection of the cables;
- the HUMS MGB electrical provision P/N 3G3130A03512, which performs the lay down and the connection of the cables;
- the family HUMS structural provision P/N 3G5311A35312, which performs the installation of the supports.

Part II of this Service Bulletin provides information to perform the installation of the Family HUMS, that includes:

- the family HUMS equipment installation P/N 3G3130A03311, which performs the installation of the tracking camera;
- the family HUMS camera support I P/N 3G5311A35411, which performs the installation of the support;

- the HUMC APSW P/N 3G3130AA0100, which performs the installation software;
- the VDAM SW P/N 3G3130AB0100, which performs the installation software.

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 two hundred fifty (250) MMH

Part II: approximately eighty (80) MMH

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

H. WEIGHT AND BALANCE

PART I

WEIGHT (kg)	7.28	
	ARM (mm)	**MOMENT (kgmm)**
LONGITUDINAL BALANCE	6158	44830.24
LATERAL BALANCE	232	1688.96

PART II

WEIGHT (kg)	7.55	
	ARM (mm)	**MOMENT (kgmm)**
LONGITUDINAL BALANCE	5586	42174.3
LATERAL BALANCE	137	1034.35

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.	I, II
DM02	39-A-06-41-00-00A-010A-A	Access doors and panels – General data	I, II
DM03	39-A-20-10-01-00A-259A-A	Ground connections - Other procedures to protect surfaces	I
DM04	39-D-31-32-16-00A-720A-K	Interruptor bracket - Install procedure	I
DM05	39-D-31-32-17-00A-720A-K	Tachometer support - Install procedure	I
DM06	39-D-31-32-13-00A-720A-K	Tachometer (MT33) - Install procedure	I
DM07	39-A-11-00-01-00A-720A-A	Decal - Install procedure	I, II
DM08	39-A-20-10-08-00A-622A-A	Electrical contacts - Crimp	I
DM09	39-A-20-10-18-00A-691A-A	Electrical wires and cables - Marking	I
DM10	39-D-31-32-03-00A-720A-K	RT-Tip Track camera - Install procedure	II
DM11	39-D-31-32-02-00A-720A-K	Data transfer device (DTD) - Install procedure	II
DM12	39-D-31-32-01-00A-720A-K	Health and usage monitoring computer (HUMC) - Install procedure	II

Following Data Module refers to CSRP:

DATA MODULE		DESCRIPTION	PART
DM13	CSRP-A-51-21-01-02A-257A-D	Polyurethane paint (MIL-PRF-85285) - Paint and apply marking	I

2) ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
C/A	Cable
DAU	Data Acquisition Unit
DM	Data Module
DOA	Design Organization Approval
DTD	Data Transfer Device

EASA	European Aviation Safety Agency
HUMS	Health and Usage Monitoring System
IGB	Intermediate Gear Box
LH	Leonardo Helicopters
MGB	Main Gear Box
MMH	Maintenance Man Hours
N.A.	Not Applicable
P/N	Part Number
S/N	Serial Number
TDS	Tail Drive Shaft
TGB	Tail Gear Box

3) ANNEX

Annex A	Family Hums Bonding Check and Functional Test
Annex B	AW139 HUMC OPSW and VDAM SW Upload Procedure

J. PUBLICATIONS AFFECTED

N.A.

K. SOFTWARE ACCOMPLISHMENT SUMMARY

Software to be updated:

HUMC APSW option file P/N 3G3130AA0100
VDAM SW option file P/N 3G3130AB0100

Option File P/N is depending upon helicopter configuration that can be different from the one reported in relevant helicopter “Commessa di Vendita”. Customer must contact Product Support Engineering (engineering.support.lhd@leonardo.com) to request the correct Option File at least three months in advance from the scheduled embodiment of this Service Bulletin.

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

1) PARTS

PART I

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	**3G3130A03111**		**FAMILY HUMS COMPLETE PROVISION**	**REF**	**.**		**-**
2	**3G3130A00711**		**TAIL ROTOR PICK-UP INSTL**	**REF**	**..**		**-**
3	3G3130A00431		Azimuth Assy	1	...		139-688L1
4	3G3130A00552		Pick-Up Support	1	...		139-688L1
5	3G3130A00651		Chopper Support	1	...		139-688L1
6	3G6493A02251		Chopper	1	...		139-688L1
7	AN4H7A		Bolt	1	...		139-688L1
8	MS17826-4		Nut	1	...		139-688L1
9	MS20995C32		Lockwire	0.45 kg	...		139-688L1
10	MS24665-155		Cotter pin	1	...		139-688L1
11	NAS1149C0416R		Washer	2	...		139-688L1
12	NAS1149C0432R		Washer	2	...		139-688L1
13	NAS1149C0632R		Washer	1	...		139-688L1
14	NAS509-6		Nut	1	...		139-688L1
15	NAS6606D15		Bolt	2	...		139-688L1
16	**3G3130A01215**		**MGB HUMS SENSORS INST**	**REF**	**..**		**-**
17	3062A1		Accelerometer	1	...		139-688L1
18	**3G6320P01111**		**FAN SENSOR ADAPTER PROVISION**	**REF**	**...**	**(1)**	**-**
19	3G6320A22931		Adapter	1	....		139-688L2
20	3G6340V00151		Accelerometer	12	...		139-688L2
21	A601A7B14		Bonding cable assy	1	...		139-688L2
22	EA6300V083-001		Azimuth sensor	1	...		139-688L2
23	MS20995C20		Lockwire	0.45 kg	...		139-688L2
24	NA0069HA040024		Screw	1	...		139-688L2
25	NAS1352C06H14		Screw	11	...		139-688L2
26	**3G3130A03412**		**HUMS FUSELAGE ELECTRICAL PROVISION**	**REF**	**..**		**-**
27	3G3130L00251		Filter	3	...		139-688L1
28	3G9A01A73001	3G3130A03412A1R	Family HUMS C/A (A1A730)	1	...	(2)	139-688L1
29	3G9A02A67201		Family HUMS C/A (A2A672)	1	...	(3)	139-688L1
30	3G9A01B67001	3G3130A03412A2R	Family HUMS C/A (A1B670)	1	...	(4)	139-688L1
31	3G9A02B63101		Family HUMS C/A (A2B631)	1	...	(5)	139-688L1
32	3G9B01R08101	3G3130A03412A3R	Family HUMS C/A (B1R81)	1	...	(6)	139-688L1
33	3G9B02B78601		Family HUMS C/A (B2B786)	1	...	(7)	139-688L1
34	3G9B01R08201	3G3130A03412A4R	Family HUMS C/A (B1R82)	1	...	(8)	139-688L1
35	3G9B02B78701		Family HUMS C/A (B2B787)	1	...	(9)	139-688L1
36	3G9C01B37101	3G3130A03412A5R	Family HUMS C/A (C1B371)	1	...	(10)	139-688L1
37	3G9C02B42701		Family HUMS C/A (C2B427)	1	...	(11)	139-688L1
38	3G9D02B23201	3G9D02B23201A1R	Family HUMS C/A (D2B232)	1	...		139-688L1
39	A388A3E08C		Standoff	1	...		139-688L1
40	A388A3E08C75		Standoff	1	...		139-688L1
41	A388A3E20C75		Standoff	1	...		139-688L1
42	A574A11-01		Boot	2	...		139-688L1

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
43	A631A01A		Spacers for cable bundles	3	...		139-688L1
44	AW001CB02H		Clamp	1	...		139-688L1
45	AW001CB03H		Clamp	1	...		139-688L1
46	AW001CB04H		Clamp	2	...		139-688L1
47	AW001CB08H		Clamp	2	...		139-688L1
48	AW001CB09H		Clamp	1	...		139-688L1
49	AW001CB10H		Clamp	1	...		139-688L1
50	AW001CL000A-X3		Support	1	...		139-688L1
51	AW001CL001-N6		Support	5	...		139-688L1
52	AW001CL510A-N6		Support	1	...		139-688L1
53	AW001CL510B-N6		Support	3	...		139-688L1
54	D38999/22CW		Dummy connector	1	...		139-688L1
55	ED300J244		Decal	2	...		139-688L1
56	ED300J362		Decal	2	...		139-688L1
57	ED300MT31P1		Decal	1	...		139-688L1
58	ED300MT39P1		Decal	1	...		139-688L1
59	M85049/95-12A-A		Flange	1	...		139-688L1
60	M85049/95-16A-A		Flange	1	...		139-688L1
61	MS21043L3	MS21043-3	Nut	1	...		139-688L1
62	NAS1149D0332J		Washer	6	...		139-688L1
63	NAS1149DN416J		Washer	8	...		139-688L1
64	NAS1190E3P5AK		Screw	2	...		139-688L1
65	NAS1802-04-7		Screw	8	...		139-688L1
66	NAS1802-3-10		Screw	1	...		139-688L1
67	NAS1802-3-6		Screw	2	...		139-688L1
68	NAS813-12		Plug	1	...		139-688L1
69	NAS813-22		Protective plug	2	...		139-688L1
70	NAS813-32		Protective plug	2	...		139-688L1
71	**3G3130A03512**		**HUMS MGB ELECTRICAL PROVISIO**	**REF**	**..**		**-**
72	3G9F12B01511		HUMS MGB C/A (F2B15)	1	...	(12)	139-688L1
73	3G9F12B01611		HUMS MGB C/A (F2B16)	1	...	(13)	139-688L1
74	A388A3E06C		Standoff	2	...		139-688L1
75	AS21919WCH02		Clamp	2	...		139-688L1
76	AS21919WCH03		Clamp	2	...		139-688L1
77	AS21919WCH04		Clamp	3	...		139-688L1
78	AS21919WCH05		Clamp	3	...		139-688L1
79	AS21919WCH06		Clamp	4	...		139-688L1
80	AS21919WCH08		Clamp	7	...		139-688L1
81	AS21919WCH11		Clamp	1	...		139-688L1
82	AW001CL001-N6		Support	1	...		139-688L1
83	NAS1149D0332J		Washer	2	...		139-688L1
84	NAS1190E3P5AK		Screw	2	...		139-688L1
85	NAS1801-3-8		Screw	1	...		139-688L1
86	**3G5311A35312**		**FAMILY HUMS STRUCTURAL PROVISION**	**REF**	**..**		**-**
87	3062A1		Accelerometer	3	...		139-688L1
88	3G5315A08951		Support	1	...		139-688L1
89	3G5315A09051		Support	1	...		139-688L1
90	3G5315A09235		Support DAU Assy	2	...		139-688L1
91	3G5320A08431		Rod Assy	1	...		139-688L1
92	3G5320A08751		Lower Fitting	1	...		139-688L1
93	3G5320A18651		Upper Fitting	1	...		139-688L1
94	A298A04TW02		Rivet	2	...		139-688L1
95	AN3-6A		Bolt	2	...		139-688L1
96	AN3H5A		Bolt	3	...		139-688L1

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
97	MS20470AD4-8		Rivet	0.1 kg	...		139-688L1
98	MS21042L3		Nut	7	...		139-688L1
99	MS21069L3		Nut plate	3	...		139-688L1
100	MS27039-0805		Screw	3	...		139-688L1
101	MS27039-1-10		Screw	3	...		139-688L1
102	MS27039-1-12		Screw	2	...		139-688L1
103	MS35489-147		Grommet	1	...		139-688L1
104	NAS1149C0332R		Washer	14	...		139-688L1
105	NAS1149D0332K		Washer	3	...		139-688L1
106	NAS1149DN832K		Washer	3	...		139-688L1
107	NAS1836C08-07P		Insert	3	...		139-688L1
108	NAS9301BNS-4-02	NAS9301B-4-02	Rivet	2	...		139-688L1
109	AS3209-113		O-ring	1	.		139-688L1
110	M39029/58-360		Electrical contact	10	.		139-688L1
111	M39029/56-348		Electrical contact	66	.		139-688L1
112	M39029/57-354		Electrical contact	6	.		139-688L1
113	M39029/56-351		Electrical contact	25	.		139-688L1
114	M39029/58-360		Electrical contact	51	.		139-688L1
115	M39029/58-363		Electrical contact	24	.		139-688L1
116	A523A-A01		Electrical contact	1	.		139-688L1
117	A523A-A05		Electrical contact	2	.		139-688L1
118	M39029/5-115		Electrical contact	4	.		139-688L1
119	MS3476W8-98S		Electrical contact	2	.		139-688L1
120	A532A300-0802T		Electrical contact	1	.		139-688L1
121	A532A390-0802		Electrical contact	1	.		139-688L1
122	A574A02-01		Electrical contact	1	.		139-688L1
123	44231-3S-793		Electrical contact	2	.		139-688L1

PART II

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
124	**3G3130A03211**		**FAMILY HUMS INSTL**	**REF**	**.**		**-**
125	**3G3130A03311**		**FAMILY HUMS EQUIPMENT INSTL**	**REF**	**..**		**-**
126	003659-001		RT-Tiptrak tracking camera	1	...		139-688L3
127	3G3130V00351		HUMS HUMC	1	...		139-688L3
128	8G4620V00451		Data Transfer Device	1	...		139-688L3
129	A601A13B100		Bonding cable assy	1	...		139-688L3
130	A631A01A		Spacers for cable bundles	1	...		139-688L3
131	AW001CL008-CM		Support	1	...		139-688L3
132	ED300A600		Decal	1	...		139-688L3
133	ED300DS229		Decal	1	...		139-688L3
134	ED300PL202		Decal	1	...		139-688L3
135	MS20995C15		Lockwire	0.45 kg	...		139-688L3
136	NAS1149C0532B		Washer	4	...		139-688L3
137	NAS1802-4-14		Screw	4	...		139-688L3
138	NAS6605H3		Bolt	4	...		139-688L3
139	**3G5311A35411**		**FAMILY HUMS CAMERA SUPPORT I**	**REF**	**..**		**-**
140	3G5317A95351		Support	1	...		139-688L3
141	3G3130AA0100		HUMC APSW	1	...	(14)	-
142	3G3130AB0100		VDAM SW	1	...	(14)	-

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
143	199-05-002 TY II, CL 2 Code n° 900004603	EA 934NA AERO (C397)	AR	(15)	I
144	MIL-PRF-23699 Code n° 501731132	Oil (C458)	AR	(15) (16)	I
145	MIL-PRF-85285 TY I, CL H Code n°999999999000003013	Polyurethane paint grey 16440(C358)	AR	(15)	I
146	MIL-PRF-680 TY II Code n° 505405407	Cleaning solvent ARDROX 5503 (C010)	AR	(15)	I
147	AWMS05-001 TY I, CL B, GR 2 Code n° 999999999000015245	Sealing compound MC780 B-2 (C465)	AR	(15)	I
148	199-05-004 CL B GR 2 Code n° 999999999000015244	Adhesive MC780 B-2	AR	(15)	I
149	Commercial	Abrasive paper P-C-451 (C420)	AR	(15)	I
150	TT-N-95 TY II Code n°531055030	Solvent aliphatic naphtha (C059)	AR	(15)	I
151	Code No. 999999999000001675	Adhesive CB200-40 (C356)	AR	(15)	I
152	MIL-DTL-81706 CL 1A & 3, Form II Code n°531050460	Alodine 1200 (C237)	AR	(15)	I
153	ASTM D5363 Form II Code n°900004956	Loctite 222 (C029)	AR	(15)	I
154	A236A01AB	Edging	AR	(15) (17)	I
155	A582A05 or EN6049-006-05-5	Tubing braided	AR	(15) (17)	I
156	AW001CK03LC	Lacing Cord	AR	(15)	I
157	EN6049-006-32-5	Nomex	2 m	(15)	I
158	M23053/5-107-0	Tubing heatshrinkable	2 m	(15)	I
159	M23053/5-109-0	Insulation sleeving	2 m	(15)	I
160	M23053/8-004-C	Insulation sleeving	2 m	(15)	I
161	M23053/8-203-C	Insulation sleeving	2 m	(15)	I

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
139-688L1	1		Part I
139-688L2	1	(1)	
139-688L3	1		Part II
3G3130AA0100	1		
3G3130AB0100	1		

NOTES

(1) Applicable only if fan P/N 3G6320V0385 is installed.

(2) The C/A P/N 3G9A01A73001 (A1A730) can be provided as loose items not assembled. Below, the list of the parts:

P/N	DESCRIPTION	Q.TY
A532A400-1303T	Backshell	1
A532A490-1303	Adapter 90°	1
A556A-T24	Wire	10 m
D38999/26FC35SN	Electrical connector	1
M39029/56-348	Electrical contact	9
M81824/1-1	Splice	2

(3) The C/A P/N 3G9A02A67201 (A2A672) can be provided as loose items not assembled. Below, the list of the parts:

P/N	DESCRIPTION	Q.TY
A561A-T2-24	Wire	15 m
M23053/8-004-C	Insulation sleeving	2 m

(4) The C/A P/N 3G9A01B67001 (A1B670) can be provided as loose items not assembled. Below, the list of the parts:

P/N	DESCRIPTION	Q.TY
A532A400-1502T	Backshell	1
A556A-T24	Wire	21 m
D38999/26WD35SN	Connector	1
M39029/56-348	Electrical contact	9
M81824/1-1	Splice	4

(5) The C/A P/N 3G9A02B63101 (A2B631) can be provided as loose items not assembled. Below, the list of the parts:

P/N	DESCRIPTION	Q.TY
8D5Q25W88SN620	Connector	1
A532A400-2502C	Backshell	1
A561A-T2-24	Wire	31 m
A561A-T4-24	Wire	3 m
A590A02	Ferrule	3
ETH1-1346A	Electrical contact	1
M23053/8-004-C	Insulation sleeving	2 m
M81824/1-1	Splice	2

(6) The C/A P/N 3G9B01R08101 (B1R81) can be provided as loose items not assembled. Below, the list of the parts:

P/N	DESCRIPTION	Q.TY
A556A-T24	Wire	11 m

(7) The C/A P/N 3G9B02B78601 (B2B786) can be provided as loose items not assembled. Below, the list of the parts:

P/N	DESCRIPTION	Q.TY
A556A-T22	Wire	1 m
A561A-T2-22	Wire	6 m

A561A-T2-24	Wire	42 m
A561A-T4-24	Wire	6 m
A590A02	Ferrule	1
M23053/8-004-C	Insulation sleeving	2 m
M39029/5-115	Electrical contact	3
M85049/52-1-08W	Backshell	1
MS3476W8-98S	Connector	1

(8) The C/A P/N 3G9B01R08201 (B1R82) can be provided as loose items not assembled. Below, the list of the parts:

P/N	DESCRIPTION	Q.TY
A556A-T24	Wire	5 m

(9) The C/A P/N 3G9B02B78701 (B2B787) can be provided as loose items not assembled. Below, the list of the parts:

P/N	DESCRIPTION	Q.TY
A532A400-1502T	Backshell	1
A561A-T2-24	Wire	18 m
D38999/20WD35SN	Connector	1
M23053/8-004-C	Insulation sleeving	2 m
M39029/56-348	Electrical contact	22

(10) The C/A P/N 3G9C01B37101 (C1B371) can be provided as loose items not assembled. Below, the list of the parts:

P/N	DESCRIPTION	Q.TY
252-8553-000	Adapter	2
A523A-A05	Contact pin	1
A532A400-1102T	Backshell	1
A556A-T24	Wire	9 m
D38999/26WB2SN	Electrical connector	1
M39029/56-352	Electrical contact	2
M39029/58-363	Electrical contact	2
M81824/1-1	Splice	1

(11) The C/A P/N 3G9C02B42701 (C2B427) can be provided as loose items not assembled. Below, the list of the parts:

P/N	DESCRIPTION	Q.TY
A529A400-1302T09	Backshell	1
A532A400-1102T	Backshell	1
A532A400-2502C	Backshell	1
A556A-T24	Wire	1 m
A561A-T2-24	Wire	97 m
A561A-T4-24	Cable 4 core	2 m
A590A02	Ferrule	1
D38999/20WB5SN	Electrical connector	1
D38999/26JC35SN	Electrical connector	1
D38999/26WJ35SN	Electrical connector	1

M23053/8-004-C	Insulation sleeving	2 m
M39029/56-348	Electrical contact	60
M39029/56-351	Electrical contact	2
M81824/1-1	Splice	2

(12) The C/A P/N 3G9F12B01511 (F2B15) can be provided as loose items not assembled. Below, the list of the parts:

P/N	DESCRIPTION	Q.TY
1037-4-G-W24	Boot heatshrinkable	9
A574A01-09	Insulation sleeving	3
A578A04-9	Sleeve marker cable	11
A578A09-9	Sleeve marker cable	1
A579A03	Marker	1
EN6049-006-05-5	Nomex	2 m
EN6049-006-13-5	Nomex	2 m
M23053/5-105-0	Insulation sleeving	2 m
M23053/5-109-0	Insulation sleeving	2 m
3G9F02B22301	Family HUMS C/A (F2B223)	REF
0012-049-001	Electrical contact	18
44231-3S-793	Electrical connector	9
A532A300-0802B	Backshell	1
A532A400-0903B	Backshell	1
A532A400-1502B	Backshell	1
A556A-T22	Wire	1 m
A561A-T2-24	Wire	30 m
A590A02	Ferrule	2
D38999/26FA98SN	Electrical connector	1
D38999/26WD35PN	Electrical connector	1
M23053/8-004-C	Insulation sleeving	2 m
M39029/5-115	Electrical contact	3
M39029/56-351	Electrical contact	3
M39029/58-360	Electrical contact	22
MS3476W8-98S	Electrical connector	1

(13) The C/A P/N 3G9F12B01611 (F2B16) is provided as loose items not assembled. Below, the list of the parts:

P/N	DESCRIPTION	Q.TY
1037-4-G-W24	Boot heatshrinkable	1
A574A1-1	Boot heatshrinkable	1
A578A04-9	Sleeve marker cable	2
A579A03	Marker	1
EN6049-006-05-5	Nomex	2 m
M23053/5-105-0	Insulation sleeving	2 m
3G9F02B22401	Family HUMS C/A (F2B224)	REF
0012-049-001	Electrical contact	2
44231-3S-793	Electrical connector	1
A532A400-1102B	Backshell	1
A561A-T2-24	Wire	1 m
D38999/26WB5PN	Electrical connector	1
M23053/8-004-C	Insulation sleeving	2 m
M39029/58-363	Electrical contact	2

(14) This software will not be supplied; as specified by Information Letter AW139-20-105, it will be available for download, along with relevant certification document, in “My Software” sub-section of Leonardo Customer Portal website https://customerportal.leonardocompany.com.

(15) Item to be procured as local supply.

(16) DOD-PRF-85734 Oil (C366) can be used as alternative.

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

B. SPECIAL TOOLS

The following special tools, or equivalent, are necessary to accomplish this Service Bulletin:

#	P/N	DESCRIPTION	Q.TY	NOTE	PART
162	3G3130G00131	Cabling harness	1		II

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

SPECIAL TOOLS NOTE

(B1) Item to be used between LRU HUMC and the laptop during SW upload procedure.

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-Aand with reference to Figures 1 thru 28 and 33 thru 40, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform family hums complete provision P/N 3G3130A03111 as described in the following procedure:

   2.1 With references to Figures 1 thru 6, perform Family HUMS structural provision P/N 3G5311A35312 as described in the following procedure:

2.1.1 With reference to Figure 1 Detail A and View H and Figure 3 Section K-K, temporarily locate the lower fitting P/N 3G5320A08751 on the shell assy P/N 3G5320A02133, countermark and drill n°2 rivet holes on the shell assy.

2.1.2 With reference to Figure 1 View H and Figure 3 Section K-K, install the lower fitting P/N 3G5320A08751 on the shell assy P/N 3G5320A02133 by means of n°2 rivets P/N A298A04TW02.

2.1.3 With reference to Figure 1 View H and Figure 2 Section F-F and Section N-N, temporarily locate the upper fitting P/N 3G5320A18651 and the support P/N 3G5317A95351 on the outlet fairing assy P/N 3G5320A08331, countermark and drill n°5 holes Ø5.20÷5.50 thru the fairing.

2.1.4 With reference to Figure 1 View H and Figure 2 Section N-N, install the upper fitting P/N 3G5320A18651 on the outlet fairing assy P/N 3G5320A08331 by means of n°2 screws P/N MS27039-1-12, n°4 washers P/N NAS1149C0332R and n°2 nuts P/N MS21042L3.

2.1.5 With reference to Figure 1 View H and Figure 3 Section M-M and Section D-D, install the rod assy P/N 3G5320A08431 on the upper fitting P/N 3G5320A18651 and the lower fitting P/N 3G5320A08751 by means of n°2 bolts P/N AN3-6A, n°4 washers P/N NAS1149C0332R and n°2 nuts P/N MS21042L3.

2.1.6 With reference to Figure 2 Section F-F, install n°3 screws P/N MS27039-1-10, n°6 washers P/N NAS1149C0332R and n°3 nuts P/N MS21042L3 on the outlet fairing assy P/N 3G5320A08331.

2.1.7 With reference to Figure 2 Section E-E and View G, perform the indicated cut out in accordance with the dimensions shown and install the grommet P/N MS35489-147.

2.1.8 In accordance with AMP DM 39-A-20-10-01-00A-259A-A and with reference to Figure 4 Detail T, prepare the indicated surface for good electrical bonding.

2.1.9 With reference to Figure 4 View P and Section U-U, temporarily locate the support P/N 3G5315A08951 on the right lower panel in accordance with the dimensions shown, countermark and drill n°3 holes Ø11.50÷11.65 thru the panel.

2.1.10 With reference to Figure 4 Section U-U, install n°3 inserts P/N NAS1836C08-07P by means of adhesive EA 934NA AERO (C397).

2.1.11 With reference to Figure 4 View P, install the support P/N 3G5315A08951 on the right lower panel by means of n°3 screws P/N MS27039-0805 and n°3 washers P/N NAS1149DN832K.

2.1.12 With reference to Figure 4 View P, install the accelerometer P/N 3062A1 on the support P/N 3G5315A08951.

2.1.13 With reference to Figure 5 Section B-B, temporarily locate the two supports DAU assy P/N 3G5315A09235, countermark and drill n°32 rivet holes.

2.1.14 With reference to Figure 5 Section B-B, install the two supports DAU assy P/N 3G5315A09235 by means of n°30 rivets P/N MS20470AD4-8 and n°2 rivets P/N NAS9301BNS-4-02.

2.1.15 In accordance with AMP DM 39-A-20-10-01-00A-259A-A and with reference to Figure 6 Detail AC, prepare the indicated surface for good electrical bonding.

2.1.16 With reference to Figure 6 View AD and View AE, temporarily locate the support P/N 3G5315A09051 on the fitting, countermark and drill n°3 holes Ø5.16÷5.28 thru the fitting.

2.1.17 With reference to Figure 6 View AE, install n°3 nut plates P/N MS21069L3 by means of n°6 rivets.

2.1.18 With reference to Figure 6 View S and View AD, install the support P/N 3G5315A09051 on the fitting by means of n°3 bolts P/N AN3H5A and n°3 washers P/N NAS1149D0332K.

2.1.19 With reference to Figure 6 View AD, install n°2 accelerometers P/N 3062A1 on the support P/N 3G5315A09051.

NOTE

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

NOTE

Install the tubing braided P/N A582A where protection against chafing and prevention of contact with structure may occur, but the tubing protection is not substitute for good routing practice.

NOTE

When necessary, replace existing clamp with suitable clamp.

NOTE

To ensure a proper installation, it is allowed to use:

- bolts (length only) two dash shorter or longer than the nominal one;
- screws (length only) two dash shorter or longer than the nominal one;
- washers (thickness only) two dash greater or lesser than the nominal one;
- spacers (length only) two dash shorter or longer than the nominal one.

2.2 With reference to Figures 14 thru 22 and Figures 33 thru 40 Wiring Diagram, perform Hums fuselage electrical provision P/N 3G3130A03412 as described in the following procedure:

2.2.1 With reference to Figure 14 Isometric View and Figure 36 Wiring Diagram, remove the Family Hums C/A (A1B225) P/N 3G9A01B22501 between the connector P106 and the junction in-line TB150-1.

2.2.2 With reference to Figure 14 Isometric View and Figure 35 Wiring Diagram, remove the Family Hums (A2A226) P/N 3G9A02A22601 between the connector PL28P2 and the connector A1-3P2.

2.2.3 With reference to Figure 15 View Looking from STA 725 to STA 3120, install the support P/N AW001CL510B-N6 at location n°1 by means of adhesive CB200-40 (C356).

2.2.4 With reference to Figure 16 View Looking from STA 1500 to STA 3120, install the support P/N AW001CL000A-X3 at location n°1 by means of adhesive CB200-40 (C356).

2.2.5 With reference to Figure 18 View C, install the standoff P/N A388A3E08C75 at location n°1 and the standoff P/N A388A3E08C at location n°2 by means of adhesive CB200-40 (C356).

2.2.6 With reference to Figure 18 View C, install the support P/N AW001CL001-N6 at location n°3 by means of adhesive CB200-40 (C356).

2.2.7 With reference to Figure 18 View C, install the dummy connector P/N D38999/22CW in the indicated position by means of adhesive EA934NA (C397).

2.2.8 With reference to Figure 19 View Rear Fuselage, install the standoff P/N A388A3E20C75 at location n°1 by means of adhesive CB200-40 (C356).

2.2.9 With reference to Figure 19 View Rear Fuselage, install the support P/N AW001CL510A-N6 at location n°2 by means of adhesive CB200-40 (C356).

2.2.10 With reference to Figure 19 View Rear Fuselage, install the support P/N AW001CL510B-N6 at location n°3 by means of adhesive CB200-40 (C356).

2.2.11 With reference to Figure 20 View D, install n°4 supports P/N AW001CL001-N6 at locations n°1, n°2, n°3, n°4 by means of adhesive CB200-40 (C356).

2.2.12 With reference to Figure 22 Tail Rotor Gear Box, install the support P/N AW001CL510B-N6 at location n°1 by means of adhesive CB200-40 (C356).

NOTE

Perform step 2.2.13 if Family Hums C/A A1A730 has been supplied as loose items not assembled.

2.2.13 With reference to Figure 34 Wiring Diagram, assemble the Family Hums C/A (A1A730) P/N 3G9A01A73001 as described in the following procedure:

2.2.13.1 With reference to Figure 34 Wiring Diagram, assemble the connector DS229P1 by means of the electrical connector

P/N D38999/26FC35SN, the backshell P/N A532A400-1303T and the adapter P/N A532A490-1303.

2.2.13.2 With reference to Figure 34 Wiring Diagram, cut n°2 wires P/N A556A-T24 of adequate length and lay them down between the connector DS229P1 and the splice SP10449 following the existing route as shown.

2.2.13.3 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the wires between the connector DS229P1 and the splice SP10449 P/N M81824/1-1.

2.2.13.4 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark wires as D612F24-G and D612G24-G by means of marker sleeves.

2.2.13.5 With reference to Figure 34 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector J111 and the splice SP10449 following the existing route as shown.

2.2.13.6 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the wire between the connector J111 and the splice SP10449.

2.2.13.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark wire as D612E24-G by means of marker sleeves.

2.2.13.8 With reference to Figure 34 Wiring Diagram, cut n°3 wires P/N A556A-T24 of adequate length and lay them down between the connector DS229P1 and the splice SP10450 following the existing route as shown.

2.2.13.9 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the wires between the connector DS229P1 and the splice SP10450 P/N M81824/1-1.

2.2.13.10 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark wires as D611A24-G, D611B24-G and D611C24-G by means of marker sleeves.

2.2.13.11 With reference to Figure 34 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector J111 and the splice SP10450 following the existing route as shown.

2.2.13.12 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the wire between the connector J111 and the splice SP10450.

2.2.13.13 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark wire as D611D24-G by means of marker sleeves.

2.2.13.14 With reference to Figure 34 Wiring Diagram, cut n°2 wires P/N A556A-T24 of adequate length and lay them down between the connector DS229P1 and the connector DS229P1 following the existing route as shown.

2.2.13.15 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the wires between the connector DS229P1 and the connector DS229P1.

2.2.13.16 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark wires as D619A24-G and D620A24-G by means of marker sleeves.

2.2.13.17 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark the cable assy so obtained as A1A730 by means of marker sleeves.

NOTE

Perform step 2.2.14 if Family Hums C/A A2A672 has been supplied as loose items not assembled.

2.2.14 With reference to Figures 34 and 37 Wiring Diagram, assemble the Family Hums C/A (A2A672) P/N 3G9A02A67201 as described in the following procedure:

2.2.14.1 With reference to Figure 34 Wiring Diagram, cut n°2 wires P/N A561A-T2-24 of adequate length and lay them down between the connector DS229P1 and the connector J107 following the existing route as shown.

2.2.14.2 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the wires between the connector DS229P1 and the connector J107.

2.2.14.3 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark wires as D617D24-S (WH and BL) and D618D24-S (WH and BL) by means of marker sleeves.

2.2.14.4 With reference to Figure 34 Wiring Diagram, apply the insulation sleeving P/N M23053/8-004-C on the end of the wires near to connectors DS229P1 and J107.

2.2.14.5 With reference to Figure 37 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector A1-1P3 and the connector J107 following the existing route as shown.

2.2.14.6 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring Diagram, perform the electrical connections of the wire between the connector A1-1P3 and the connector J107.

2.2.14.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring Diagram, mark wire as D626A24-S (WH and BL) by means of marker sleeves.

2.2.14.8 With reference to Figure 37 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector A1-1P2 and the connector J107 following the existing route as shown.

2.2.14.9 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring Diagram, perform the electrical connections of the wire between the connector A1-1P2 and the connector J107.

2.2.14.10 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring Diagram, mark wire as D627D24-S (WH and BL) by means of marker sleeves.

2.2.14.11 With reference to Figure 37 Wiring Diagram, apply the insulation sleeving P/N M23053/8-004-C on the end of the wires near to connectors A1-1P2, A1-1P3 and J107.

2.2.14.12 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figures 34 and 37 Wiring Diagram, mark the cable assy so obtained as A2A672 by means of marker sleeves.

NOTE

Perform step 2.2.15 if Family Hums C/A A1B670 has been supplied as loose items not assembled.

2.2.15 With reference to Figures 33 and 36 Wiring Diagram, assemble the Family Hums C/A (A1B670) P/N 3G9A01B67001 as described in the following procedure:

2.2.15.1 With reference to Figures 33 and 36 Wiring Diagram, assemble the connector PL202P2 by means of the electrical connector P/N D38999/26WD35SN and the backshell P/N A532A400-1502T.

2.2.15.2 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector P111 and the connector P102 following the existing route as shown.

2.2.15.3 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the connector P111 and the connector P102.

2.2.15.4 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D611E24-G by means of marker sleeves.

2.2.15.5 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector P111 and the splice SP10448 following the existing route as shown.

2.2.15.6 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the connector P111 and the splice SP10448 P/N M81824/1-1.

2.2.15.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D612D24-G by means of marker sleeves.

2.2.15.8 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector PL202P2 and the splice SP10448 following the existing route as shown.

2.2.15.9 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the connector PL202P2 and the splice SP10448.

2.2.15.10 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D612C24-G by means of marker sleeves.

2.2.15.11 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector P102 and the splice SP10448 following the existing route as shown.

2.2.15.12 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the connector P102 and the splice SP10448.

2.2.15.13 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D612B24-G by means of marker sleeves.

2.2.15.14 With reference to Figure 33 Wiring Diagram, cut n°2 wires P/N A556A-T24 of adequate length and lay them down between the connector PL202P2 and the splice SP10696 following the existing route as shown.

2.2.15.15 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wires between the connector PL202P2 and the splice SP10696 P/N M81824/1-1.

2.2.15.16 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wires as D613A24-G and D613B24-G by means of marker sleeves.

2.2.15.17 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector TB132P1 and the splice SP10696 following the existing route as shown.

2.2.15.18 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the connector TB132P1 and the splice SP10696.

2.2.15.19 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D613C24N-G by means of marker sleeves.

2.2.15.20 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector PL202P2 and the terminal board TB140 following the existing route as shown.

2.2.15.21 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the connector PL202P2 and the terminal board TB140.

2.2.15.22 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D615A24N-G by means of marker sleeves.

2.2.15.23 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector PL202P2 and the terminal board TB136-2 following the existing route as shown.

2.2.15.24 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the connector PL202P2 and the terminal board TB136-2.

2.2.15.25 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D616A24-G by means of marker sleeves.

2.2.15.26 With reference to Figure 36 Wiring Diagram, cut n°3 wires P/N A556A-T24 of adequate length and lay them down between the connector PL202P2 and the splice SP10453 following the existing route as shown.

2.2.15.27 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 36 Wiring Diagram, perform the electrical connections of the wires between the connector PL202P2 and the splice SP10453 P/N M81824/1-1.

2.2.15.28 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 36 Wiring Diagram, mark wires as D625C24-G, D625D24-G and D625E24-G by means of marker sleeves.

2.2.15.29 With reference to Figure 36 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the splice SP10453 and the splice SP10454 following the existing route as shown.

2.2.15.30 With reference to Figure 36 Wiring Diagram, perform the electrical connections of the wire between the splice SP10453 and the splice SP10454 P/N M81824/1-1.

2.2.15.31 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 36 Wiring Diagram, mark wire as D625B24-G by means of marker sleeves.

2.2.15.32 With reference to Figure 36 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector PL202P2 and the splice SP10454 following the existing route as shown.

2.2.15.33 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 36 Wiring Diagram, perform the electrical connections of the wire between the connector PL202P2 and the splice SP10454.

2.2.15.34 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 36 Wiring Diagram, mark wire as D625F24-G by means of marker sleeves.

2.2.15.35 With reference to Figure 36 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector P106 and the splice SP10454 following the existing route as shown.

2.2.15.36 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 36 Wiring Diagram, perform the electrical connections of the wire between the connector P106 and the splice SP10454.

2.2.15.37 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 36 Wiring Diagram, mark wire as D625G24-G by means of marker sleeves.

2.2.15.38 With reference to Figure 36 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the junction in-line TB150-1 and the splice SP10454 following the existing route as shown.

2.2.15.39 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 36 Wiring Diagram, perform the electrical connections of the wire between the junction in-line TB150-1 and the splice SP10454.

2.2.15.40 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 36 Wiring Diagram, mark wire as D625A24-G by means of marker sleeves.

2.2.15.41 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figures 33 and 36 Wiring Diagram, mark the cable assy so obtained as A1B670 by means of marker sleeves.

NOTE

Perform step 2.2.16 if Family Hums C/A A2B631 has been supplied as loose items not assembled.

2.2.16 With reference to Figures 34, 35 and 37 Wiring Diagram, assemble the Family Hums C/A (A2B631) P/N 3G9A02B63101 as described in the following procedure:

2.2.16.1 With reference to Figure 34 Wiring Diagram, assemble the connector PL202P1 by means of the electrical connector P/N 8D5Q25W88SN620 and the backshell P/N A532A400-2502C.

2.2.16.2 With reference to Figure 34 Wiring Diagram, cut n°1 wire P/N A561A-T4-24 of adequate length and lay it down between the connector PL202P1 and the connector P110 following the existing route as shown.

2.2.16.3 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the wire between the connector PL202P1 and the connector P110.

2.2.16.4 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark wire as D621A24-S (WH, BL, GN and OR) by means of marker sleeves.

2.2.16.5 With reference to Figure 34 Wiring Diagram, cut n°2 wires P/N A561A-T2-24 of adequate length and lay them down between the connector P107 and the connector P110 following the existing route as shown.

2.2.16.6 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the wires between the connector P107 and the connector P110.

2.2.16.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark wires as D617C24-S (WH and BL) and D618C24-S (WH and BL) by means of marker sleeves.

2.2.16.8 With reference to Figure 35 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector A1-3P2 and the splices SP10452 (BL) and SP10451 (WH) following the existing route as shown.

2.2.16.9 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring Diagram, perform the electrical connections of the wire between the connector A1-3P2 and n°2 splices SP10452 and SP10451 P/N M81824/1-1.

2.2.16.10 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring Diagram, mark wire as D624E24-S (WH and BL) by means of marker sleeves.

2.2.16.11 With reference to Figure 35 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector PL28P2 and the splices SP10452 (BL) and SP10451 (WH) following the existing route as shown.

2.2.16.12 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring Diagram, perform the electrical connections of the wire between the connector PL28P2 and n°2 splices SP10452 and SP10451.

2.2.16.13 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring Diagram, mark wire as D624D24-S (WH and BL) by means of marker sleeves.

2.2.16.14 With reference to Figure 35 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the

connector P110 and the splices SP10452 (BL) and SP10451 (WH) following the existing route as shown.

2.2.16.15 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring Diagram, perform the electrical connections of the wire between the connector P110 and n°2 splices SP10452 and SP10451.

2.2.16.16 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring Diagram, mark wire as D624C24-S (WH and BL) by means of marker sleeves.

2.2.16.17 With reference to Figure 35 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P110 and the connector PL28P1 following the existing route as shown.

2.2.16.18 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring Diagram, perform the electrical connections of the wire between the connector P110 and the connector PL28P1.

2.2.16.19 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring Diagram, mark wire as D623A24-S (WH and BL) by means of marker sleeves.

2.2.16.20 With reference to Figure 35 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P110 and the connector TB122P1 following the existing route as shown.

2.2.16.21 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring Diagram, perform the electrical connections of the wire between the connector P110 and the connector TB122P1.

2.2.16.22 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring Diagram, mark wire as D622C24-S (WH and BL) by means of marker sleeves.

2.2.16.23 With reference to Figure 37 Wiring Diagram, cut n°2 wires P/N A561A-T2-24 of adequate length and lay them down between the connector P110 and the connector P107 following the existing route as shown.

2.2.16.24 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring Diagram, perform the electrical

connections of the wires between the connector P110 and the connector P107.

2.2.16.25 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring Diagram, mark wires as D626B24-S (WH and BL) and D627C24-S (WH and BL) by means of marker sleeves.

2.2.16.26 With reference to Figures 34, 35 and 37 Wiring Diagram, apply the insulation sleeving P/N M23053/8-004-C on the end of the wires near to connectors P107, P110, A1-3P2, PL28P1, PL28P2, PL202P1 and TB122P1.

2.2.16.27 With reference to Figure 35 Wiring Diagram, apply n°3 ferrules P/N A590A02 on the wires near the splices SP10451 and SP10452.

2.2.16.28 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figures 34, 35 and 37 Wiring Diagram, mark the cable assy so obtained as A2B631 by means of marker sleeves.

NOTE

Perform step 2.2.17 if Family Hums C/A B1R81 has been supplied as loose items not assembled.

2.2.17 With reference to Figure 33 Wiring Diagram, assemble the Family Hums C/A (B1R81) P/N 3G9B01R08101 as described in the following procedure:

2.2.17.1 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector J102 and the connector J202 following the existing route as shown.

2.2.17.2 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the connector J102 and the connector J202.

2.2.17.3 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D611F24-G by means of marker sleeves.

2.2.17.4 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the

connector J102 and the connector PL1P6 following the existing route as shown.

2.2.17.5 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the connector J102 and the connector PL1P6.

2.2.17.6 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D612A24-G by means of marker sleeves.

2.2.17.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark the cable assy so obtained as B1R81 by means of marker sleeves.

NOTE

Perform step 2.2.18 if Family Hums C/A B2B786 has been supplied as loose items not assembled.

2.2.18 With reference to Figures 34, 35 and 37 Wiring Diagram, assemble the Family Hums C/A (B2B786) P/N 3G9B02B78601 as described in the following procedure:

2.2.18.1 With reference to Figure 37 Wiring Diagram, assemble the connector MT40P1 by means of the electrical connector P/N MS3476W8-98S and the backshell P/N M85049/52-1-08W.

2.2.18.2 With reference to Figure 34 Wiring Diagram, cut n°1 wire P/N A561A-T4-24 of adequate length and lay it down between the connector J110 and the connector J208 following the existing route as shown.

2.2.18.3 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the wire between the connector J110 and the connector J208.

2.2.18.4 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark wire as D621B24-S (WH, BL, GN and OR) by means of marker sleeves.

2.2.18.5 With reference to Figure 34 Wiring Diagram, cut n°2 wires P/N A561A-T2-24 of adequate length and lay them down between the connector J110 and the connector J208 following the existing route as shown.

2.2.18.6 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the wires between the connector J110 and the connector J208.

2.2.18.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark wires as D618B24-S (WH and BL) and D617B24-S (WH and BL) by means of marker sleeves.

2.2.18.8 With reference to Figure 35 Wiring Diagram, cut n°3 wires P/N A561A-T2-24 of adequate length and lay them down between the connector J110 and the connector J208 following the existing route as shown.

2.2.18.9 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring Diagram, perform the electrical connections of the wires between the connector J110 and the connector J208.

2.2.18.10 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring Diagram, mark wires as D622B24-S (WH and BL), D623B24-S (WH and BL) and D624B24-S (WH and BL) by means of marker sleeves.

2.2.18.11 With reference to Figure 37 Wiring Diagram, cut n°2 wires P/N A561A-T2-24 of adequate length and lay them down between the connector J110 and the connector J208 following the existing route as shown.

2.2.18.12 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring Diagram, perform the electrical connections of the wires between the connector J110 and the connector J208.

2.2.18.13 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring Diagram, mark wires as D626C24-S (WH and BL) and D627B24-S (WH and BL) by means of marker sleeves.

2.2.18.14 With reference to Figure 37 Wiring Diagram, cut n°1 wire P/N A561A-T2-22 of adequate length and lay it down between the connector MT40P1 and the connector J208 following the existing route as shown.

2.2.18.15 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring Diagram, perform the electrical connections of the wire between the connector MT40P1 and the connector J208.

2.2.18.16 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring Diagram, mark wire as D628B22-S (WH and BL) by means of marker sleeves.

2.2.18.17 With reference to Figure 37 Wiring Diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay it down between the connector MT40P1 and the connector MT40P1.

2.2.18.18 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring Diagram, perform the electrical connections of the wire between the connector MT40P1 and the connector MT40P1.

2.2.18.19 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring Diagram, mark wire as D629A22-S by means of marker sleeves.

2.2.18.20 With reference to Figures 34, 35 and 37 Wiring Diagram, apply the insulation sleeving P/N M23053/8-004-C on the end of the wires near to connectors J110, J208 and MT40P1.

2.2.18.21 With reference to Figure 37 Wiring Diagram, apply n°1 ferrule P/N A590A02 on the wire near the connector MT40P1.

2.2.18.22 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figures 34, 35 and 37 Wiring Diagram, mark the cable assy so obtained as B2B786 by means of marker sleeves.

NOTE

Perform step 2.2.19 if Family Hums C/A B1R82 has been supplied as loose items not assembled.

2.2.19 With reference to Figure 33 Wiring Diagram, assemble the Family Hums C/A (B1R82) P/N 3G9B01R08201 as described in the following procedure:

2.2.19.1 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector PL1P10 and the connector J212 following the existing route as shown.

2.2.19.2 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the connector PL1P10 and the connector J212.

2.2.19.3 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D610A24-G by means of marker sleeves.

2.2.19.4 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark the cable assy so obtained as B1R82 by means of marker sleeves.

NOTE

Perform step 2.2.20 if Family Hums C/A B2B787 has been supplied as loose items not assembled.

2.2.20 With reference to Figures 38 and 40 Wiring Diagram, assemble the Family Hums C/A (B2B787) P/N 3G9B02B78701 as described in the following procedure:

2.2.20.1 With reference to Figures 38 and 40 Wiring Diagram, assemble the connector J244 by means of the electrical connector P/N D38999/20WD35SN and the backshell P/N A532A400-1502T.

2.2.20.2 With reference to Figure 38 Wiring Diagram, cut n°6 wires P/N A561A-T2-24 of adequate length and lay them down between the connector J244 and the connector J216 following the existing route as shown.

2.2.20.3 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 38 Wiring Diagram, perform the electrical connections of the wires between the connector J244 and the connector J216.

2.2.20.4 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 38 Wiring Diagram, mark wires as D630B24-S (WH and BL), D631B24-S (WH and BL), D632B24-S (WH and BL), D633B24-S (WH and BL), D634B24-S (WH and BL) and D635B24-S (WH and BL) by means of marker sleeves.

2.2.20.5 With reference to Figure 40 Wiring Diagram, cut n°5 wires P/N A561A-T2-24 of adequate length and lay them down between

the connector J244 and the connector J216 following the existing route as shown.

2.2.20.6 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 40 Wiring Diagram, perform the electrical connections of the wires between the connector J244 and the connector J216.

2.2.20.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 40 Wiring Diagram, mark wires as D644B24-S (WH and BL), D645B24-S (WH and BL), D646B24-S (WH and BL), D647B24-S (WH and BL) and D648B24-S (WH and BL) by means of marker sleeves.

2.2.20.8 With reference to Figures 38 and 40 Wiring Diagram, apply the insulation sleeving P/N M23053/8-004-C on the end of the wires near to connectors J244 and J216.

2.2.20.9 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figures 38 and 40 Wiring Diagram, mark the cable assy so obtained as B2B787 by means of marker sleeves.

NOTE

Perform step 2.2.21 if Family Hums C/A C1B371 has been supplied as loose items not assembled.

2.2.21 With reference to Figure 33 Wiring Diagram, assemble the Family Hums C/A (C1B371) P/N 3G9C01B37101 as described in the following procedure:

2.2.21.1 With reference to Figure 33 Wiring Diagram, assemble the connector A600P1 by means of the electrical connector P/N D38999/26WB2SN and the backshell P/N A532A400-1102T.

2.2.21.2 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector A600P1 and the splice SP3591 following the existing route as shown.

2.2.21.3 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the connector A600P1 and the splice SP3591 P/N M81824/1-1. Apply the adapter P/N 252-8553-000.

2.2.21.4 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D611H24-G by means of marker sleeves.

2.2.21.5 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the terminal board TB310 and the splice SP3591 following the existing route as shown.

2.2.21.6 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the terminal board TB310 and the splice SP3591.

2.2.21.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D611J24N-G by means of marker sleeves.

2.2.21.8 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector A600P1 and the connector P212 following the existing route as shown.

2.2.21.9 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the connector A600P1 and the connector P212. Apply the adapter P/N 252-8553-000.

2.2.21.10 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D610B24-G by means of marker sleeves.

2.2.21.11 With reference to Figure 33 Wiring Diagram, cut n°1 wire P/N A556A-T24 of adequate length and lay it down between the connector P202 and the splice SP3591 following the existing route as shown.

2.2.21.12 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the wire between the connector P202 and the splice SP3591.

2.2.21.13 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark wire as D611G24-G by means of marker sleeves.

2.2.21.14 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 33 Wiring Diagram, mark the cable assy so obtained as C1B371 by means of marker sleeves.

NOTE

Perform step 2.2.22 if Family Hums C/A C2B427 has been supplied as loose items not assembled.

2.2.22 With reference to Figures 34, 35, 37 thru 40 Wiring Diagram, assemble the Family Hums C/A (C2B427) P/N 3G9C02B42701 as described in the following procedure:

2.2.22.1 With reference to Figures 34, 35, 37 thru 40 Wiring Diagram, assemble the connector A600P2 by means of the electrical connector P/N D38999/26WJ35SN and the backshell P/N A532A400-2502C.

2.2.22.2 With reference to Figure 40 Wiring Diagram, assemble the connector J362 by means of the electrical connector P/N D38999/20WB5SN and the backshell P/N A532A400-1102T.

2.2.22.3 With reference to Figure 40 Wiring Diagram, assemble the connector P360 by means of the electrical connector P/N D38999/26JC35SN and the backshell P/N A529A400-1302T09.

2.2.22.4 With reference to Figure 34 Wiring Diagram, cut n°1 wire P/N A561A-T4-24 of adequate length and lay it down between the connector A600P2 and the connector P208 following the existing route as shown.

2.2.22.5 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the wire between the connector A600P2 and the connector P208.

2.2.22.6 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark wire as D621C24-S (WH, BL, GN and OR) by means of marker sleeves.

2.2.22.7 With reference to Figure 34 Wiring Diagram, cut n°2 wires P/N A561A-T2-24 of adequate length and lay them down between the connector A600P2 and the connector P208 following the existing route as shown.

2.2.22.8 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the wires between the connector A600P2 and the connector P208.

2.2.22.9 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark wires as D617A24-S (WH and BL) and D618A24-S (WH and BL) by means of marker sleeves.

2.2.22.10 With reference to Figure 34 Wiring Diagram, cut n°2 wires P/N A556A-T24 of adequate length and lay them down between the connector A600P2 and the connector A600P2 following the existing route as shown.

2.2.22.11 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the wires between the connector A600P2 and the connector A600P2.

2.2.22.12 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 34 Wiring Diagram, mark wires as D652A24-S and D643A24-S by means of marker sleeves.

2.2.22.13 With reference to Figure 35 Wiring Diagram, cut n°3 wires P/N A561A-T2-24 of adequate length and lay them down between the connector A600P2 and the connector P208 following the existing route as shown.

2.2.22.14 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 35 Wiring Diagram, perform the electrical connections of the wires between the connector A600P2 and the connector P208.

2.2.22.15 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring Diagram, mark wires as D622A24-S (WH and BL), D623C24-S (WH and BL) and D624A24-S (WH and BL) by means of marker sleeves.

2.2.22.16 With reference to Figure 37 Wiring Diagram, cut n°3 wires P/N A561A-T2-24 of adequate length and lay them down between the connector A600P2 and the connector P208 following the existing route as shown.

2.2.22.17 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 37 Wiring Diagram, perform the electrical

connections of the wires between the connector A600P2 and the connector P208.

2.2.22.18 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 37 Wiring Diagram, mark wires as D626D24-S (WH and BL), D627A24-S (WH and BL) and D628A24-S (WH and BL) by means of marker sleeves.

2.2.22.19 With reference to Figure 38 Wiring Diagram, cut n°5 wires P/N A561A-T2-24 of adequate length and lay them down between the connector A600P2 and the connector P216 following the existing route as shown.

2.2.22.20 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 38 Wiring Diagram, perform the electrical connections of the wires between the connector A600P2 and the connector P216.

2.2.22.21 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 38 Wiring Diagram, mark wires as D630A24-S (WH and BL), D631A24-S (WH and BL), D632A24-S (WH and BL), D633A24-S (WH and BL) and D634A22-S (WH and BL) by means of marker sleeves.

2.2.22.22 With reference to Figure 38 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P216 and the splices SP3691 (BL) and SP3690 (WH) following the existing route as shown.

2.2.22.23 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 38 Wiring Diagram, perform the electrical connections of the wire between the connector P216 and n°2 splices SP3691 and SP3690 P/N M81824/1-1.

2.2.22.24 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 38 Wiring Diagram, mark wire as D635A24-S (WH and BL) by means of marker sleeves.

2.2.22.25 With reference to Figure 39 Wiring Diagram, cut n°5 wires P/N A561A-T2-24 of adequate length and lay them down between the connector A600P2 and the connector P302 following the existing route as shown.

2.2.22.26 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 39 Wiring Diagram, perform the electrical

connections of the wires between the connector A600P2 and the connector P302.

2.2.22.27 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 39 Wiring Diagram, mark wires as D637A24-S (WH and BL), D638A24-S (WH and BL), D639A24-S (WH and BL), D640A24-S (WH and BL) and D641A24-S (WH and BL) by means of marker sleeves.

2.2.22.28 With reference to Figure 40 Wiring Diagram, cut n°5 wires P/N A561A-T2-24 of adequate length and lay them down between the connector A600P2 and the connector P216 following the existing route as shown.

2.2.22.29 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 40 Wiring Diagram, perform the electrical connections of the wires between the connector A600P2 and the connector P216.

2.2.22.30 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 40 Wiring Diagram, mark wires as D644A24-S (WH and BL), D645A24-S (WH and BL), D646A24-S (WH and BL), D647A24-S (WH and BL) and D648A24-S (WH and BL) by means of marker sleeves.

2.2.22.31 With reference to Figure 40 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector A600P2 and the connector J362 following the existing route as shown.

2.2.22.32 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 40 Wiring Diagram, perform the electrical connections of the wire between the connector A600P2 and the connector J362.

2.2.22.33 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 40 Wiring Diagram, mark wire as D650A24-S (WH and BL) by means of marker sleeves.

2.2.22.34 With reference to Figure 40 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector A600P2 and the connector P360 following the existing route as shown.

2.2.22.35 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 40 Wiring Diagram, perform the electrical

connections of the wire between the connector A600P2 and the connector P360.

2.2.22.36 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 40 Wiring Diagram, mark wire as D651A24-S (WH and BL) by means of marker sleeves.

2.2.22.37 With reference to Figures 34, 35, 37 thru 40 Wiring Diagram, apply the insulation sleeving P/N M23053/8-004-C on the end of the wires near to connectors A600P2, J362, P208, P216, P302 and P360.

2.2.22.38 With reference to Figure 38 Wiring Diagram, apply n°1 ferrule P/N A590A02 on the wire near the splices SP3690 and SP3691.

2.2.22.39 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figures 34, 35, 37 thru 40 Wiring Diagram, mark the cable assy so obtained as C2B427 by means of marker sleeves.

NOTE

Perform steps 2.2.23 thru 2.2.32 if previous steps from 2.2.13 thru 2.2.22 have not been applied.

2.2.23 With reference to Figures 14 thru 22 and Figures 33 thru 40 Wiring Diagram, lay down the below C/As following the existing route unless otherwise indicated on the figures:

- 3G9A01A73001 Family Hums C/A (A1A730);
- 3G9A02A67201 Family Hums C/A (A2A672);
- 3G9A01B67001 Family Hums C/A (A1B670);
- 3G9A02B63101 Family Hums C/A (A2B631);
- 3G9B01R08101 Family Hums C/A (B1R81);
- 3G9B02B78601 Family Hums C/A (B2B786);
- 3G9B01R08201 Family Hums C/A (B1R82);
- 3G9B02B78701 Family Hums C/A (B2B787);
- 3G9C01B37101 Family Hums C/A (C1B371);
- 3G9C02B42701 Family Hums C/A (C2B427).

Secure the cable by means of existing hardware and lacing cord.

2.2.24 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 34 Wiring Diagram, perform the electrical connections of the C/A A1A730 to the connector J111.

2.2.25 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figures 34 and 38 Wiring Diagram, perform the electrical

connections of the C/A A2A672 to the connector DS229P1, the connector J107, the connector A1-1P2 and the connector A1-1P3.

2.2.26 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figures 33 and 36 Wiring Diagram, perform the electrical connections of the C/A A1B670 to the connector P111, the connector P102, the connector P106, the connector TB132P1, the terminal board TB140, the terminal board 136/2 and the junction in-line TB150/1.

2.2.27 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figures 34, 35 and 37 Wiring Diagram, perform the electrical connections of the C/A A2B631 to the connector A1-3P2, the connector P107, the connector P110, the connector PL28P1, the connector PL28P2 and the connector TB122P1.

2.2.28 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the C/A B1R81 to the connector J102, the connector J202 and the connector PL1P6.

2.2.29 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figures 34, 35 and 37 Wiring Diagram, perform the electrical connections of the C/A B2B786 to the connector J110 and the connector J208.

2.2.30 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 33 Wiring Diagram, perform the electrical connections of the C/A B1R82 to the connector PL1P10 and the connector J212.

2.2.31 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figures 38 and 40 Wiring Diagram, perform the electrical connections of the C/A B2B787 to the connector J216.

2.2.32 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figures 34, 35, 37 thru 40 Wiring Diagram, perform the electrical connections of the C/A C2B427 to the connector P208, the connector P216 and the connector P302.

2.2.33 With reference to Figures 20 thru 22 and Figure 39 Wiring Diagram, lay down the Family Hums C/A (D2B232) P/N 3G9D02B23201 following the existing route unless otherwise indicated on the figures. Secure the cable by means of existing hardware and lacing cord.

2.2.34 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 39 Wiring Diagram, perform the electrical connections of the C/A D2B232 to the connector J302.

2.2.35 With reference to Figure 16 View Looking from STA 1500 to STA 3120, install n°3 spacers for cable bundles A631A01A between the C/A A1A730 and the C/A A2A672.

2.2.36 With reference to Figure 18 View C, install n°2 clamps P/N AW001CB04H on the C/A A1A730 and the C/A A2A678 by means of n°2 screws P/N NAS1190E3P5AK and n°2 washers P/N NAS1149D0332J.

2.2.37 With reference to Figure 16 View Looking from STA 1500 to STA 3120, protect the C/A A1A730 and the C/A A2A672 with nomex P/N EN6049-066-32-5 on indicated area near the connector DS229P1.

2.2.38 With reference to Figure 17 View Looking Roof RH Side from STA 3120 to STA 6700, install n°2 clamps P/N AW001CB08H on the C/A B2B787 by means of existing hardware.

2.2.39 With reference to Figure 19 View Rear Fuselage, install the clamp P/N AW001CB02H on the C/A C1B371 and the clamp P/N AW001CB10H on the C/A C2B427 by means of the screw P/N NAS1802-3-6 and the washer P/N NAS1149D0332J.

2.2.40 With reference to Figure 19 View Rear Fuselage and Figure 6 Wiring Diagram, install the filter FL13 P/N 3G3130L00251 in position and perform the electrical connections of the cables on part to the splices SP3690 and SP3691 on one side and to the connector A600P2 on the other side.

2.2.41 With reference to Figure 20 View D, install the clamp P/N AW001CB03H on the C/A C2B427 by means of the screw P/N NAS1802-3-6 and the washer P/N NAS1149D0332J.

2.2.42 With reference to Figure 22 Tail Rotor Gear Box and Figure 7 Wiring Diagram, install the filter FL19 P/N 3G3130L00251 in position and perform the electrical connections of the cables on part to the splices SP4012 and SP4013 on one side and to the connector MT37P1 on the other side.

2.2.43 With reference to Figure 22 Tail Rotor Gear Box and Figure 7 Wiring Diagram, install the filter FL20 P/N 3G3130L00251 in position and perform the electrical connections of the cables on part to the splices

SP4014 and SP4015 on one side and to the connector MT37P1 on the other side.

2.2.44 With reference to Figure 22 View G, install the insulation sleeving P/N M23053/5-109-0 in order to cover the C/A D2B232 in the indicate position near the TB484 for a distance as shown (length 150 mm).

2.2.45 With reference to Figure 22 View G, install the tubing heatshrinkable P/N M23053/5-107-0 in order to cover the C/A D2B232 in the indicate position for a distance as shown (length 150 mm) by means of adhesive S1125 (C373).

2.2.46 With reference to Figure 22 View G, install the clamp P/N AW001CB09H on the C/A D2B232 by means of the screw P/N NAS1802-3-10, the nut P/N MS21043L3, n°2 washers P/N NAS1149D0332J and the existing hardware.

2.2.47 With reference to Figure 17 View Looking Roof RH Side from STA 3120 to STA 6700, install the connector J244 (C/A B2B787) by means of the flange P/N M85049/95-16A-A, n°4 screws P/N NAS1802-04-7 and n°4 washers P/N NAS1149DN416J.

2.2.48 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 17 View Looking Roof RH Side from STA 3120 to STA 6700, install n°2 decals P/N ED300J244 in an area adjacent the connector J244.

2.2.49 With reference to Figure 19 View Rear Fuselage, install the connector J362 (C/A C2B427) by means of the flange P/N M85049/95-12A-A, n°4 screws P/N NAS1802-04-7 and n°4 washers P/N NAS1149DN416J.

2.2.50 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and reference to Figure 19 View Rear Fuselage, install n°2 decals P/N ED300J362 in an area adjacent the connector J362.

2.2.51 With reference to Figure 21 View F, install the connector MT39P1 (C/A D2B232) by means of the boot P/N A574A11-01 and the insulation sleeving P/N M23053/8-004-C (length 60 mm).

2.2.52 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 21 View F, install the decal P/N ED300MT39P1 in an area adjacent the connector MT39P1.

2.2.53 With reference to Figure 22 Tail Rotor Gear Box, install the connector MT31P1 (C/A D2B232) by means of the boot P/N A574A11-01 and the insulation sleeving P/N M23053/8-004-C (length 60 mm).

2.2.54 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 22 Tail Rotor Gear Box, install the decal P/N ED300MT31P1 in an area adjacent the connector MT31P1.

NOTE

Perform steps 2.2.55 thru 2.2.58 if Part II is not is not intended to be performed consequently to Part I.

2.2.55 With reference to Figure 15 View Looking from STA 725 to STA 3120 and Detail A, protect and stow the connector PL202P1 (C/A A2B631) and the connector PL202P2 (C/A A1B670) to the support previously installed by means of the protective plug P/N NAS813-22 (for the PL202P2) and the protective plug P/N NAS813-32 (for the PL202P1), the nomex P/N EN6049-006-32-5 and the tie straps P/N AW001CK03LC.

2.2.56 With reference to Figure 15 Detail A and Figure 16 View Looking from STA 1500 to STA 3120, protect and stow the connector MT40P1 (C/A B2B786) to the support previously installed by means of the protective plug P/N NAS813-12, the nomex P/N EN6049-006-32-5 and the tie strap P/N AW001CK03LC.

2.2.57 With reference to Figure 18 View C, stow the connector DS229P1 to the dummy connector P/N D38999/22CW previously installed.

2.2.58 With reference to Figure 15 Detail A and Figure 19 View Rear Fuselage, protect and stow the connector A600P1 (C/A C1B371) and the connector A600P2 (C/A C2B427) to the support previously installed by means of the protective plug P/N NAS813-22 (for the A600P1) and the protective plug P/N NAS813-32 (for the A600P2), the nomex P/N EN6049-006-32-5 and the tie straps P/N AW001CK03LC.

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

NOTE

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

NOTE

Install the tubing braided P/N A582A where protection against chafing and prevention of contact with structure may occur, but the tubing protection is not substitute for good routing practice.

NOTE

When necessary, replace existing clamp with suitable clamp.

NOTE

To ensure a proper installation, it is allowed to use:

- bolts (length only) two dash shorter or longer than the nominal one;
- screws (length only) two dash shorter or longer than the nominal one;
- washers (thickness only) two dash greater or lesser than the nominal one;
- spacers (length only) two dash shorter or longer than the nominal one.

2.3 With reference to Figures 23 thru 28 and Figures 38 thru 40 Wiring Diagram, perform the HUMS MGB electrical provision P/N 3G3130A03512 as described in the following procedure:

2.3.1 With reference to Figure 25 View B, install the support P/N AW001CL001-N6 at location n°1 by means of adhesive CB200-40 (C356).

2.3.2 With reference to Figure 26 View C, install n°2 standoffs P/N A388A3E06C at locations n°1 and n°2 by means of adhesive CB200-40 (C356).

NOTE

Perform step 2.3.3 if the C/A F2B15 has been supplied as loose items not assembled.

2.3.3 With reference to Figure 27 and Figures 38 and 40 Wiring Diagram, assemble the HUMS MGB C/A (F2B15) P/N 3G9F12B01511 as described in the following procedure:

NOTE

Perform steps from 2.3.3.1 thru 2.3.3.46 to assemble the Family HUMS C/A (F2B223) P/N 3G9F02B22301.

2.3.3.1 With reference to Figure 27 and Figures 38 and 40 Wiring Diagram, assemble the connectors MT23P1, MT24P1, MT25P1, MT26P1, MT27P1, MT28P1, MT29P1, MT30P1 and MT90P1 by means of n°9 electrical connectors P/N 44231-3S-793.

2.3.3.2 With reference to Figure 27 and Figure 40 Wiring Diagram, assemble the connector MT34P1 by means of the electrical connector P/N D38999/26FA98SN and the backshell P/N A532A400-0903B.

2.3.3.3 With reference to Figure 27 and Figure 38 Wiring Diagram, assemble the connector MT36P1 by means of the electrical connector P/N MS3476W8-98S and the backshell P/N A532A300-0802B.

2.3.3.4 With reference to Figure 27 and Figures 38 and 40 Wiring Diagram, assemble the connector P244 by means of the electrical connector P/N D38999/26WD35PN and the backshell P/N A532A400-1502B.

2.3.3.5 With reference to Figure 38 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P244 and the connector MT90P1 following the existing route as shown.

2.3.3.6 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 38 Wiring Diagram, perform the electrical connections of the wire between the connector P244 and the connector MT90P1.

2.3.3.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 38 Wiring Diagram, mark wire as D630C24-S (WH and BL) by means of marker sleeves.

2.3.3.8 With reference to Figure 38 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P244 and the connector MT23P1 following the existing route as shown.

2.3.3.9 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 38 Wiring Diagram, perform the electrical connections of the wire between the connector P244 and the connector MT23P1.

2.3.3.10 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 38 Wiring Diagram, mark wire as D631C24-S (WH and BL) by means of marker sleeves.

2.3.3.11 With reference to Figure 38 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P244 and the connector MT25P1 following the existing route as shown.

2.3.3.12 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 38 Wiring Diagram, perform the electrical connections of the wire between the connector P244 and the connector MT25P1.

2.3.3.13 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 38 Wiring Diagram, mark wire as D632C24-S (WH and BL) by means of marker sleeves.

2.3.3.14 With reference to Figure 38 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P244 and the connector MT27P1 following the existing route as shown.

2.3.3.15 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 38 Wiring Diagram, perform the electrical connections of the wire between the connector P244 and the connector MT27P1.

2.3.3.16 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 38 Wiring Diagram, mark wire as D633C24-S (WH and BL) by means of marker sleeves.

2.3.3.17 With reference to Figure 38 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P244 and the connector MT29P1 following the existing route as shown.

2.3.3.18 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 38 Wiring Diagram, perform the electrical connections of the wire between the connector P244 and the connector MT29P1.

2.3.3.19 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 38 Wiring Diagram, mark wire as D634C24-S (WH and BL) by means of marker sleeves.

2.3.3.20 With reference to Figure 38 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P244 and the connector MT36P1 following the existing route as shown.

2.3.3.21 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 38 Wiring Diagram, perform the electrical connections of the wire between the connector P244 and the connector MT36P1.

2.3.3.22 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 35 Wiring Diagram, mark wire as D635C24-S (WH and BL) by means of marker sleeves.

2.3.3.23 With reference to Figure 38 Wiring Diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay it down between the connector MT36P1 and the connector MT36P1 following the existing route as shown.

2.3.3.24 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 38 Wiring Diagram, perform the electrical connections of the wire between the connector MT36P1 and the connector MT36P1.

2.3.3.25 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 38 Wiring Diagram, mark wire as D636A22-S by means of marker sleeves.

2.3.3.26 With reference to Figure 40 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P244 and the connector MT24P1 following the existing route as shown.

2.3.3.27 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 40 Wiring Diagram, perform the electrical connections of the wire between the connector P244 and the connector MT24P1.

2.3.3.28 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 40 Wiring Diagram, mark wire as D644C24-S (WH and BL) by means of marker sleeves.

2.3.3.29 With reference to Figure 40 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P244 and the connector MT26P1 following the existing route as shown.

2.3.3.30 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 40 Wiring Diagram, perform the electrical connections of the wire between the connector P244 and the connector MT26P1.

2.3.3.31 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 40 Wiring Diagram, mark wire as D645C24-S (WH and BL) by means of marker sleeves.

2.3.3.32 With reference to Figure 40 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P244 and the connector MT28P1 following the existing route as shown.

2.3.3.33 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 40 Wiring Diagram, perform the electrical connections of the wire between the connector P244 and the connector MT28P1.

2.3.3.34 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 40 Wiring Diagram, mark wire as D646C24-S (WH and BL) by means of marker sleeves.

2.3.3.35 With reference to Figure 40 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P244 and the connector MT30P1 following the existing route as shown.

2.3.3.36 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 40 Wiring Diagram, perform the electrical connections of the wire between the connector P244 and the connector MT30P1.

2.3.3.37 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 40 Wiring Diagram, mark wire as D647C24-S (WH and BL) by means of marker sleeves.

2.3.3.38 With reference to Figure 40 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P244 and the connector MT34P1 following the existing route as shown.

2.3.3.39 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 40 Wiring Diagram, perform the electrical connections of the wire between the connector P244 and the connector MT34P1.

2.3.3.40 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 40 Wiring Diagram, mark wire as D648C24-S (WH and BL) by means of marker sleeves.

2.3.3.41 With reference to Figure 40 Wiring Diagram, cut n°1 wire P/N A556A-T22 of adequate length and lay it down between the connector MT34P1 and the connector MT34P1 following the existing route as shown.

2.3.3.42 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 40 Wiring Diagram, perform the electrical connections of the wire between the connector MT34P1 and the connector MT34P1.

2.3.3.43 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 40 Wiring Diagram, mark wire as D649A22-S by means of marker sleeves.

2.3.3.44 With reference to Figures 38 and 40 Wiring Diagram, apply the insulation sleeving P/N M23053/8-004-C on the end of the wires near to connectors MT23P1, MT24P1, MT25P1, MT26P1, MT27P1, MT28P1, MT29P1, MT30P1, MT90P1, MT34P1, MT36P1 and P244.

2.3.3.45 With reference to Figure 38 Wiring Diagram, apply n°2 ferrules P/N A590A02 on the wires near the connectors MT34P1 and MT36P1.

2.3.3.46 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figures 38 and 40 Wiring Diagram, mark the cable assy so obtained as F2B223 by means of marker sleeves.

2.3.3.47 With reference to Figure 27 Detail A, install the following items by means of the adhesive S1125 (C373) on the connectors MT28P1, MT26P1 and MT24P1 (C/A F2B223):

- n°3 boots heatshrinkable P/N 1037-4-G-W24;

- insulation sleeving P/N M23053/5-105-0;
- nomex P/N EN6049-006-05-5.

Install n°3 sleeve markers cable P/N A578A04-9 on the end of the cable.

2.3.3.48 With reference to Figure 27 Detail B, install the following items by means of the adhesive S1125 (C373) on the connectors MT36P1, MT34P1 and MT27P1 (C/A F2B223):

- n°1 boot heatshrinkable P/N 1037-4-G-W24;
- n°2 insulations sleeving P/N A574A01-09;
- insulation sleeving P/N M23053/5-105-0;
- nomex P/N EN6049-006-05-5.

Install n°3 sleeve markers cable P/N A578A04-9 on the end of the cable.

2.3.3.49 With reference to Figure 27 Detail C, install the following items by means of the adhesive S1125 (C373) on the connectors MT90P1, MT30P1 and P244 (C/A F2B223):

- n°2 boots heatshrinkable P/N 1037-4-G-W24;
- n°1 insulation sleeving P/N A574A01-09;
- insulation sleeving P/N M23053/5-105-0;
- insulation sleeving P/N M23053/5-109-0;
- nomex P/N EN6049-006-13-5;
- nomex P/N EN6049-006-05-5.

Install n°2 sleeve markers cable P/N A578A04-9 and n°1 sleeve marker cable P/N A578A09-9 on the end of the cable.

2.3.3.50 With reference to Figure 27 Isometric View, install the following items by means of the adhesive S1125 (C373) on the connectors MT25P1, MT29P1 and MT23P1 (C/A F2B223):

- n°3 boots heatshrinkable P/N 1037-4-G-W24;
- insulation sleeving P/N M23053/5-105-0;
- nomex P/N EN6049-006-05-5.

Install n°3 sleeve markers cable P/N A578A04-9 on the end of the cable.

2.3.3.51 With reference to Figure 27 Isometric View, mark the so obtained cable assy as F2B15 by means of the marker P/N A579A03.

NOTE

Perform step 2.3.4 if the C/A F2B16 has been supplied as loose items not assembled.

2.3.4 With reference to Figure 28 and Figure 40 Wiring Diagram, assemble the HUMS MGB C/A (F2B16) P/N 3G9F12B01611 as described in the following procedure:

NOTE

Perform steps from 2.3.4.1 thru 2.3.4.7 to assemble the Family HUMS C/A (F2B224) P/N 3G9F02B22401.

2.3.4.1 With reference to Figure 28 and Figure 40 Wiring Diagram, assemble the connector MT38P1 by means the electrical connector P/N 44231-3S-793.

2.3.4.2 With reference to Figure 28 and Figure 40 Wiring Diagram, assemble the connector P362 by means of the electrical connector P/N D38999/26WB5PN and the backshell P/N A532A400-1102B.

2.3.4.3 With reference to Figure 40 Wiring Diagram, cut n°1 wire P/N A561A-T2-24 of adequate length and lay it down between the connector P362 and the connector MT38P1 following the existing route as shown.

2.3.4.4 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 40 Wiring Diagram, perform the electrical connections of the wire between the connector P362 and the connector MT38P1.

2.3.4.5 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 40 Wiring Diagram, mark wire as D650B24-S (WH and BL) by means of marker sleeves.

2.3.4.6 With reference to Figure 40 Wiring Diagram, apply the insulation sleeving P/N M23053/8-004-C on the end of the wires near to connectors MT38P1 and P362.

2.3.4.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 40 Wiring Diagram, mark the cable assy so obtained as F2B224 by means of marker sleeves.

2.3.4.8 With reference to Figure 28 Detail A, install the following items by means of the adhesive S1125 (C373) on the connectors MT38P1 and P362 (C/A F2B224):

- n°1 boot heatshrinkable P/N 1037-4-G-W24;

- n°1 boot heatshrinkable P/N A574A1-1;
- insulation sleeving P/N M23053/5-105-0;
- nomex P/N EN6049-006-05-5.

Install n°2 sleeve markers cable P/N A578A04-9 on the end of the cable.

2.3.4.9 With reference to Figure 28 Detail A, mark the so obtained cable assy as F2B16 by means of the marker P/N A579A03.

NOTE

Perform step 2.3.5 if previous steps 2.3.3 and 2.3.4 have not been applied.

2.3.5 With reference to Figures 23 thru 26 and Figures 38 and 40 Wiring Diagram, lay down the below C/As following the existing route unless otherwise indicated on the figures:

- 3G9F12B01511 HUMS MGB C/A (F2B15);
- 3G9F12B01611 HUMS MGB C/A (F2B16).

Secure the cable by means of existing hardware and lacing cord.

2.3.6 With reference to Figure 24 View A, install n°3 clamps P/N AS21919WCH08 on the C/A F2B15 by means of existing hardware.

2.3.7 With reference to Figure 24 View A, replace two existing clamps with n°2 clamps P/N AS21919WCH08 on the C/A F2B15 by means of existing hardware.

2.3.8 With reference to Figure 24 View A, replace two existing clamps with n°2 clamps P/N AS21919WCH06 on the C/A F2B15 by means of existing hardware.

2.3.9 With reference to Figure 24 View A, install the clamp P/N AS21919WCH03 on the C/A F2B15 by means of existing hardware.

2.3.10 With reference to Figure 24 View A, replace the existing clamp with the clamp P/N AS21919WCH05 on the C/A F2B15 by means of existing hardware.

2.3.11 With reference to Figure 24 View A, install the clamp P/N AS21919WCH05 on the C/A F2B15 by means of existing hardware.

2.3.12 With reference to Figure 25 View B, replace the existing clamp with the clamp P/N AS21919WCH11 on the C/A F2B15 by means of existing hardware.

2.3.13 With reference to Figure 25 View B, install the clamp P/N AS21919WCH03 on the C/A F2B15 by means of existing hardware.

2.3.14 With reference to Figure 25 View B, install n°2 clamps P/N AS21919WCH04 on the C/A F2B15 by means of existing hardware.

2.3.15 With reference to Figure 25 View B, install the clamp P/N AS21919WCH04 on the C/A F2B15 by means of the screw P/N NAS1802-3-8 and existing hardware.

2.3.16 With reference to Figure 25 View B, replace the existing clamp with the clamp P/N AS21919WCH06 on the C/A F2B15 by means of existing hardware.

2.3.17 With reference to Figure 25 View B, install the clamp P/N AS21919WCH05 on the C/A F2B15 by means of existing hardware.

2.3.18 With reference to Figure 25 View B, install the clamp P/N AS21919WCH06 on the C/A F2B15 by means of existing hardware.

2.3.19 With reference to Figure 25 View B, replace two existing clamps with n°2 clamps P/N AS21919WCH08 on the C/A F2B15 by means of existing hardware.

2.3.20 With reference to Figure 26 View C, install n°2 clamps P/N AS21919WCH02 on the C/A F2B16 by means of n°2 screws P/N NAS1190E3P5AK and n°2 washers P/N NAS1149D0332J.

2.3.21 With reference to Figure 25 View B and Figures 38 and 40 Wiring Diagram, perform the electrical connection of the connector P244 (C/A F2B15) to the connector J244 (C/A B2B787).

2.3.22 With reference to Figure 26 View C and Figure 40 Wiring Diagram, perform the electrical connection of the connector P362 (C/A F2B16) to the connector J362 (C/A C2B427).

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

2.4 With reference to Figure 7, perform the tail rotor pick up installation P/N 3G3130A00711 as described in the following procedure:

2.4.1 With reference to Figure 7, remove n°2 bolts P/N NAS6606D12, n°2 washers P/N A162A0632, n°2 washers P/N NAS1149C0632R, n°2 nuts P/N MS17825-6 and n°2 cotter pins P/N MS24665-302 from the tail rotor structure.

2.4.2 In accordance with AMP DM 39-D-31-32-16-00A-720A-K and with reference to Figure 7, install the chopper support P/N 3G3130A00651 on the tail rotor structure by means of n°2 bolts P/N NAS6606D15, n°2 washers P/N A162A0632 (under bolt head), n°2 washers

P/N NAS1149C0632R (under nut), n°2 nuts P/N MS17825-6 and n°2 cotter pins P/N MS24665-302. Torque the nuts to 11.0-12.5 Nm.

2.4.3 With reference to Figure 7, install the chopper P/N 3G6493A02251 on the chopper support P/N 3G3130A00651 by means of the washer P/N NAS1149C0432R, the nut P/N MS17826-4 and the cotter pin P/N MS24665-155. Torque the nut to 2.8-4.0 Nm.

2.4.4 With reference to Figure 7 View A, remove n°2 nuts P/N MS21042L4 and n°2 washers P/N NAS1149C0432R from the TGB.

2.4.5 In accordance with AMP DM 39-D-31-32-17-00A-720A-K and with reference to Figure 7, install the pick-up support P/N 3G3130A00552 on the tail rotor structure by means of the bolt P/N AN4H7A, the washer NAS1149C0432R, the lockwire P/N MS20995C32, n°2 nuts P/N MS21042L4, n°2 washers P/N NAS1149C0416R. Torque the bolt to 3.4-4.5 Nm and the nuts to 10-13 Nm.

2.4.6 In accordance with AMP DM 39-D-31-32-13-00A-720A-K and with reference to Figure 7, install the azimuth assy P/N 3G3130A00431 on the pick-up support P/N 3G3130A00552 by means of the nut P/N NAS509-6, the washer P/N NAS1149C0632R, the lockwire P/N MS20995C32. Torque the nut to 3.84-4.52. Apply Loctite 222 (C029) on the removable fasteners.

2.4.7 Perform duplicate inspections to check the correct bolts installation, safety, security, final torque and locking.

WARNING

THE MATERIALS THAT FOLLOW ARE DANGEROUS. BEFORE YOU PERFORM THE INSTALLATION OF SENSOR P/N EA6300V083-001 OR ACCELEROMETER P/N 3G6320A10051, MAKE SURE THAT YOU KNOW ALL THE SAFETY PRECAUTIONS AND FIRST AID INSTRUCTIONS FOR THESE MATERIALS:

- Sealant (C465)
- Chromate conversion coating (C406)
- Oil (C458)
- Cleaning Solvent (C010)
- Alodine 1200 (C237)

2.5 With reference to Figures 8 thru 13, perform MGB HUMS sensors installation

P/N 3G3130A01215 as described in the following procedure:

NOTE

If the fan P/N 3G6320V03853 is installed, perform step 2.5.1. Otherwise, if the fan P/N 3G6320A11231 is installed, skip to step 2.5.2.

2.5.1 With reference to Figure 13, perform the fan sensor adapter provision P/N 3G6320P01111 as described in the following procedure:

NOTE

If necessary, change the angular position of the adapter P/N 3G6320A22931 to obtain the best mating condition (+/-15° to be verified in relation to the cable length).

2.5.1.1 Check the coupling of the parts to ensure a good contact of all surfaces to be bonded.

2.5.1.2 With reference to Figure 13 Section B-B, mark and mask the application zone. Remove the varnish and the primer in the marked area by means of the abrasive paper (C420) and clean the area with the gauze imbued of solvent aliphatic naphtha (C059). Let the area to air dry.

2.5.1.3 Clean the mating surface of the adapter P/N 3G6320A22931 with the clean cloth imbued of solvent aliphatic naphtha (C059). Let the area to air dry.

NOTE

The quantity of the adhesive should be sufficient to cover all baseplate surface in order to obtain the adhesive squeeze-out completely around the bonding edge.

2.5.1.4 With reference to Figure 13 Section B-B, apply the adhesive CB200-40 (C356) to the centre of the surface of the adapter P/N 3G6320A22931.

NOTE

Full adhesive cure is achieved after 24 hours.

2.5.1.5 With reference to Figure 13 Side View, View A and Section B-B, put immediately the adapter P/N 3G6320A22931 in its position on the fan MGB cooling P/N3G6320V03853 and apply pressure for 5 minutes in order to allow the complete polymerization.

2.5.1.6 With reference to Figure 13 Section B-B, apply the Alodine 1200 (C237) on non-covered metallic parts by means of cloth.

2.5.1.7 With reference to Figure 13 Section B-B, seal with a bead of the sealant 199-05-004 Class B2 around the bonding edge.

2.5.2 With reference to Figures 8 thru 12, install n°12 accelerometers P/N 3G6340V00151 (A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A21) and the accelerometer P/N 3062A1 on the MGB/TDS/IGB/TGB as follows:

2.5.2.1 With reference to Figures 9 Detail A, remove the existing washers P/N 3G6320A10051 and the existing screws P/N MS35265-28 from the applicable structure.

2.5.2.2 With reference to Figures 9 Detail C, remove the existing washer P/N 3G6320A15351 and the existing screw P/N MS35266-79 from the MGB.

2.5.2.3 Clean n°12 accelerometers P/N 3G6340V00151, the accelerometer P/N 3062A1 and the related mating area on the applicable structure with the cloth and the Cleaning solvent (C010).

WARNING

BE CAREFUL WHEN YOU USE THE COMPRESSED AIR. DUST AND PARTICLES CAN CAUSE INJURY TO YOUR EYES. ALWAYS USE APPLICABLE PROTECTIVE GOGGLES.

2.5.2.4 Dry the parts you cleaned with the compressed air until you remove all the solvent.

2.5.2.5 Apply the Alodine (C237) to the accelerometer installation surfaces on the applicable structure.

2.5.2.6 Lubricate the screws P/N NAS1352C06H14 and the screw P/N NA0069HA040024 (accelerometer A12) with the Oil (C458).

2.5.2.7 With reference to Figure 8 thru 12, put the accelerometers P/N 3G6340V00151 and the accelerometer P/N 3062A1 in their installation positions.

2.5.2.8 With reference to Figure 9 Detail A, install the screws P/N NAS1352C06H14 (P/N NA0069HA040024 for accelerometer A12) that attaches the accelerometers P/N 3G6340V00151 to the

applicable structure and apply insulation sleeving P/N M23053/8-203-C. Torque the screws to 2.0-2.4 Nm.

2.5.2.9 With reference to Figure 9 Detail C, install the accelerometer P/N 306A21 (A21) on the MGB and apply insulation sleeving P/N M23053/8-203-C. Apply a locking torque of 2.0-2.4 Nm.

2.5.2.10 Apply the sealing compound (C465) to the mating edge between the accelerometers P/N 3G6340V00151, the accelerometer P/N 306A21 and the applicable structure. Use a plastic spatula to apply the sealing compound.

2.5.2.11 With reference to Figure 9 Detail A, secure the head of the screws P/N NAS1352C06H14 (P/N NA0069HA040024 for accelerometer A12) by means of lockwire P/N MS20995C20.

2.5.2.12 With reference to Figure 9 Detail C, secure the accelerometer P/N 306A21 to the adjacent oil filler cap by means of lockwire P/N MS20995C20

NOTE

Do not apply paint in the area shown in Figure 9.

2.5.2.13 With reference to Figures 8 thru 12 and in accordance with DM CSRP-A-51-21-01-02A-257A-D, restore the external painting on the MGB/TDS/IGB/TGB structure by means of polyurethane paint (C358).

2.5.3 With reference to Figures 8 and 9, install the azimuth sensor P/N EA6300V083-001 on the MGB as follows:

2.5.3.1 With reference to Figure 9 Detail B, remove the existing hardware from the MGB:

- n°2 washers P/N NAS1149F0332P;
- n°2 washers P/N NAS1149D0332K;
- n°2 nuts P/N MS21042L3;
- the flange P/N 3G6320A10151;
- the o-ring P/N AS3209-113.

2.5.3.2 Clean the accelerometer azimuth sensor P/N EA6300V083-001 and the related mating area on the applicable structure with the cloth and the Cleaning solvent (C010).

WARNING

BE CAREFUL WHEN YOU USE THE COMPRESSED AIR. DUST AND PARTICLES CAN CAUSE INJURY TO YOUR EYES. ALWAYS USE APPLICABLE PROTECTIVE GOGGLES.

2.5.3.3 Dry the parts you cleaned with the compressed air until you remove all the solvent.

2.5.3.4 Apply the Alodine (C237) to the azimuth sensor installation surface on the applicable structure.

2.5.3.5 Make sure that the clearance between the prod of the azimuth sensor and the gear tip is 1.00 thru 1.5 mm, in accordance with steps 5 thru 8 of AMP DM 39-A-31-32-16-00A-720A-K.

2.5.3.6 Lubricate the o-ring P/N AS3209-113 with the Oil (C458).

2.5.3.7 With reference to Figure 8, put the azimuth sensor P/N EA6300V083-001 in its installation position.

2.5.3.8 With reference to Figure 9 Detail B, install n°2 nuts P/N MS21042L3 and the n°2 washers P/N NAS1149F0332P that attaches the azimuth sensor P/N EA6300V083-001 to the MGB. Torque the nuts to 3.43-4.51 Nm.

2.5.3.9 Apply the sealing compound (C465) to the mating edge between the azimuth sensor P/N EA6300V083-001 and the MGB, to the washers and nuts. Use a plastic spatula to apply the sealing compound.

NOTE

Do not apply paint in the area shown in Figure 9.

2.5.3.10 With reference to Figure 8 and in accordance with DM CSRP-A-51-21-01-02A-257A-D, restore the external painting on the MGB/TDS/IGB/TGB structure by means of polyurethane paint (C358).

2.5.4 With reference to Figure 24 View A and Figure 38 Wiring Diagram, perform the electrical connections of the connectors MT34P1, MT24P1, MT28P1 and MT26P1 of C/A F2B15 to the respectively accelerometers MT34, MT24, MT28 and MT26.

2.5.5 With reference to Figure 25 View B and Figures 38 and 40 Wiring Diagram, perform the electrical connections of the connectors MT90P1, MT27P1, MT30P1, MT23P1, MT29P1, MT25P1 and MT36P1 of C/A F2B15 to the respectively accelerometers MT90, MT27, MT30, MT23, MT29, MT25 and MT36.

2.5.6 With reference to Figure 26 View C and Figure 40 Wiring Diagram, perform the electrical connection of the connector MT38P1 (C/A F2B16) to the accelerometer MT38.

2.5.7 With reference to Figure 11 Detail E, install the bonding cable P/N A601A7B14 on the housing TDS bearing assy P/N 3G6510A05232 by means of existing hardware.

3. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
4. Return the helicopter to flight configuration and record for compliance with Part I of this Service Bulletin on the helicopter logbook.
5. 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 29 thru 32, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform the Family HUMS instl P/N 3G3130A03211 installation as described in the following procedure:

   2.1 With reference to Figure 29 View Looking Inboard LH side and View A, perform the Family HUMS camera support instl P/N 3G5311A35411 and install the support P/N 3G5317A95351 in the indicated position by means of existing screws and washers.

   2.2 With reference to Figures 30 thru 32, perform the Family HUMS equipment instl P/N 3G3130A03311 as described in the following procedure:

      2.2.1 With reference to Figure 31 View B, install the support P/N AW001CL008-CM at location n°1 by means of the adhesive CB200-40 (C356).

NOTE

Perform step 2.2.2 if Part II has not been performed consequently to Part I.

      2.2.2 With reference to Figure 31 View Looking Inside LH Copilot Windows, free the connector DS229P1 from the dummy connector P/N D38999/22CW.

      2.2.3 In accordance with AMP DM 39-D-31-32-03-00A-720A-K and with reference to Figure 31 View Looking Inside LH Copilot Windows, install the RT-Tiptrak tracking camera (DS229) P/N 003659-001 by means of n°4 bolts P/N NAS6605H3 and n°4 washers P/N NAS1149C0532B. Safety the four bolts by means of lockwire P/N MS20995C15.

      2.2.4 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 31 View Looking Inside LH Copilot Windows, install the decal P/N ED300DS229 in an area adjacent the RT-Tiptrak tracking camera DS229.

      2.2.5 With reference to Figure 31 View B, install the bonding cable assy P/N A601A13B100 and fix one end to the tracking camera support and the other end to the PS1 by means of existing hardware.

2.2.6 With reference to Figure 31 View B, install the spacer for cable bundles P/N A631A01A on the bonding cable assy P/N A601A13B100.

NOTE

Perform step 2.2.7 if Part II has not been performed consequently to Part I.

2.2.7 With reference to Figure 31 View Interseat Console and Figure 32 Detail C, free the connectors PL202P1 (C/A A2B566) and PL202P2 (C/A A1B597) from their stowage (remove the nomex, the tie strap and the protective plug).

2.2.8 In accordance with AMP DM 39-D-31-32-02-00A-720A-K and with reference to Figure 31 View Interseat Console, install the Data Transfer Device (PL202) P/N 8G4620V00451 by means of the four quick-release fasteners.

2.2.9 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 31 View Interseat Console, install the decal P/N ED300PL202 in an area adjacent the DTD PL202.

NOTE

Perform step 2.2.10 if Part II has not been performed consequently to Part I.

2.2.10 With reference to Figure 32 View Looking Floor and Detail C, free the connector MT40P1 (C/A B2B718) from its stowage (remove the nomex, the tie strap and the protective plug).

2.2.11 With reference to Figure 32 View Looking Floor, perform the electrical connection of the MT40P1 (C/A B2B718) to the accelerometer MT40.

NOTE

Perform step 2.2.12 if Part II has not been performed consequently to Part I.

2.2.12 With reference to Figure 32 View Looking Back STA 7200 RH Side and Detail C, free the connectors A600P1 (C/A C1B334) and A600P2 (C/A C2B379) from their stowage (remove the nomex, the tie strap and the protective plug).

2.2.13 In accordance with AMP DM 39-D-31-32-01-00A-720A-K and with reference to Figure 32 View Looking Back STA 7200 RH Side, install the HUMS HUMC (A600) P/N 3G3130V00351 by means of n°4 screws P/N NAS1802-4-14.

2.2.14 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 32 View Looking Back STA 7200 RH Side, install the decal P/N ED300A600 in an area adjacent the HUMS HUMC A600.

2.2.15 With reference to Figure 32 View Looking Back STA 7200 RH Side, upload n°2 software P/N 3G3130AA0100 and P/N 3G3130AB0100 following the instructions in accordance with the upload procedure (Annex B).

2.2.16 With reference to Figure 31, remove the locking ring P/N AW001YC01RED.

2.3 In accordance with Annex A perform the Family HUMS bonding check and Functional Test.

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

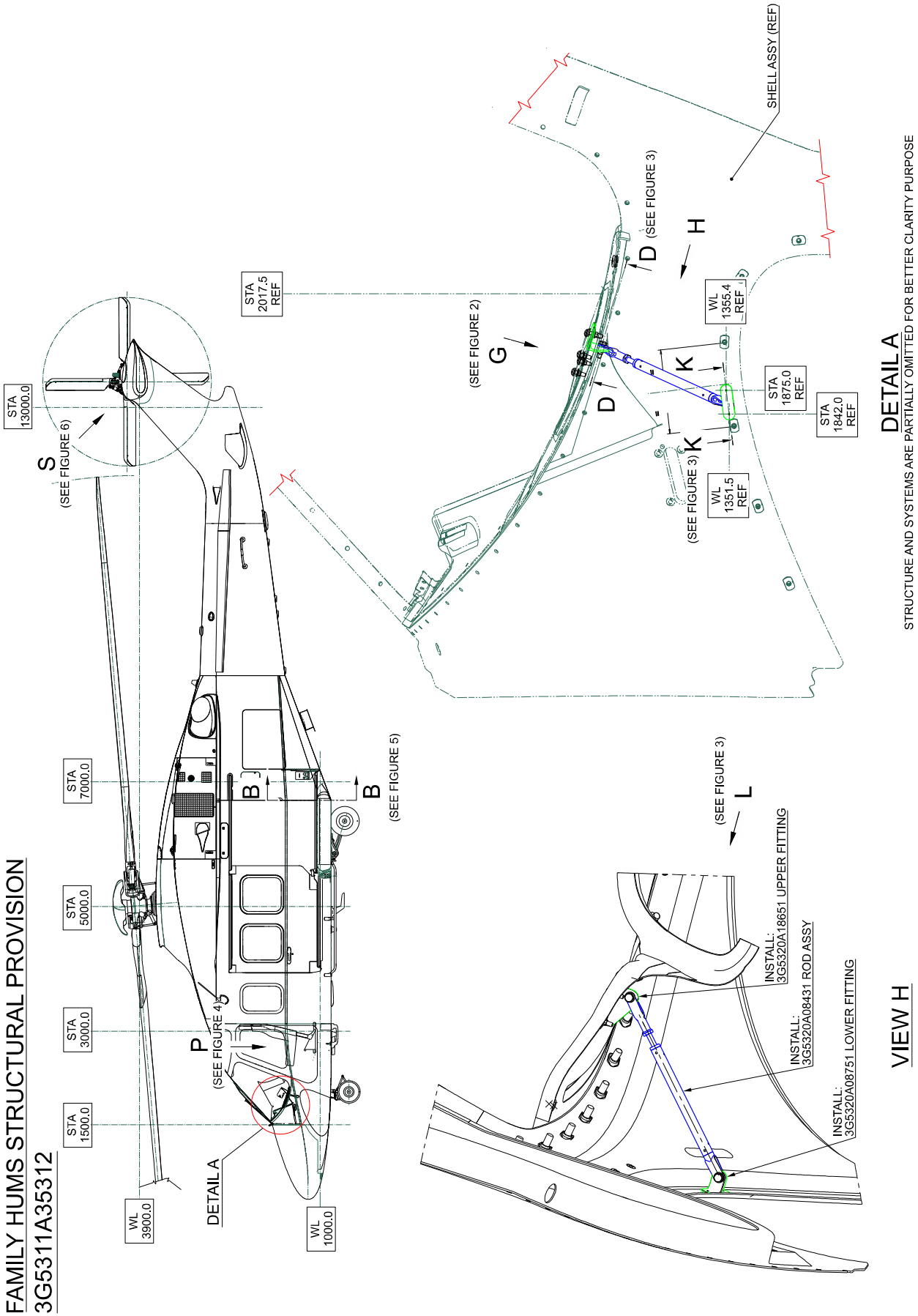
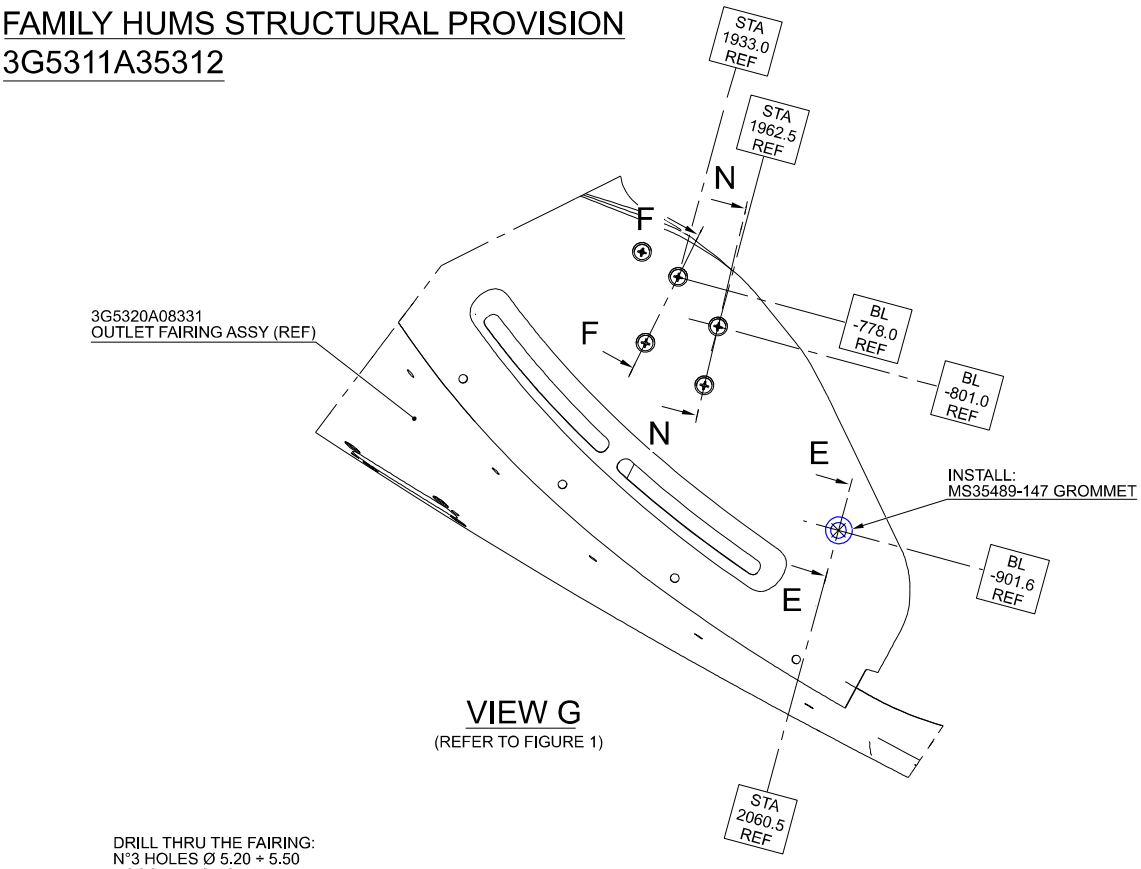
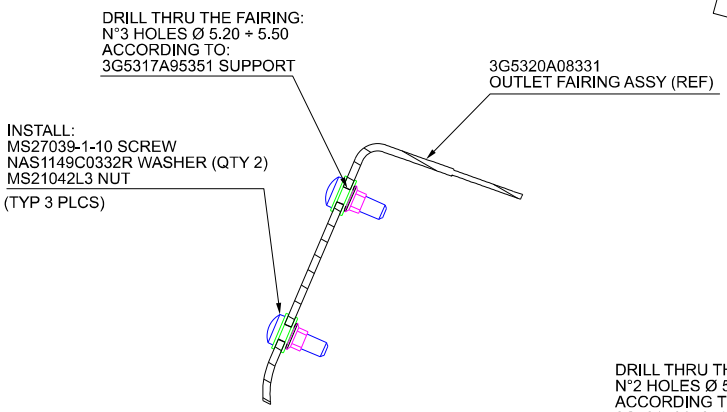

FAMILY HUMS STRUCTURAL PROVISION
3G5311A35312
STA 13000.0
STA 7000.0
STA 5000.0
STA 3000.0
STA 1500.0
WL 3900.0
WL 1000.0
S
(SEE FIGURE 6)
P
(SEE FIGURE 4)
B
B
(SEE FIGURE 5)
DETAIL A
STA 2017.5 REF
(SEE FIGURE 2)
G
D
D (SEE FIGURE 3)
H
K
K
(SEE FIGURE 3)
WL 1355.4 REF
WL 1351.5 REF
STA 1875.0 REF
STA 1842.0 REF
SHELL ASSY (REF)
DETAIL A
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(SEE FIGURE 3)
L
INSTALL: 3G5320A18651 UPPER FITTING
INSTALL: 3G5320A08431 ROD ASSY
INSTALL: 3G5320A08751 LOWER FITTING
VIEW H

Figure 1

FAMILY HUMS STRUCTURAL PROVISION
3G5311A35312

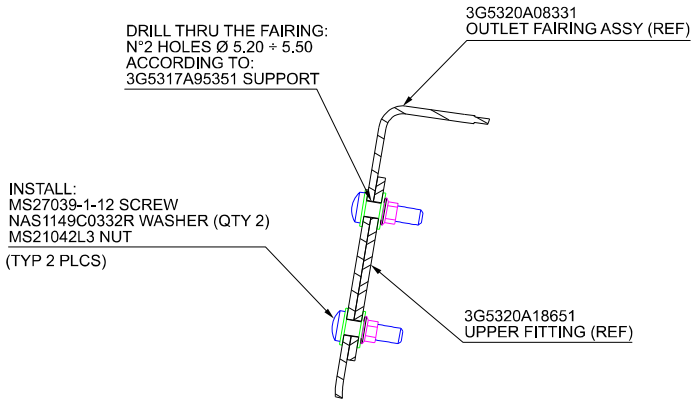


VIEW G
(REFER TO FIGURE 1)



SECTION F-F

SECTION E-E



SECTION N-N

Figure 2

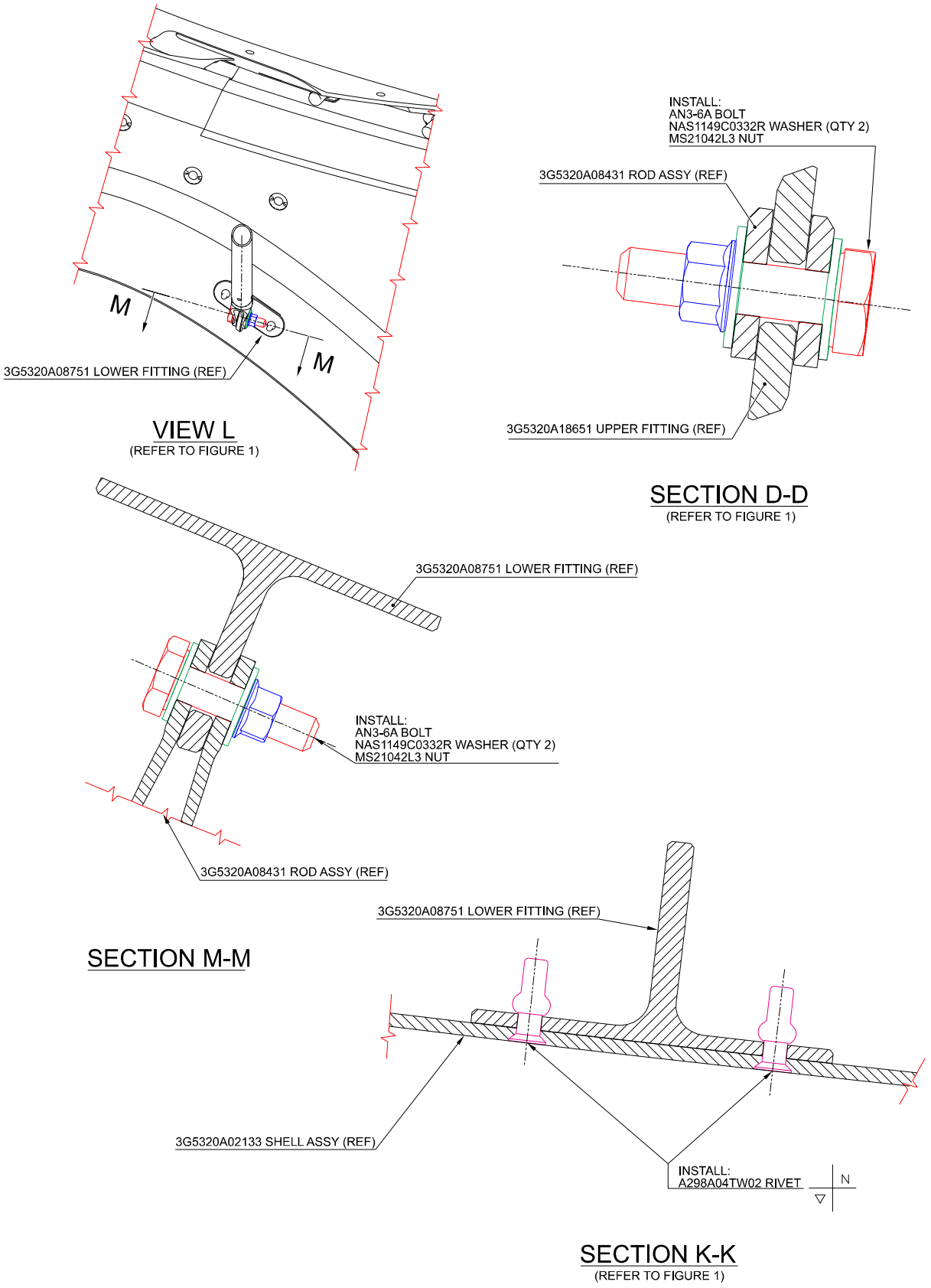
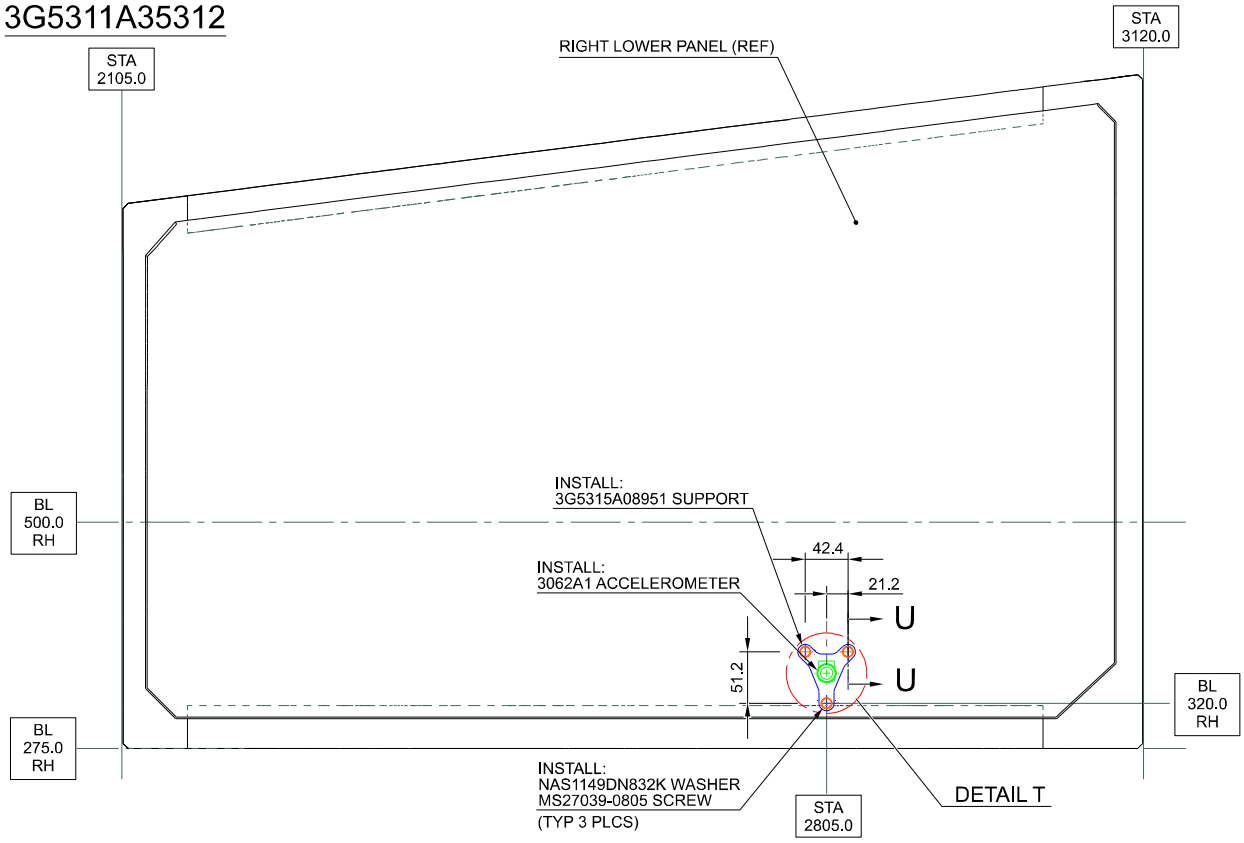

M
M
3G5320A08751 LOWER FITTING (REF)
VIEW L
(REFER TO FIGURE 1)
INSTALL:
AN3-6A BOLT
NAS1149C0332R WASHER (QTY 2)
MS21042L3 NUT
3G5320A08431 ROD ASSY (REF)
3G5320A18651 UPPER FITTING (REF)
SECTION D-D
(REFER TO FIGURE 1)
3G5320A08751 LOWER FITTING (REF)
INSTALL:
AN3-6A BOLT
NAS1149C0332R WASHER (QTY 2)
MS21042L3 NUT
3G5320A08431 ROD ASSY (REF)
SECTION M-M
3G5320A08751 LOWER FITTING (REF)
3G5320A02133 SHELL ASSY (REF)
INSTALL:
A298A04TW02 RIVET
N
SECTION K-K
(REFER TO FIGURE 1)

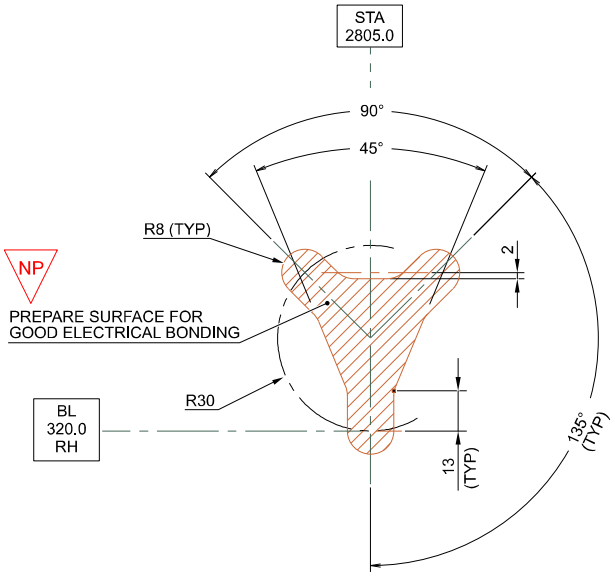
Figure 3

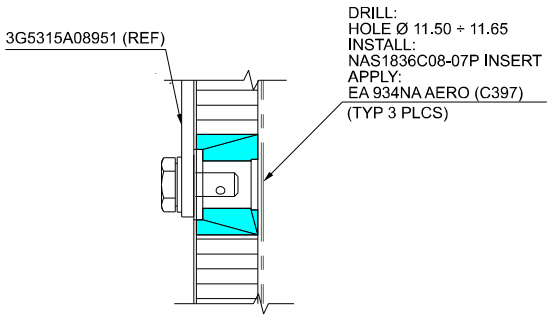
FAMILY HUMS STRUCTURAL PROVISION
3G5311A35312



VIEW P

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





SECTION U-U

DETAIL T

SUPPORT HUMS ACCELEROMETER OMITTED FOR CLARITY

Figure 4

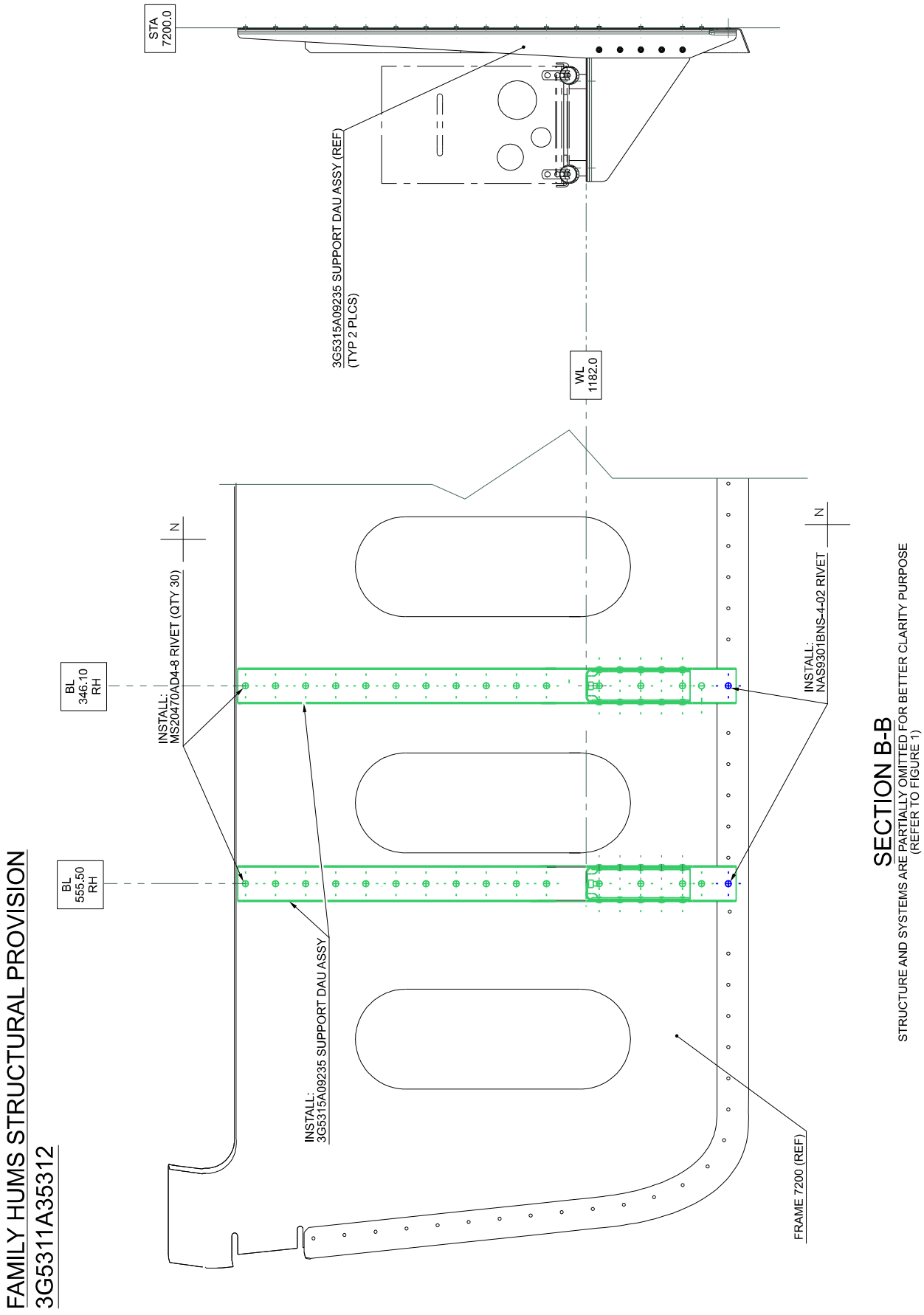
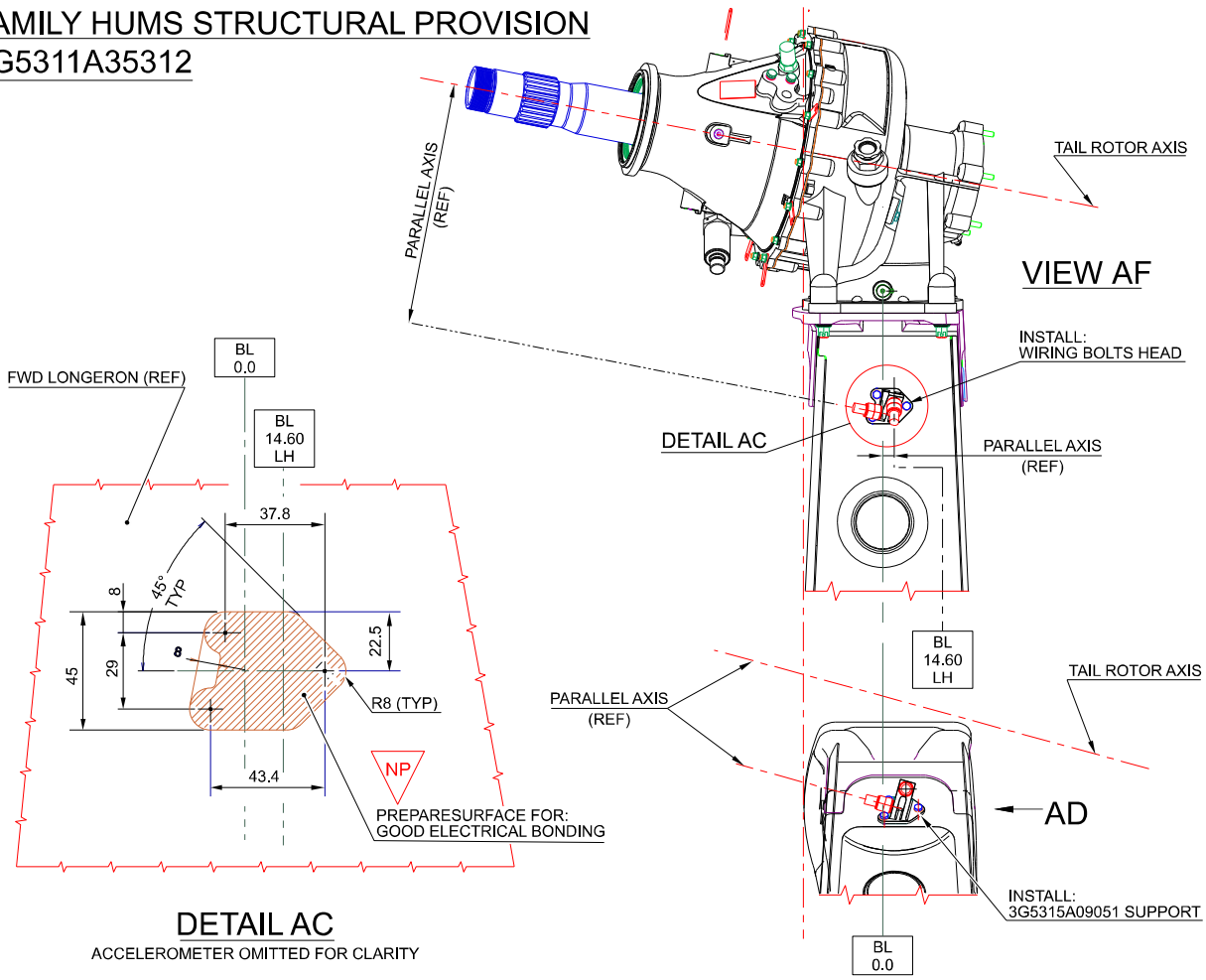

FAMILY HUMS STRUCTURAL PROVISION
3G5311A35312
STA 7200.0
3G5315A09235 SUPPORT DAU ASSY (REF)
(TYP 2 PLCS)
WL 1182.0
BL 346.10 RH
BL 555.50 RH
INSTALL:
MS20470AD4-8 RIVET (QTY 30)
INSTALL:
NAS9301BNS-4-02 RIVET
INSTALL:
3G5315A09235 SUPPORT DAU ASSY
FRAME 7200 (REF)
SECTION B-B
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 1)

Figure 5

FAMILY HUMS STRUCTURAL PROVISION
3G5311A35312



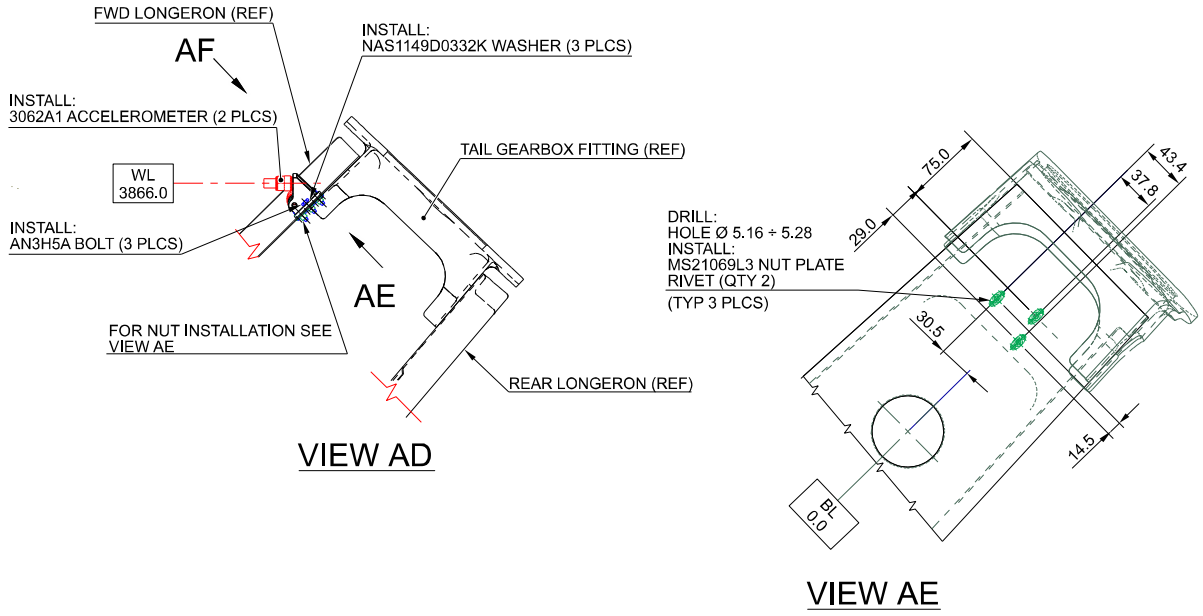


Figure 6

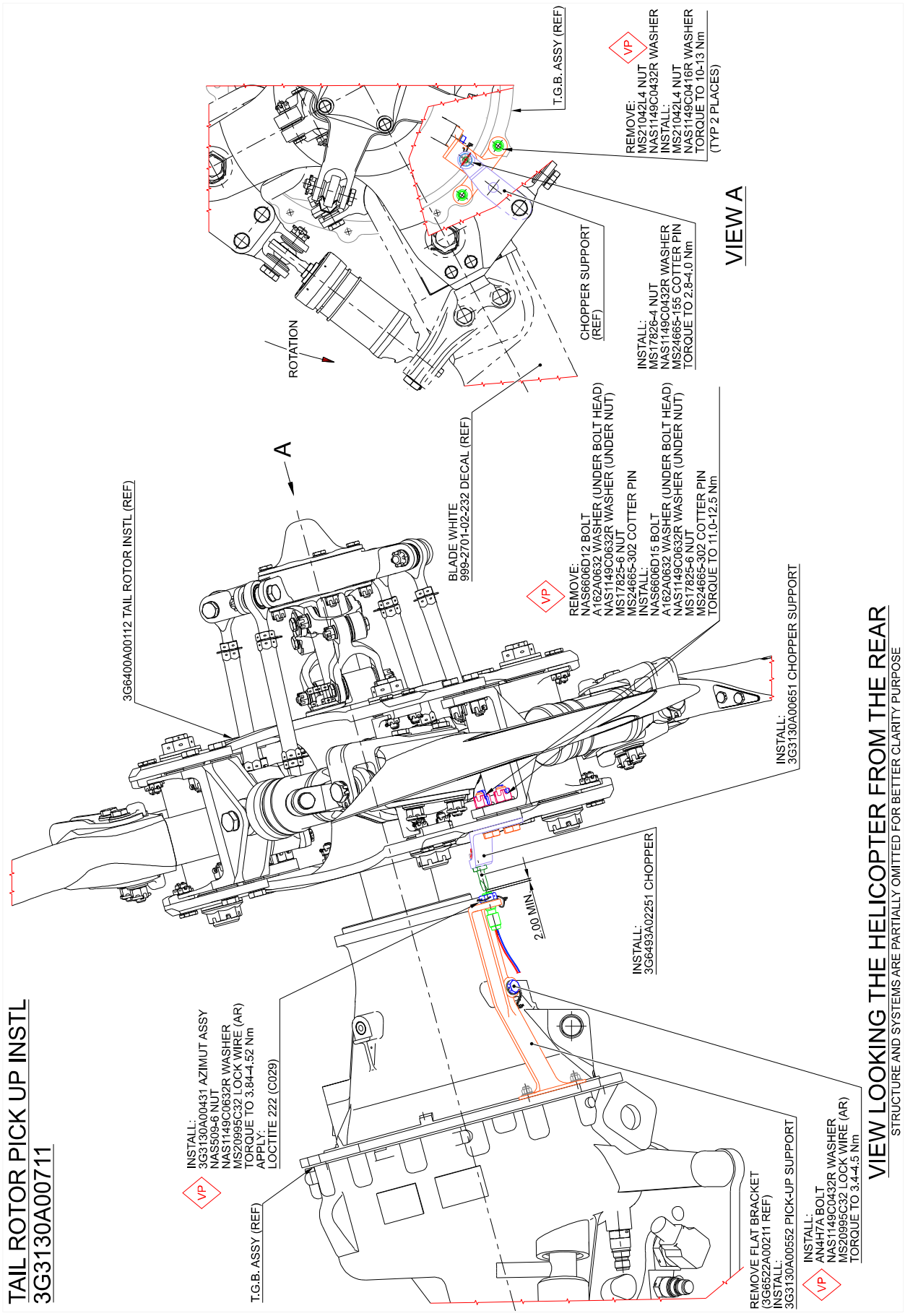

TAIL ROTOR PICK UP INSTL
3G3130A00711
VIEW LOOKING THE HELICOPTER FROM THE REAR
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
VIEW A
A
ROTATION
T.G.B. ASSY (REF)
REMOVE:
MS21042L4 NUT
NAS1149C0432R WASHER
INSTALL:
MS21042L4 NUT
NAS1149C0416R WASHER
TORQUE TO 10-13 Nm
(TYP 2 PLACES)
CHOPPER SUPPORT
(REF)
INSTALL:
MS17826-4 NUT
NAS1149C0432R WASHER
MS24665-155 COTTER PIN
TORQUE TO 2.8-4.0 Nm
BLADE WHITE
999-2701-02-232 DECAL (REF)
3G6400A00112 TAIL ROTOR INSTL (REF)
REMOVE:
NAS6606D12 BOLT
A162A0632 WASHER (UNDER BOLT HEAD)
NAS1149C0632R WASHER (UNDER NUT)
MS17825-6 NUT
MS24665-302 COTTER PIN
INSTALL:
NAS6606D15 BOLT
A162A0632 WASHER (UNDER BOLT HEAD)
NAS1149C0632R WASHER (UNDER NUT)
MS17825-6 NUT
MS24665-302 COTTER PIN
TORQUE TO 11.0-12.5 Nm
INSTALL:
3G3130A00651 CHOPPER SUPPORT
INSTALL:
3G6493A02251 CHOPPER
2.00 MIN
INSTALL:
3G3130A00431 AZIMUT ASSY
NAS509-6 NUT
NAS1149C0632R WASHER
MS20995C32 LOCK WIRE (AR)
TORQUE TO 3.84-4.52 Nm
APPLY:
LOCTITE 222 (C029)
T.G.B. ASSY (REF)
REMOVE FLAT BRACKET
(3G6522A00211 REF)
INSTALL:
3G3130A00552 PICK-UP SUPPORT
INSTALL:
AN4H7A BOLT
NAS1149C0432R WASHER
MS20995C32 LOCK WIRE (AR)
TORQUE TO 3.4-4.5 Nm
VP

Figure 7

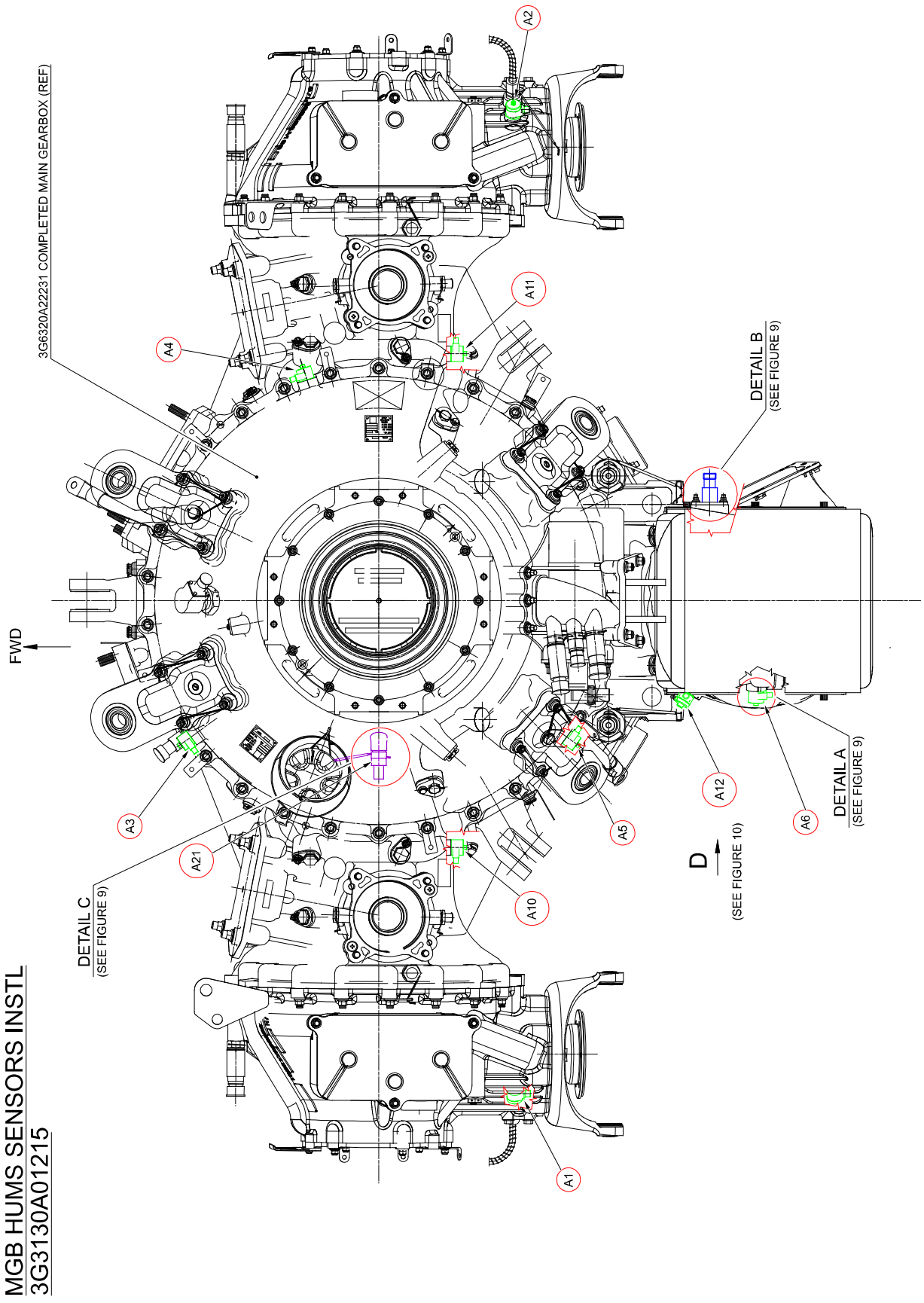
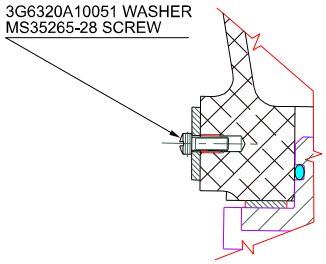
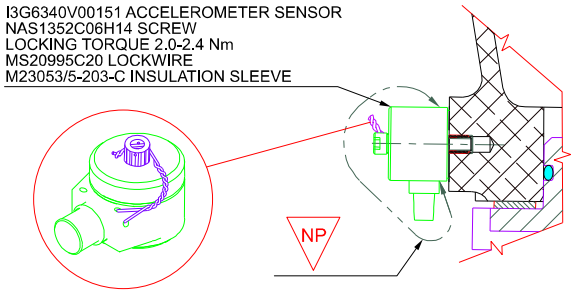

MGB HUMS SENSORS INSTL
3G3130A01215
FWD
3G6320A22231 COMPLETED MAIN GEARBOX (REF)
A1
A2
A3
A4
A5
A6
A10
A11
A12
A21
DETAIL A
(SEE FIGURE 9)
DETAIL B
(SEE FIGURE 9)
DETAIL C
(SEE FIGURE 9)
D
(SEE FIGURE 10)

Figure 8

MGB HUMS SENSORS INSTL
3G3130A01215

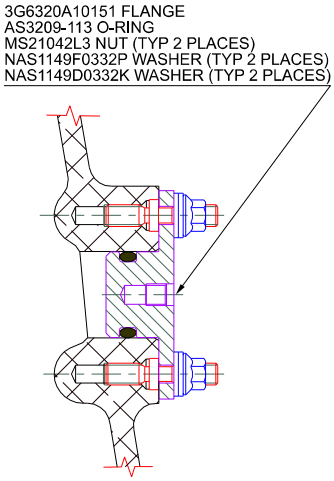


REMOVE

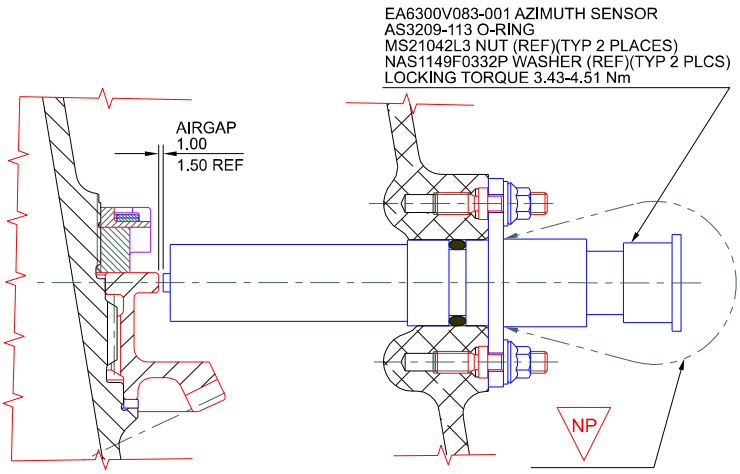


DETAIL A
TYPICAL 12 PLACES
(REFER TO FIGURE 8, 10, 11, 12)

INSTALL

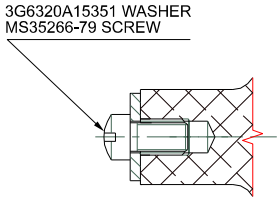


REMOVE

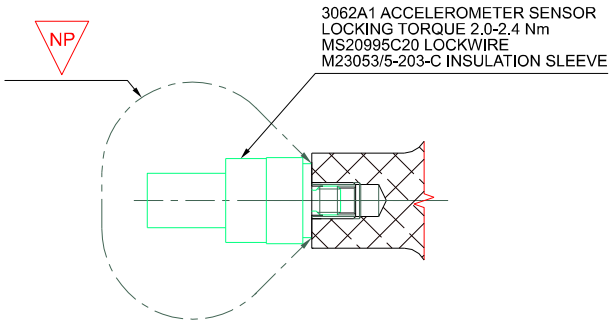


INSTALL

DETAIL B
(REFER TO FIGURE 8)



REMOVE



INSTALL

DETAIL C
(REFER TO FIGURE 8)

Figure 9

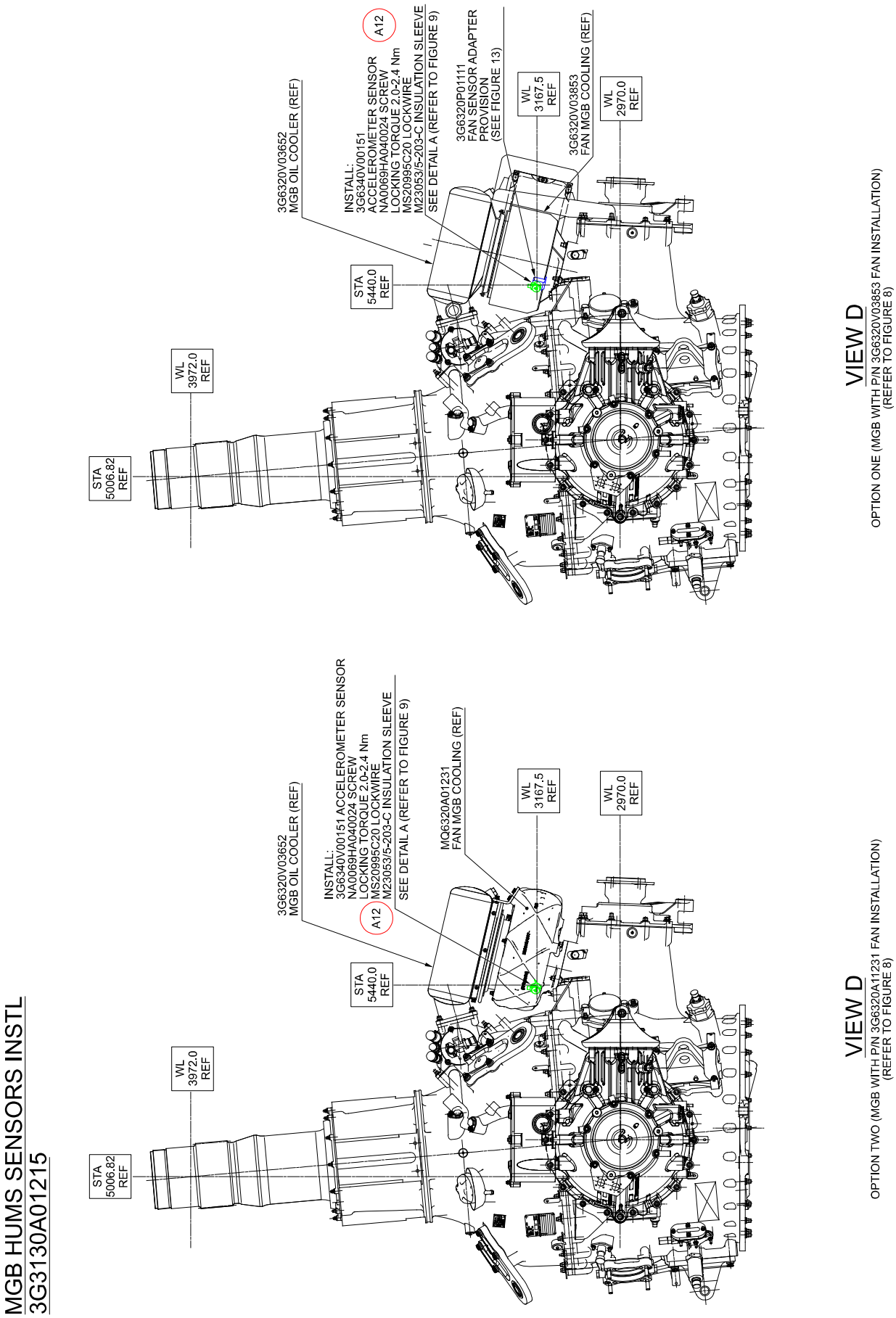

MGB HUMS SENSORS INSTL
3G3130A01215
STA 5006.82 REF
WL 3972.0 REF
STA 5440.0 REF
3G6320V03652
MGB OIL COOLER (REF)
INSTALL:
3G6340V00151 ACCELEROMETER SENSOR
NA0069HA040024 SCREW
LOCKING TORQUE 2.0-2.4 Nm
MS20995C20 LOCKWIRE
M23053/5-203-C INSULATION SLEEVE
SEE DETAIL A (REFER TO FIGURE 9)
A12
MQ6320A01231
FAN MGB COOLING (REF)
WL 3167.5 REF
WL 2970.0 REF
VIEW D
OPTION TWO (MGB WITH P/N 3G6320A11231 FAN INSTALLATION)
(REFER TO FIGURE 8)
3G6320P01111
FAN SENSOR ADAPTER
PROVISION
(SEE FIGURE 13)
3G6320V03853
FAN MGB COOLING (REF)
VIEW D
OPTION ONE (MGB WITH P/N 3G6320V03853 FAN INSTALLATION)
(REFER TO FIGURE 8)

Figure 10

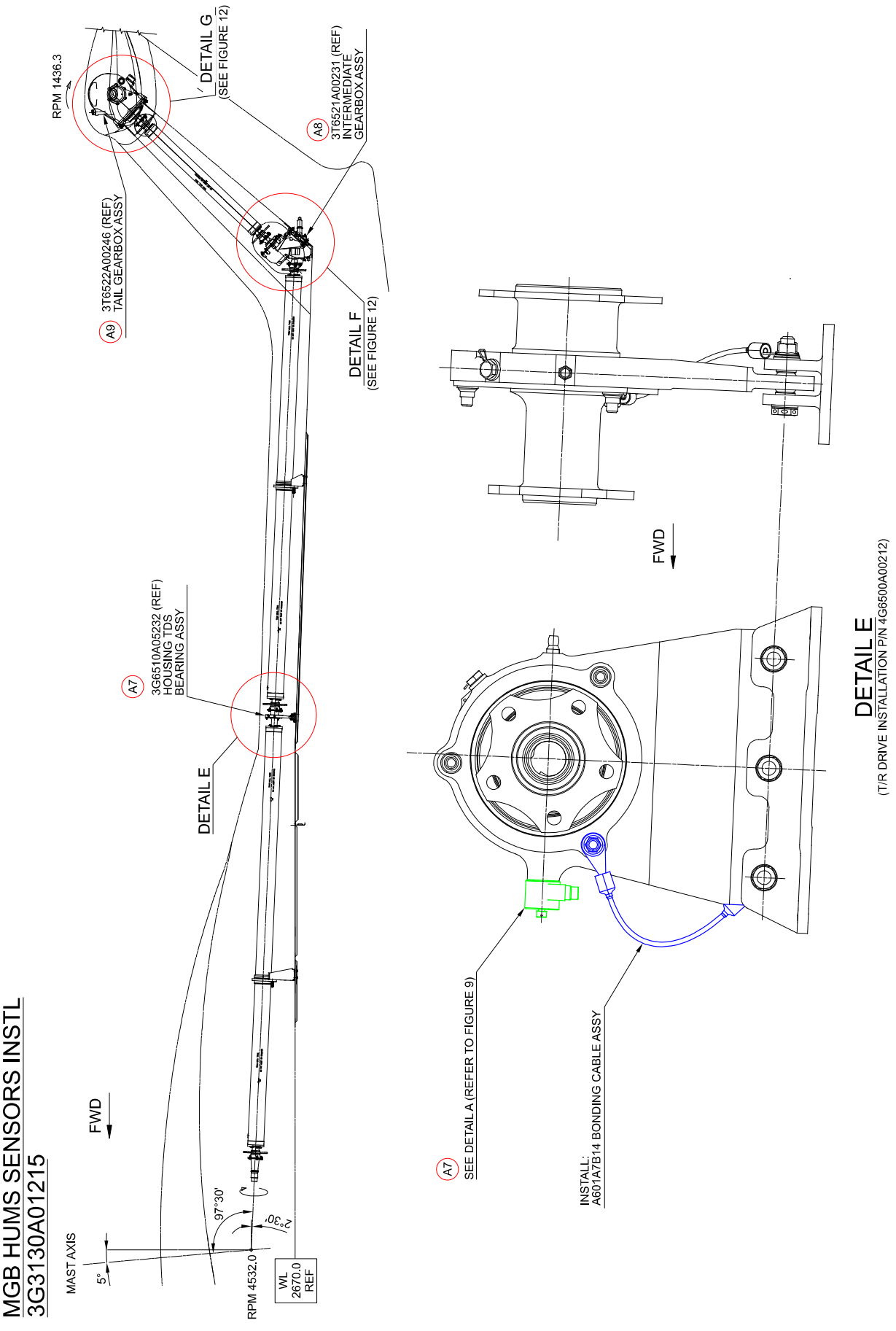
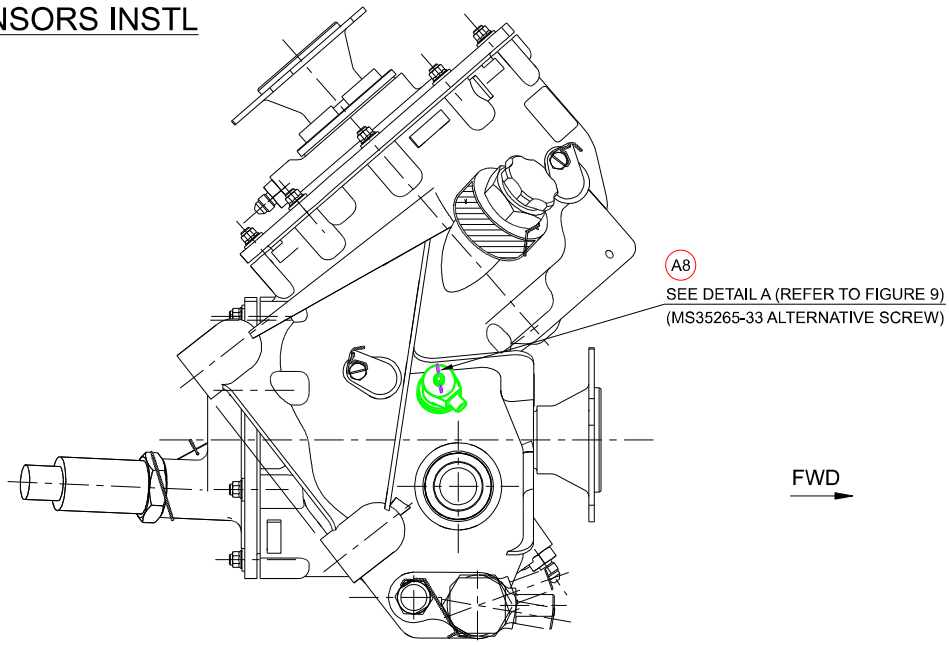
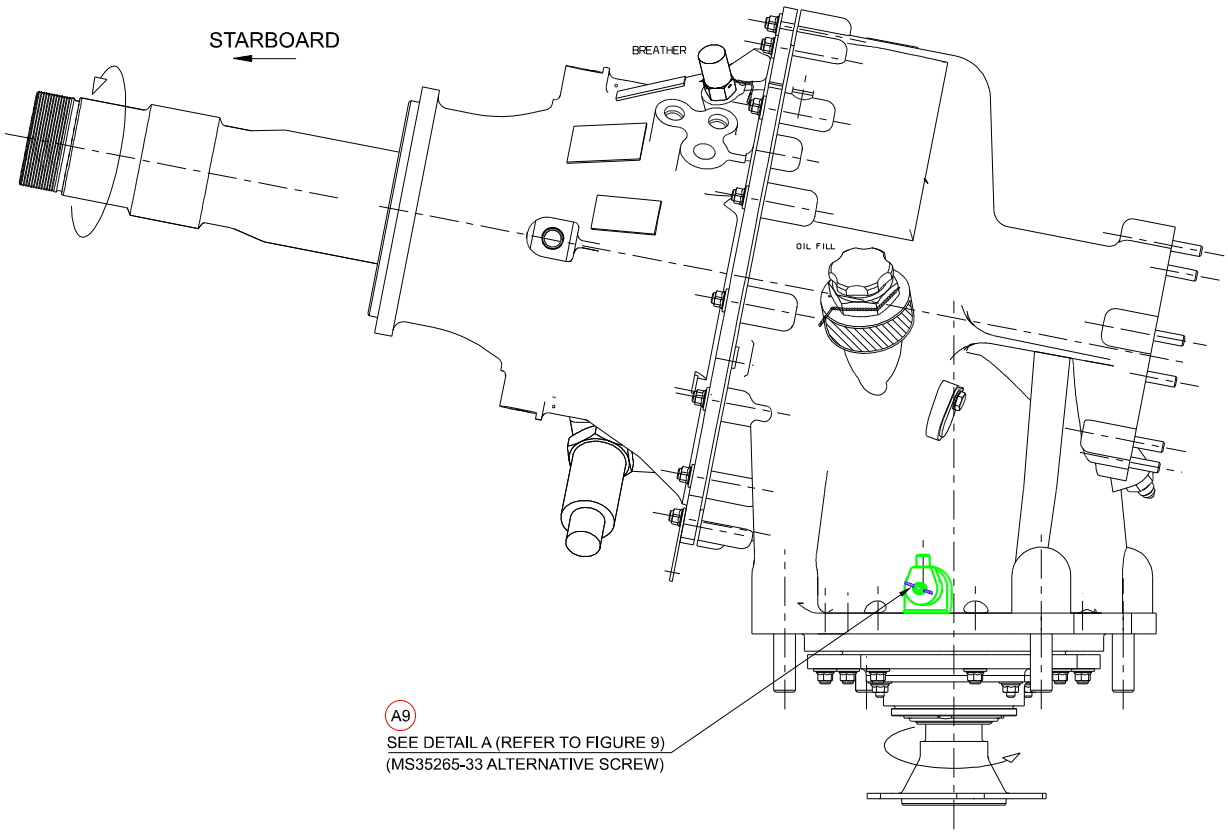

MGB HUMS SENSORS INSTL
3G3130A01215
RPM 1436.3
DETAIL G
(SEE FIGURE 12)
A8
3T6521A00231 (REF)
INTERMEDIATE
GEARBOX ASSY
A9
3T6522A00246 (REF)
TAIL GEARBOX ASSY
DETAIL F
(SEE FIGURE 12)
A7
3G6510A05232 (REF)
HOUSING TDS
BEARING ASSY
DETAIL E
FWD
MAST AXIS
5°
97°30'
A°30'
RPM 4532.0
WL
2670.0
REF
FWD
DETAIL E
(T/R DRIVE INSTALLATION P/N 4G6500A00212)
A7
SEE DETAIL A (REFER TO FIGURE 9)
INSTALL:
A601A7B14 BONDING CABLE ASSY

Figure 11



DETAIL F
(REFER TO FIGURE 11)



DETAIL G
(REFER TO FIGURE 11)

Figure 12

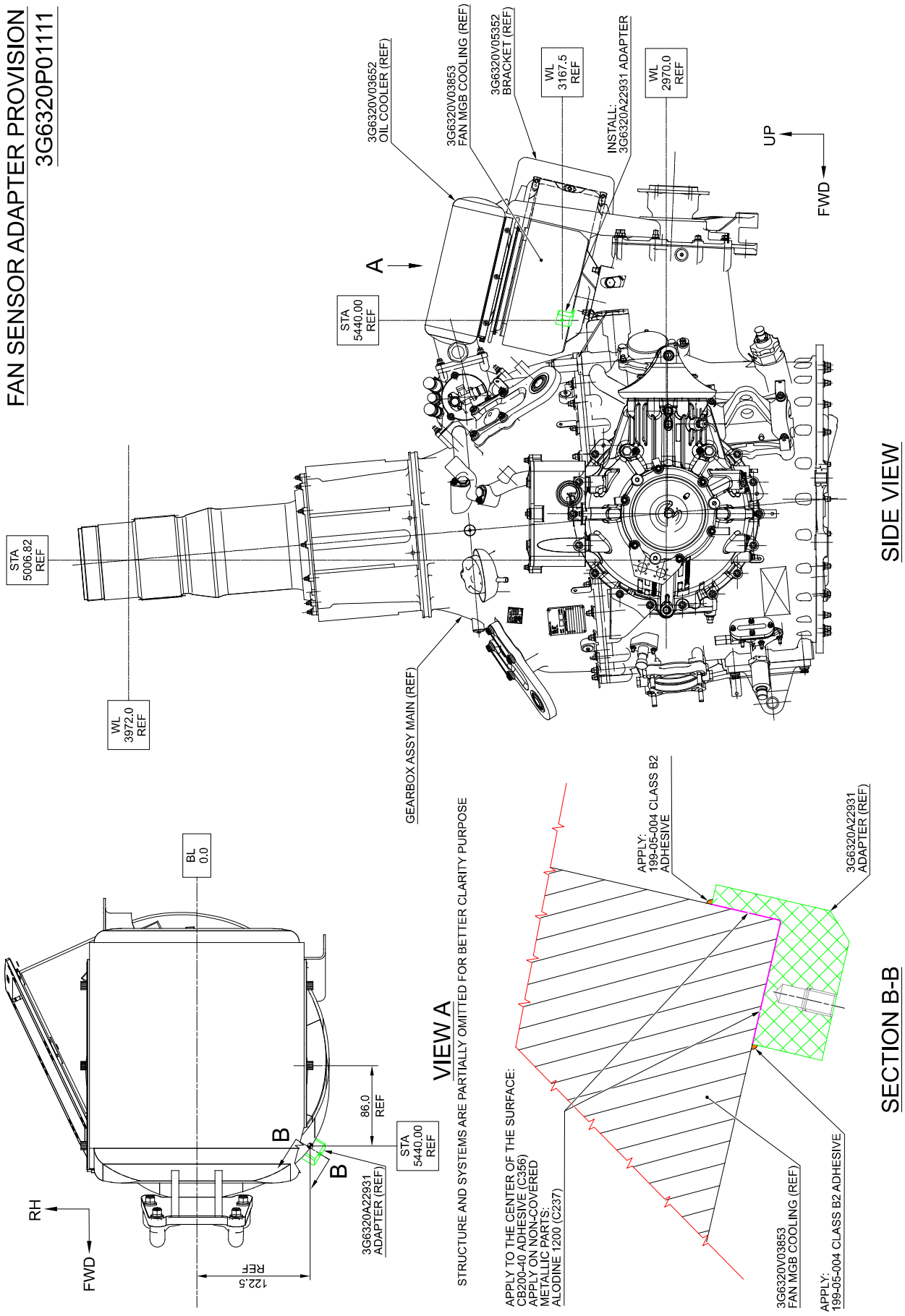

FAN SENSOR ADAPTER PROVISION
3G6320P01111
3G6320V03652
OIL COOLER (REF)
3G6320V03853
FAN MGB COOLING (REF)
3G6320V05352
BRACKET (REF)
WL
3167.5
REF
INSTALL:
3G6320A22931 ADAPTER
WL
2970.0
REF
UP
FWD
A
STA
5440.00
REF
STA
5006.82
REF
WL
3972.0
REF
GEARBOX ASSY MAIN (REF)
SIDE VIEW
BL
0.0
B
B
86.0
REF
STA
5440.00
REF
3G6320A22931
ADAPTER (REF)
RH
FWD
122.5
REF
VIEW A
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
APPLY:
199-05-004 CLASS B2
ADHESIVE
3G6320A22931
ADAPTER (REF)
APPLY TO THE CENTER OF THE SURFACE:
CB200-40 ADHESIVE (C356)
APPLY ON NON-COVERED
METALLIC PARTS:
ALODINE 1200 (C237)
3G6320V03853
FAN MGB COOLING (REF)
APPLY:
199-05-004 CLASS B2 ADHESIVE
SECTION B-B

Figure 13

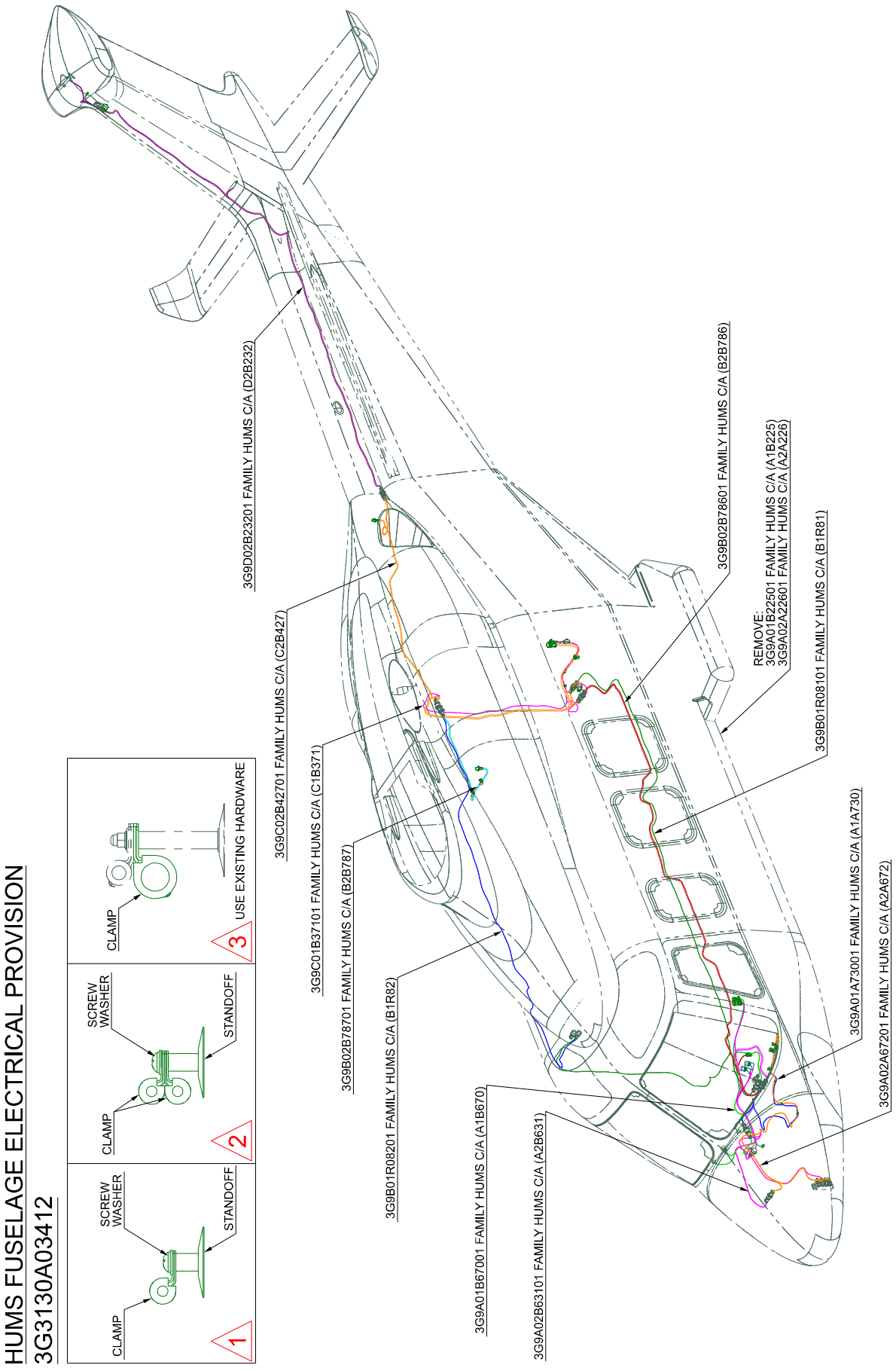

HUMS FUSELAGE ELECTRICAL PROVISION
3G3130A03412
CLAMP
SCREW WASHER
STANDOFF
1
CLAMP
SCREW WASHER
STANDOFF
2
CLAMP
3
USE EXISTING HARDWARE
3G9D02B23201 FAMILY HUMS C/A (D2B232)
3G9C02B42701 FAMILY HUMS C/A (C2B427)
3G9C01B37101 FAMILY HUMS C/A (C1B371)
3G9B02B78701 FAMILY HUMS C/A (B2B787)
3G9B01R08201 FAMILY HUMS C/A (B1R82)
3G9A01B67001 FAMILY HUMS C/A (A1B670)
3G9A02B63101 FAMILY HUMS C/A (A2B631)
3G9B02B78601 FAMILY HUMS C/A (B2B786)
REMOVE:
3G9A01B22501 FAMILY HUMS C/A (A1B225)
3G9A02A22601 FAMILY HUMS C/A (A2A226)
3G9B01R08101 FAMILY HUMS C/A (B1R81)
3G9A01A73001 FAMILY HUMS C/A (A1A730)
3G9A02A67201 FAMILY HUMS C/A (A2A672)

Figure 14

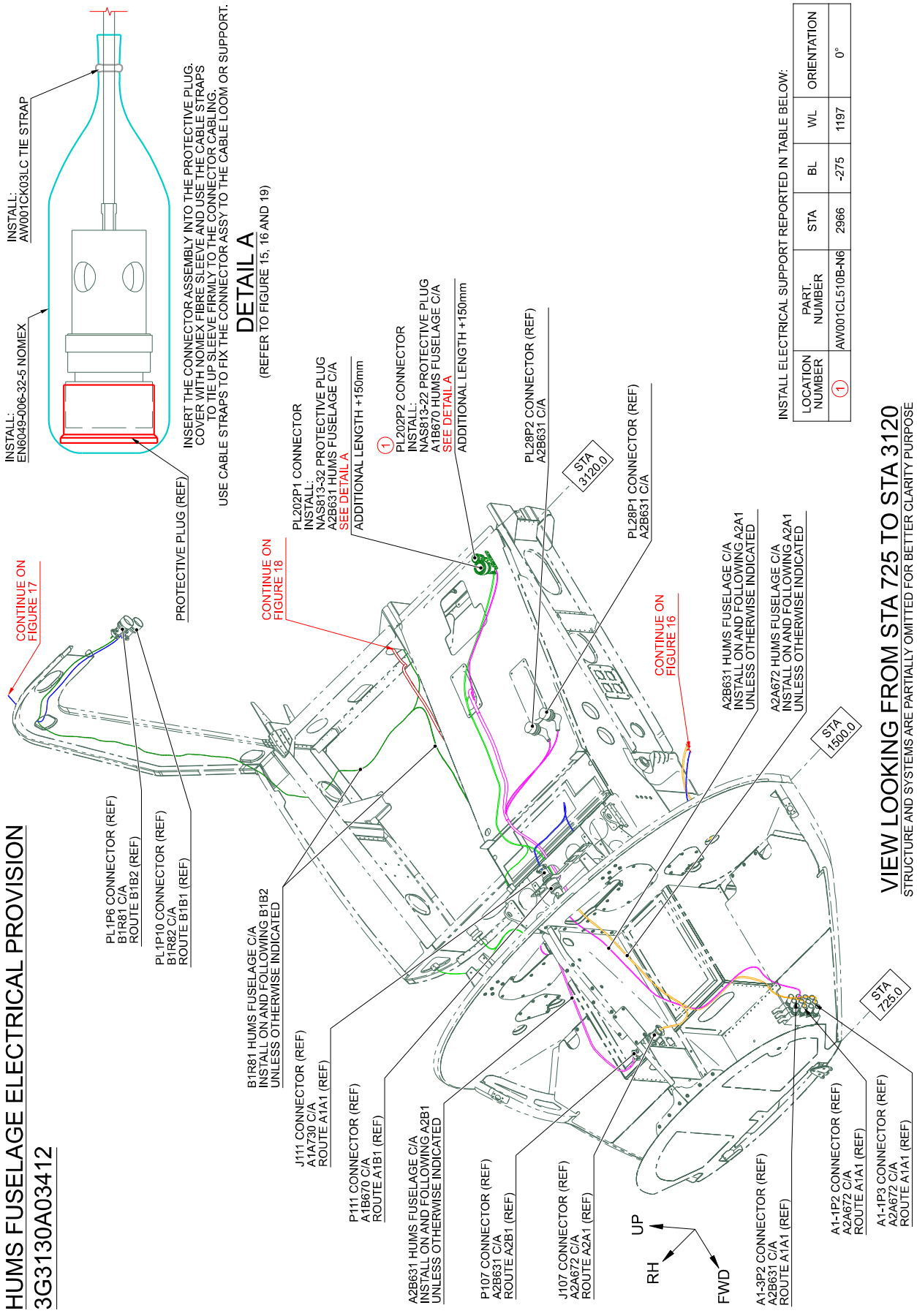

HUMS FUSELAGE ELECTRICAL PROVISION
3G3130A03412
VIEW LOOKING FROM STA 725 TO STA 3120
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
DETAIL A
(REFER TO FIGURE 15, 16 AND 19)
INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:
LOCATION NUMBER
PART. NUMBER
STA
BL
WL
ORIENTATION
1
AW001CL510B-N6
2966
-275
1197
0°
INSTALL: AW001CK03LC TIE STRAP
INSTALL: EN6049-006-32-5 NOMEX
PROTECTIVE PLUG (REF)
INSERT THE CONNECTOR ASSEMBLY INTO THE PROTECTIVE PLUG. COVER WITH NOMEX FIBRE SLEEVE AND USE THE CABLE STRAPS TO TIE UP SLEEVE FIRMLY TO THE CONNECTOR CABLING. USE CABLE STRAPS TO FIX THE CONNECTOR ASSY TO THE CABLE LOOM OR SUPPORT.
CONTINUE ON FIGURE 17
CONTINUE ON FIGURE 18
CONTINUE ON FIGURE 16
PL1P6 CONNECTOR (REF) B1R81 C/A ROUTE B1B2 (REF)
PL1P10 CONNECTOR (REF) B1R82 C/A ROUTE B1B1 (REF)
B1R81 HUMS FUSELAGE C/A INSTALL ON AND FOLLOWING B1B2 UNLESS OTHERWISE INDICATED
PL202P1 CONNECTOR INSTALL: NAS813-32 PROTECTIVE PLUG A2B631 HUMS FUSELAGE C/A SEE DETAIL A
ADDITIONAL LENGTH +150mm
1
PL202P2 CONNECTOR INSTALL: NAS813-22 PROTECTIVE PLUG A1B670 HUMS FUSELAGE C/A SEE DETAIL A
ADDITIONAL LENGTH +150mm
PL28P2 CONNECTOR (REF) A2B631 C/A
PL28P1 CONNECTOR (REF) A2B631 C/A
STA 3120.0
STA 1500.0
STA 725.0
A2B631 HUMS FUSELAGE C/A INSTALL ON AND FOLLOWING A2A1 UNLESS OTHERWISE INDICATED
A2A672 HUMS FUSELAGE C/A INSTALL ON AND FOLLOWING A2A1 UNLESS OTHERWISE INDICATED
J111 CONNECTOR (REF) A1A730 C/A ROUTE A1A1 (REF)
P111 CONNECTOR (REF) A1B670 C/A ROUTE A1B1 (REF)
A2B631 HUMS FUSELAGE C/A INSTALL ON AND FOLLOWING A2B1 UNLESS OTHERWISE INDICATED
P107 CONNECTOR (REF) A2B631 C/A ROUTE A2B1 (REF)
J107 CONNECTOR (REF) A2A672 C/A ROUTE A2A1 (REF)
A1-3P2 CONNECTOR (REF) A2B631 C/A ROUTE A1A1 (REF)
A1-1P2 CONNECTOR (REF) A2A672 C/A ROUTE A1A1 (REF)
A1-1P3 CONNECTOR (REF) A2A672 C/A ROUTE A1A1 (REF)
UP
RH
FWD

Figure 15

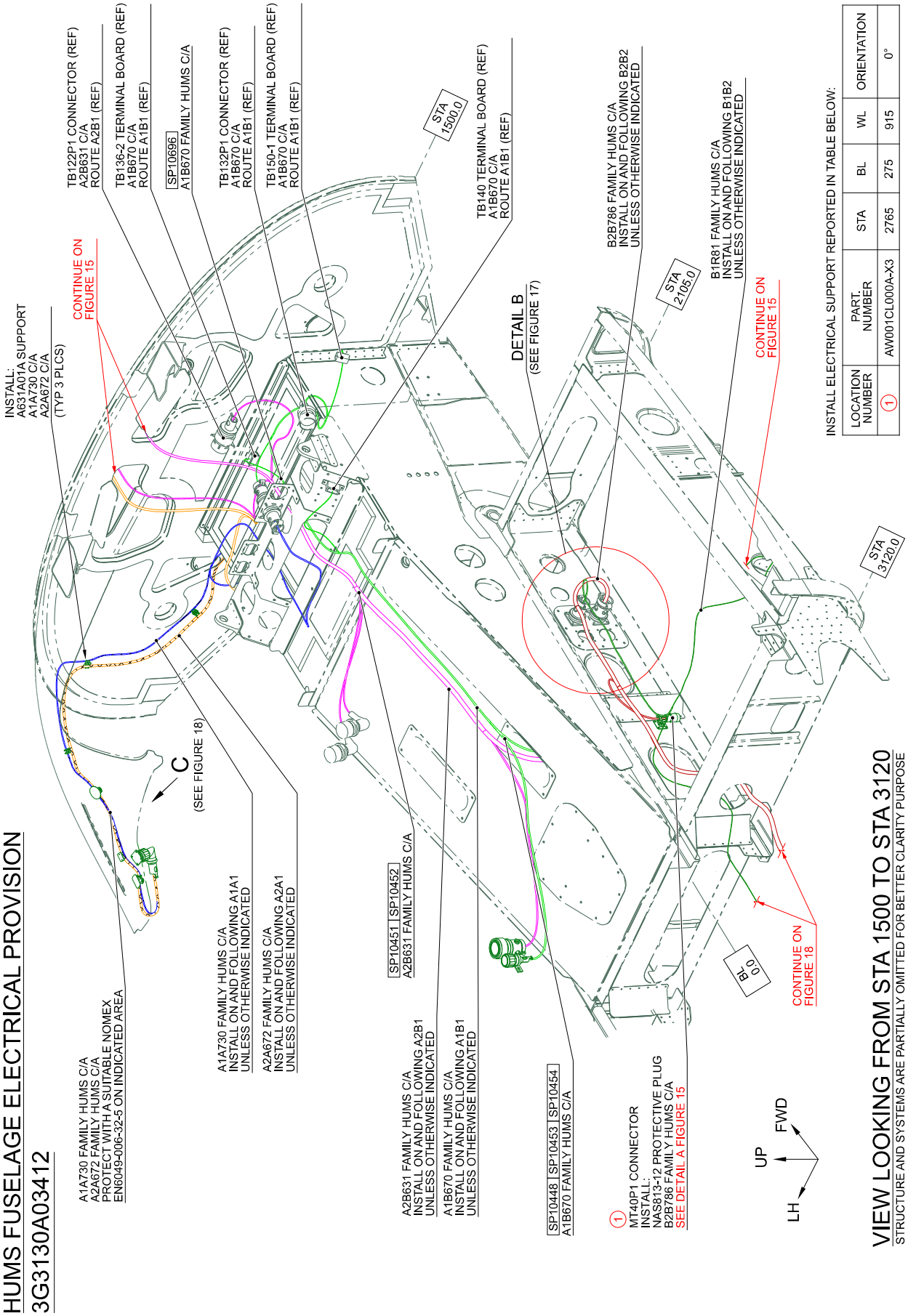

HUMS FUSELAGE ELECTRICAL PROVISION
3G3130A03412
INSTALL:
A631A01A SUPPORT
A1A730 C/A
A2A672 C/A
(TYP 3 PLCS)
CONTINUE ON FIGURE 15
TB122P1 CONNECTOR (REF)
A2B631 C/A
ROUTE A2B1 (REF)
TB136-2 TERMINAL BOARD (REF)
A1B670 C/A
ROUTE A1B1 (REF)
SP10696
A1B670 FAMILY HUMS C/A
TB132P1 CONNECTOR (REF)
A1B670 C/A
ROUTE A1B1 (REF)
TB150-1 TERMINAL BOARD (REF)
A1B670 C/A
ROUTE A1B1 (REF)
STA 1500.0
TB140 TERMINAL BOARD (REF)
A1B670 C/A
ROUTE A1B1 (REF)
DETAIL B
(SEE FIGURE 17)
B2B786 FAMILY HUMS C/A
INSTALL ON AND FOLLOWING B2B2
UNLESS OTHERWISE INDICATED
STA 2105.0
B1R81 FAMILY HUMS C/A
INSTALL ON AND FOLLOWING B1B2
UNLESS OTHERWISE INDICATED
CONTINUE ON FIGURE 15
STA 3120.0
C
(SEE FIGURE 18)
A1A730 FAMILY HUMS C/A
A2A672 FAMILY HUMS C/A
PROTECT WITH A SUITABLE NOMEX
EN6049-006-32-5 ON INDICATED AREA
A1A730 FAMILY HUMS C/A
INSTALL ON AND FOLLOWING A1A1
UNLESS OTHERWISE INDICATED
A2A672 FAMILY HUMS C/A
INSTALL ON AND FOLLOWING A2A1
UNLESS OTHERWISE INDICATED
SP10451 SP10452
A2B631 FAMILY HUMS C/A
A2B631 FAMILY HUMS C/A
INSTALL ON AND FOLLOWING A2B1
UNLESS OTHERWISE INDICATED
A1B670 FAMILY HUMS C/A
INSTALL ON AND FOLLOWING A1B1
UNLESS OTHERWISE INDICATED
SP10448 SP10453 SP10454
A1B670 FAMILY HUMS C/A
1
MT40P1 CONNECTOR
INSTALL:
NAS813-12 PROTECTIVE PLUG
B2B786 FAMILY HUMS C/A
SEE DETAIL A FIGURE 15
BL 0.0
CONTINUE ON FIGURE 18
UP
FWD
LH
VIEW LOOKING FROM STA 1500 TO STA 3120
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:
LOCATION NUMBER | PART NUMBER | STA | BL | WL | ORIENTATION
1 | AW001CL000A-X3 | 2765 | 275 | 915 | 0°

Figure 16

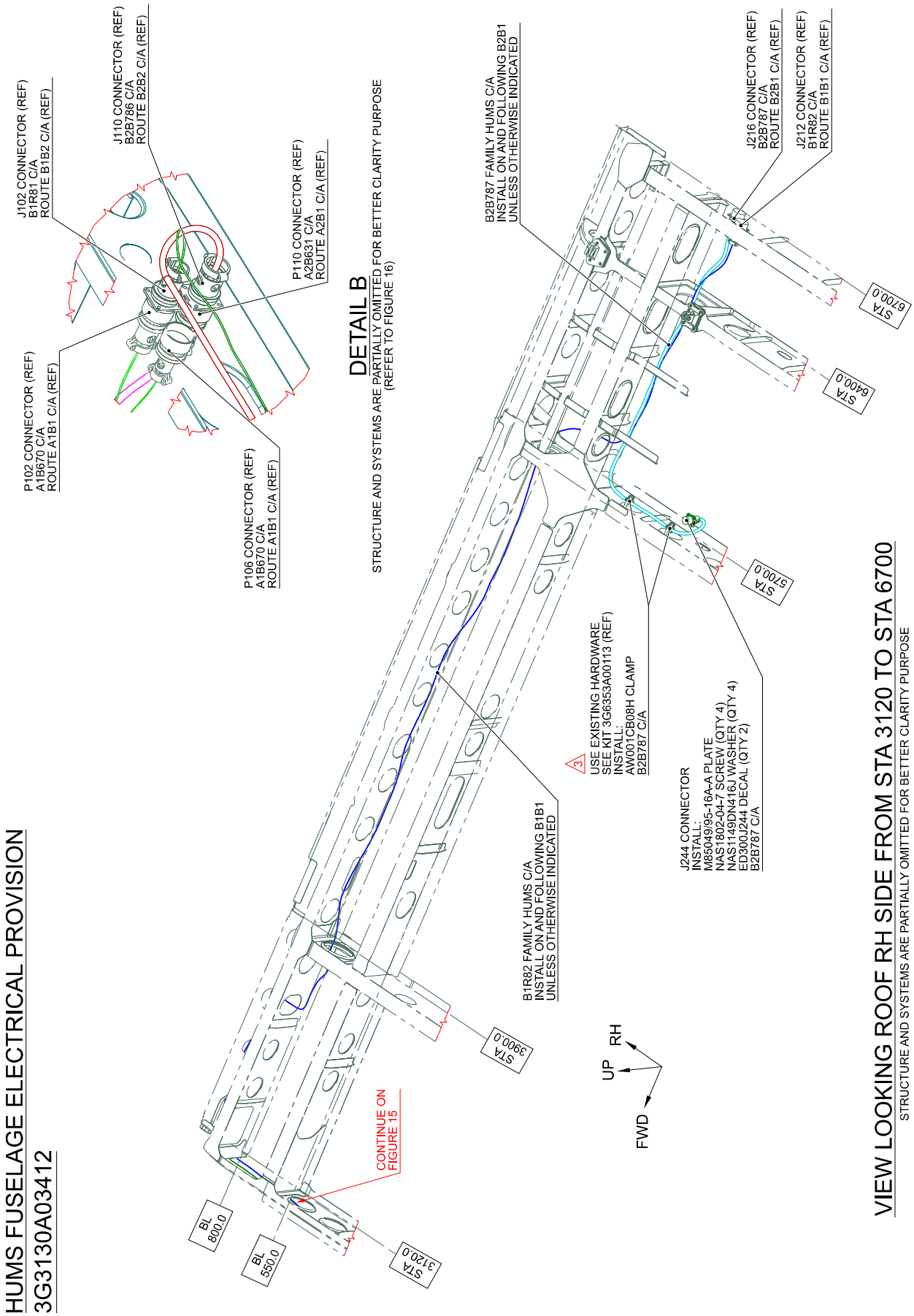

HUMS FUSELAGE ELECTRICAL PROVISION
3G3130A03412
VIEW LOOKING ROOF RH SIDE FROM STA 3120 TO STA 6700
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
DETAIL B
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 16)
J102 CONNECTOR (REF)
B1R81 C/A
ROUTE B1B2 C/A (REF)
J110 CONNECTOR (REF)
B2B786 C/A
ROUTE B2B2 C/A (REF)
P110 CONNECTOR (REF)
A2B631 C/A
ROUTE A2B1 C/A (REF)
P102 CONNECTOR (REF)
A1B670 C/A
ROUTE A1B1 C/A (REF)
P106 CONNECTOR (REF)
A1B670 C/A
ROUTE A1B1 C/A (REF)
B2B787 FAMILY HUMS C/A
INSTALL ON AND FOLLOWING B2B1
UNLESS OTHERWISE INDICATED
J216 CONNECTOR (REF)
B2B787 C/A
ROUTE B2B1 C/A (REF)
J212 CONNECTOR (REF)
B1R82 C/A
ROUTE B1B1 C/A (REF)
STA 6700.0
STA 6400.0
STA 5700.0
STA 3900.0
STA 3120.0
BL 800.0
BL 550.0
B1R82 FAMILY HUMS C/A
INSTALL ON AND FOLLOWING B1B1
UNLESS OTHERWISE INDICATED
3
USE EXISTING HARDWARE
SEE KIT 3G6353A00113 (REF)
INSTALL:
AW001CB08H CLAMP
B2B787 C/A
J244 CONNECTOR
INSTALL:
M85049/95-16A-A PLATE
NAS1802-04-7 SCREW (QTY 4)
NAS1149DN416J WASHER (QTY 4)
ED300J244 DECAL (QTY 2)
B2B787 C/A
CONTINUE ON
FIGURE 15
UP
RH
FWD

Figure 17

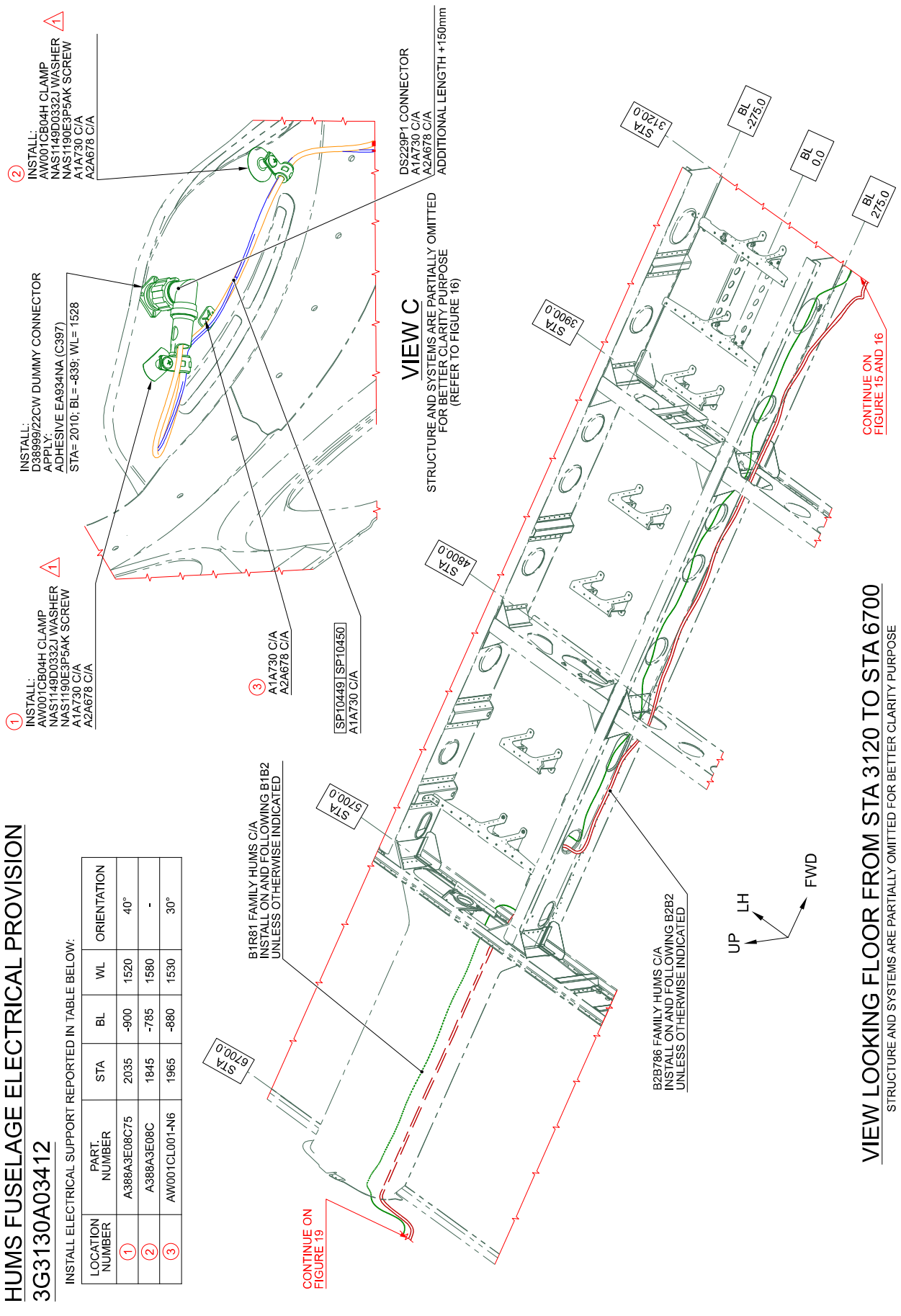

HUMS FUSELAGE ELECTRICAL PROVISION
3G3130A03412
INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:
LOCATION NUMBER | PART NUMBER | STA | BL | WL | ORIENTATION
① | A368A3E08C75 | 2035 | -900 | 1520 | 40°
② | A388A3E08C | 1845 | -785 | 1580 | -
③ | AW001CL001-N6 | 1965 | -880 | 1530 | 30°
① INSTALL: AW001CB04H CLAMP NAS1149D0332J WASHER NAS1190E3P5AK SCREW A1A730 C/A A2A678 C/A
② INSTALL: AW001CB04H CLAMP NAS1149D0332J WASHER NAS1190E3P5AK SCREW A1A730 C/A A2A678 C/A
INSTALL: D38999/22CW DUMMY CONNECTOR APPLY: ADHESIVE EA934NA (C397) STA= 2010; BL = -839; WL= 1528
③ A1A730 C/A A2A678 C/A
SP10449| SP10450 A1A730 C/A
DS229P1 CONNECTOR A1A730 C/A A2A678 C/A ADDITIONAL LENGTH +150mm
VIEW C
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE (REFER TO FIGURE 16)
B1R81 FAMILY HUMS C/A INSTALL ON AND FOLLOWING B1B2 UNLESS OTHERWISE INDICATED
B2B786 FAMILY HUMS C/A INSTALL ON AND FOLLOWING B2B2 UNLESS OTHERWISE INDICATED
STA 6700.0
STA 5700.0
STA 4800.0
STA 3900.0
STA 3120.0
BL -275.0
BL 0.0
BL 275.0
UP
LH
FWD
CONTINUE ON FIGURE 19
CONTINUE ON FIGURE 15 AND 16
VIEW LOOKING FLOOR FROM STA 3120 TO STA 6700
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 18

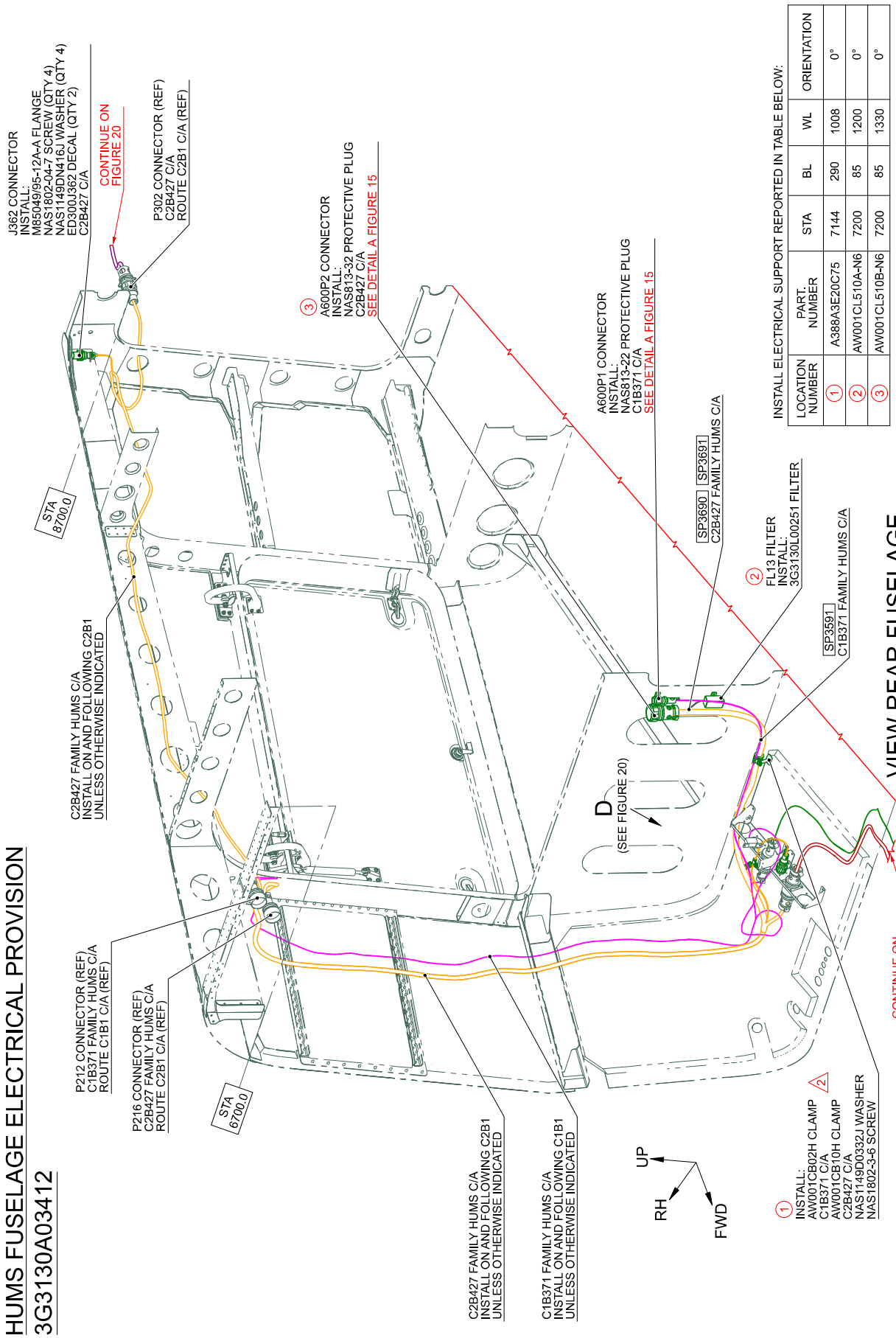
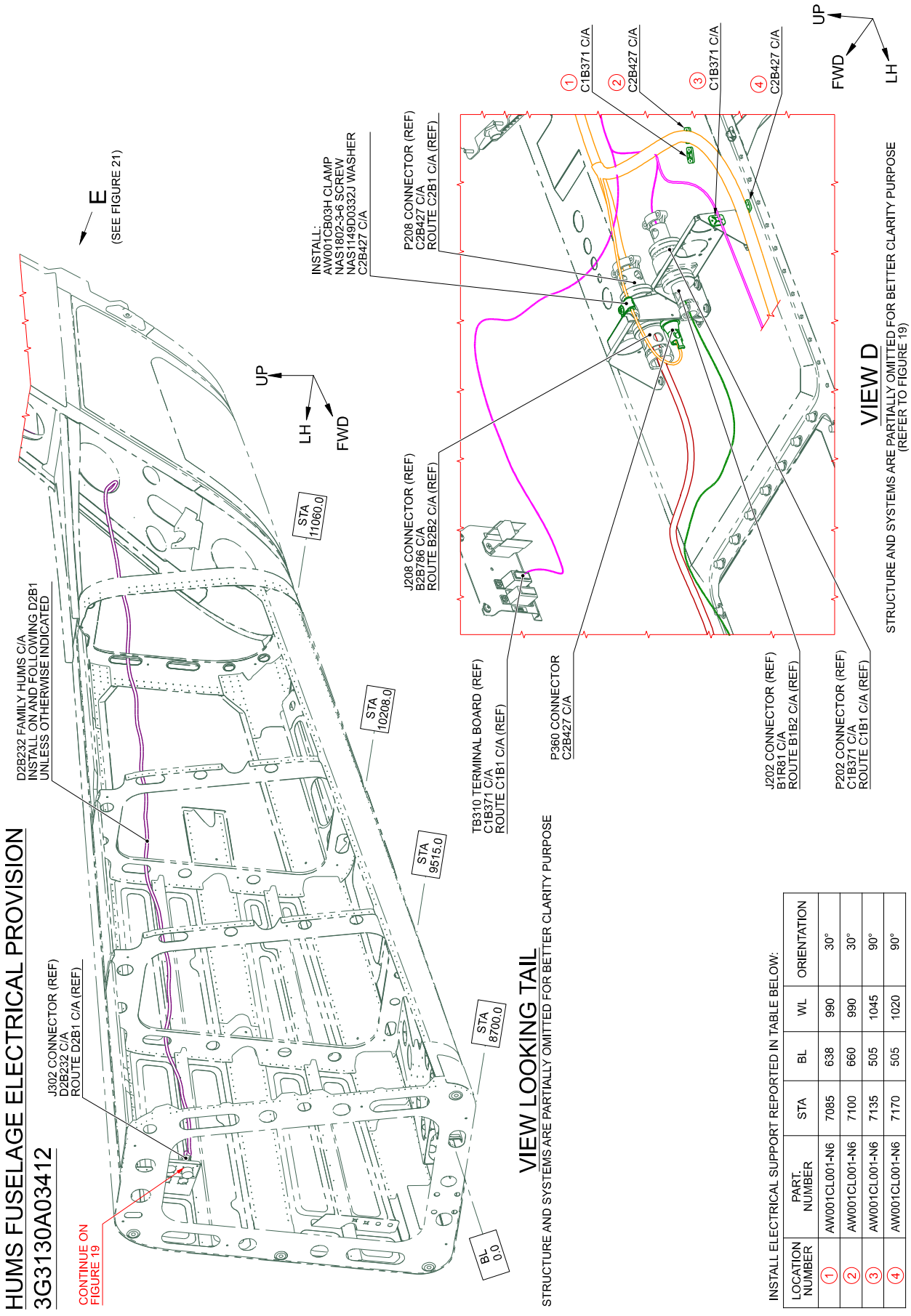

HUMS FUSELAGE ELECTRICAL PROVISION
3G3130A03412
J362 CONNECTOR
INSTALL:
M85049/95-12A-A FLANGE
NAS1802-04-7 SCREW (QTY 4)
NAS1149DN416J WASHER (QTY 4)
ED300J362 DECAL (QTY 2)
C2B427 C/A
CONTINUE ON FIGURE 20
P302 CONNECTOR (REF)
C2B427 C/A
ROUTE C2B1 C/A (REF)
3
A600P2 CONNECTOR
INSTALL:
NAS813-32 PROTECTIVE PLUG
C2B427 C/A
SEE DETAIL A FIGURE 15
A600P1 CONNECTOR
INSTALL:
NAS813-22 PROTECTIVE PLUG
C1B371 C/A
SEE DETAIL A FIGURE 15
SP3690 SP3691
C2B427 FAMILY HUMS C/A
2
FL13 FILTER
INSTALL:
3G3130L00251 FILTER
SP3591
C1B371 FAMILY HUMS C/A
STA 9700.0
C2B427 FAMILY HUMS C/A
INSTALL ON AND FOLLOWING C2B1
UNLESS OTHERWISE INDICATED
P212 CONNECTOR (REF)
C1B371 FAMILY HUMS C/A
ROUTE C1B1 C/A (REF)
P216 CONNECTOR (REF)
C2B427 FAMILY HUMS C/A
ROUTE C2B1 C/A (REF)
STA 6700.0
D
(SEE FIGURE 20)
C2B427 FAMILY HUMS C/A
INSTALL ON AND FOLLOWING C2B1
UNLESS OTHERWISE INDICATED
C1B371 FAMILY HUMS C/A
INSTALL ON AND FOLLOWING C1B1
UNLESS OTHERWISE INDICATED
UP
RH
FWD
1
INSTALL:
AW001CB02H CLAMP
C1B371 C/A
AW001CB10H CLAMP
C2B427 C/A
NAS1149D0332J WASHER
NAS1802-3-6 SCREW
2
VIEW REAR FUSELAGE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
CONTINUE ON FIGURE 18
INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:
LOCATION NUMBER | PART. NUMBER | STA | BL | WL | ORIENTATION
1 | A388A3E20C75 | 7144 | 290 | 1008 | 0°
2 | AW001CL510A-N6 | 7200 | 85 | 1200 | 0°
3 | AW001CL510B-N6 | 7200 | 85 | 1330 | 0°

Figure 19



INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:

LOCATION NUMBER	PART NUMBER	STA	BL	WL	ORIENTATION
①	AW001CL001-N6	7085	638	990	30°
②	AW001CL001-N6	7100	660	990	30°
③	AW001CL001-N6	7135	505	1045	90°
④	AW001CL001-N6	7170	505	1020	90°

Figure 20

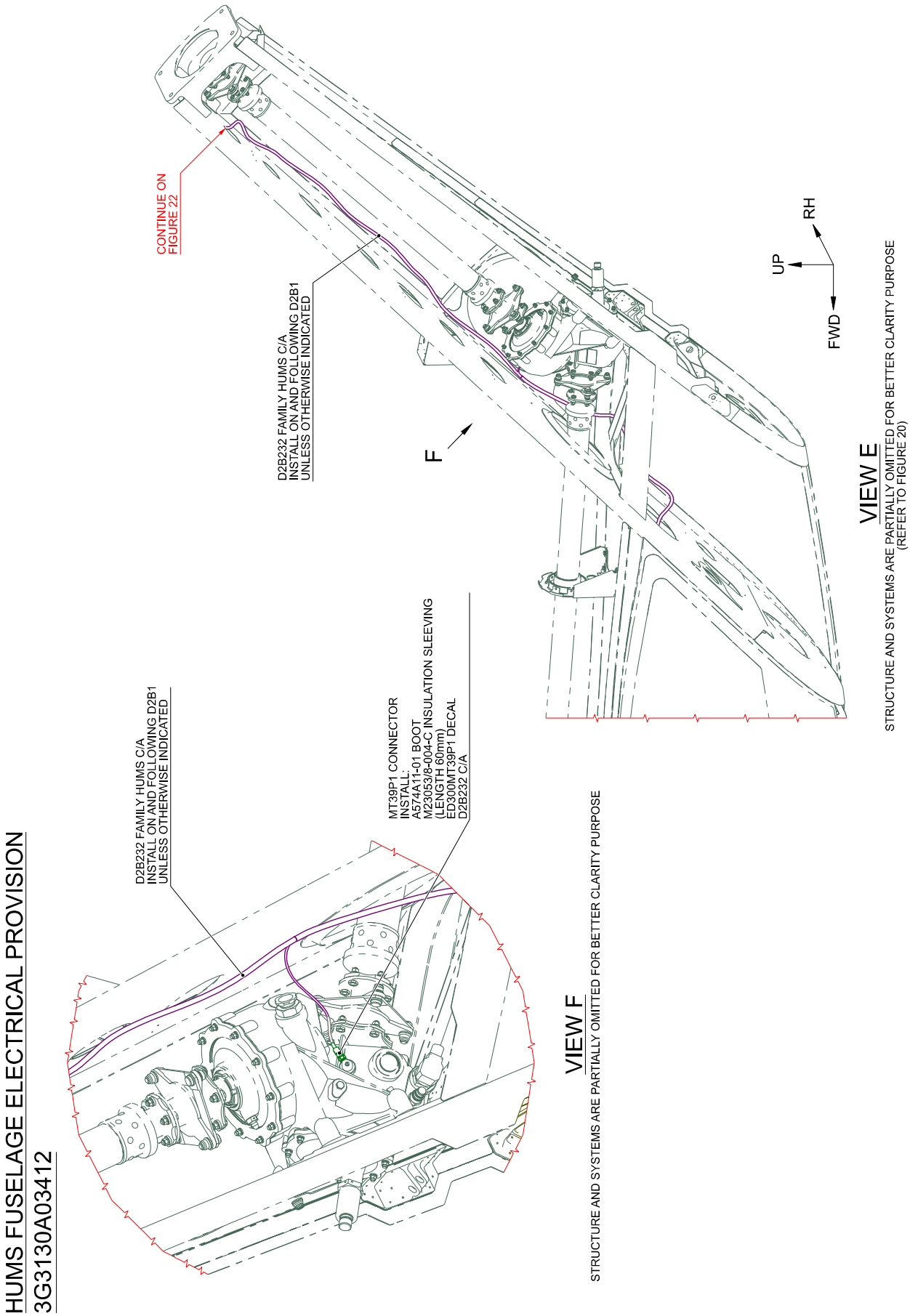

HUMS FUSELAGE ELECTRICAL PROVISION
3G3130A03412
CONTINUE ON FIGURE 22
D2B232 FAMILY HUMS C/A
INSTALL ON AND FOLLOWING D2B1
UNLESS OTHERWISE INDICATED
F
UP
RH
FWD
VIEW E
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 20)
D2B232 FAMILY HUMS C/A
INSTALL ON AND FOLLOWING D2B1
UNLESS OTHERWISE INDICATED
MT39P1 CONNECTOR
INSTALL:
A574A11-01 BOOT
M23053/8-004-C INSULATION SLEEVING
(LENGTH 60mm)
ED300MT39P1 DECAL
D2B232 C/A
VIEW F
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 21

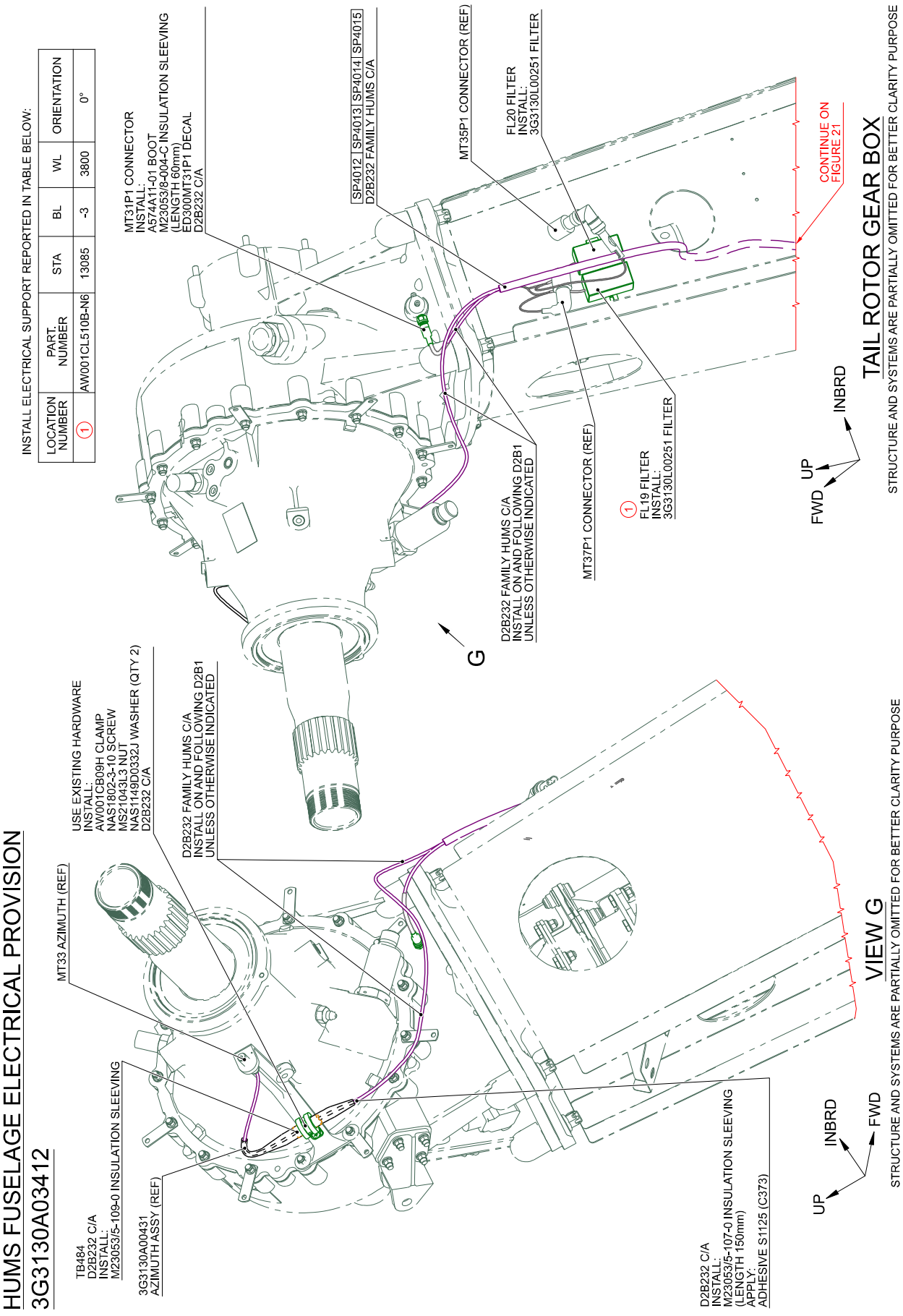

HUMS FUSELAGE ELECTRICAL PROVISION
3G3130A03412
INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:
LOCATION NUMBER | PART NUMBER | STA | BL | WL | ORIENTATION
1 | AW001CL510B-N6 | 13085 | -3 | 3800 | 0°
MT31P1 CONNECTOR INSTALL: A574A11-01 BOOT M23053/8-004-C INSULATION SLEEVING (LENGTH 60mm) ED300MT31P1 DECAL D2B232 C/A
SP4012 SP4013 SP4014 SP4015 D2B232 FAMILY HUMS C/A
MT35P1 CONNECTOR (REF)
FL20 FILTER INSTALL: 3G3130L00251 FILTER
CONTINUE ON FIGURE 21
D2B232 FAMILY HUMS C/A INSTALL ON AND FOLLOWING D2B1 UNLESS OTHERWISE INDICATED
MT37P1 CONNECTOR (REF)
1 FL19 FILTER INSTALL: 3G3130L00251 FILTER
G
UP
FWD
INBRD
TAIL ROTOR GEAR BOX
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
MT33 AZIMUTH (REF)
USE EXISTING HARDWARE INSTALL: AW001CB09H CLAMP NAS1802-3-10 SCREW MS21043L3 NUT NAS1149D0332J WASHER (QTY 2) D2B232 C/A
D2B232 FAMILY HUMS C/A INSTALL ON AND FOLLOWING D2B1 UNLESS OTHERWISE INDICATED
TB484 D2B232 C/A INSTALL: M23053/5-109-0 INSULATION SLEEVING
3G3130A00431 AZIMUTH ASSY (REF)
D2B232 C/A INSTALL: M23053/5-107-0 INSULATION SLEEVING (LENGTH 150mm) APPLY: ADHESIVE S1125 (C373)
UP
INBRD
FWD
VIEW G
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 22

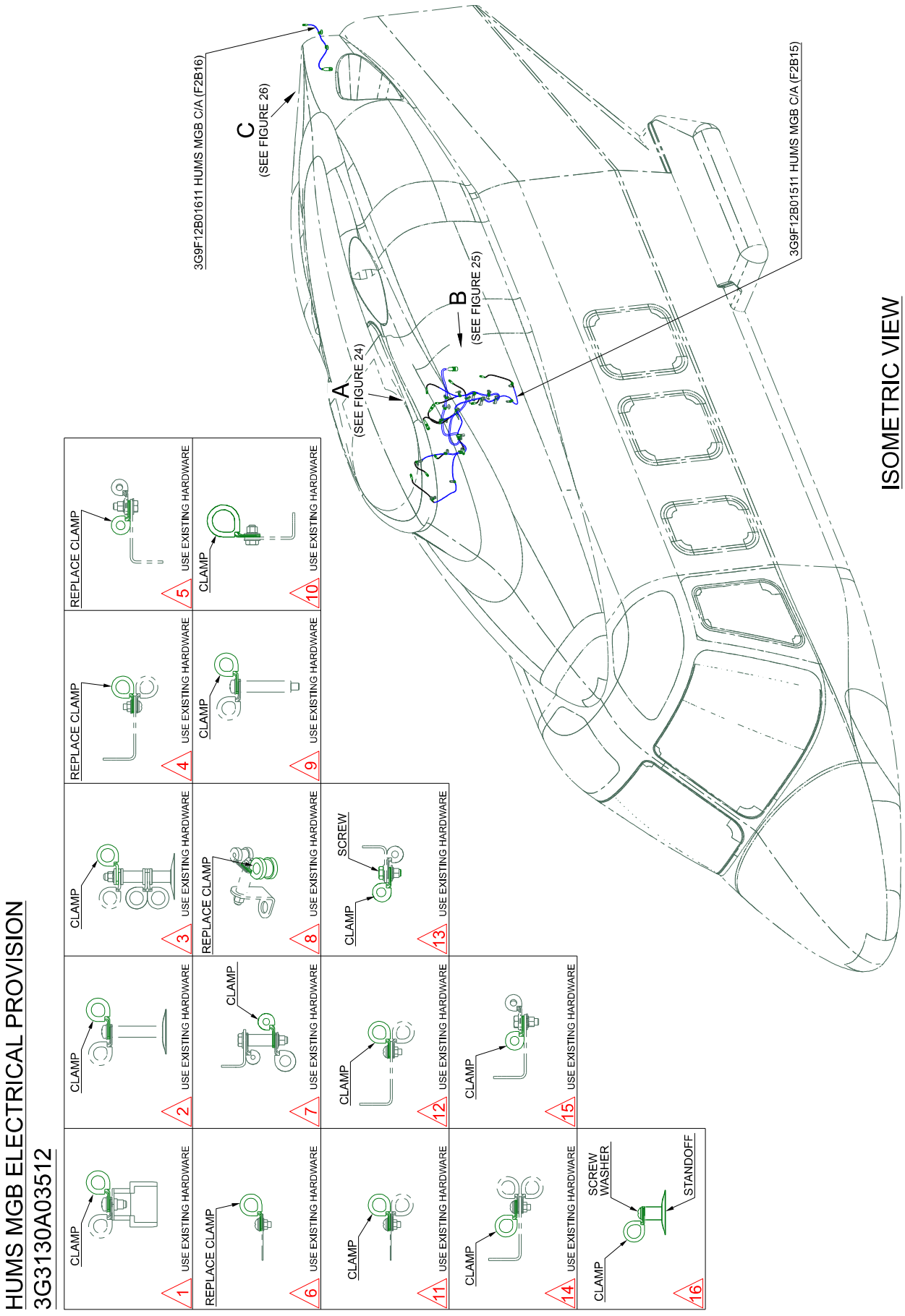

HUMS MGB ELECTRICAL PROVISION
3G3130A03512
CLAMP
USE EXISTING HARDWARE
REPLACE CLAMP
SCREW
WASHER
STANDOFF
3G9F12B01611 HUMS MGB C/A (F2B16)
3G9F12B01511 HUMS MGB C/A (F2B15)
A
(SEE FIGURE 24)
B
(SEE FIGURE 25)
C
(SEE FIGURE 26)
ISOMETRIC VIEW

Figure 23

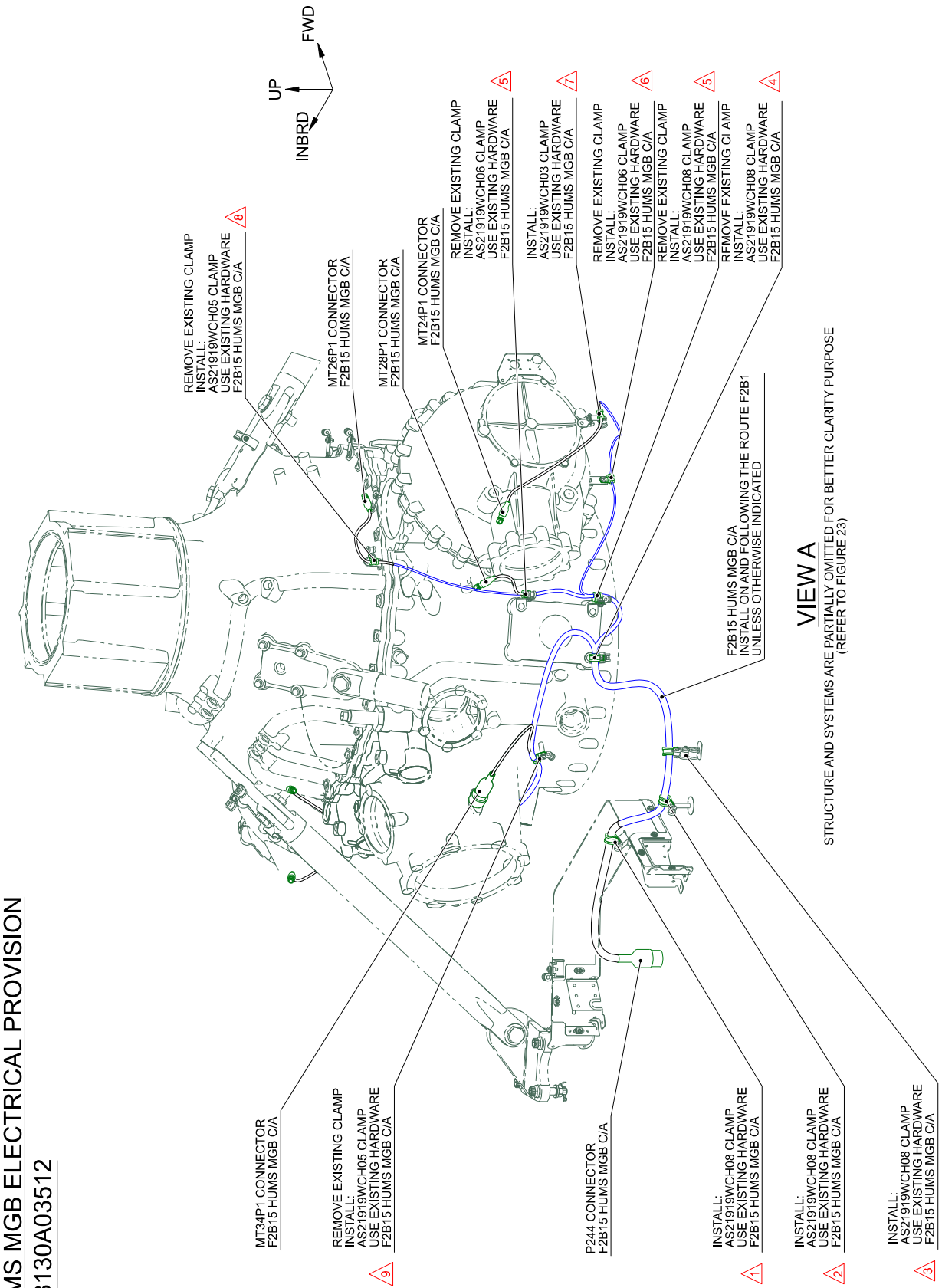

HUMS MGB ELECTRICAL PROVISION
3G3130A03512
FWD
UP
INBRD
VIEW A
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 23)
1 INSTALL: AS21919WCH08 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
2 INSTALL: AS21919WCH08 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
3 INSTALL: AS21919WCH08 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
4 REMOVE EXISTING CLAMP INSTALL: AS21919WCH08 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
5 REMOVE EXISTING CLAMP INSTALL: AS21919WCH08 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
6 REMOVE EXISTING CLAMP INSTALL: AS21919WCH06 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
7 REMOVE EXISTING CLAMP INSTALL: AS21919WCH03 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
8 REMOVE EXISTING CLAMP INSTALL: AS21919WCH05 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
9 REMOVE EXISTING CLAMP INSTALL: AS21919WCH05 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
F2B15 HUMS MGB C/A INSTALL ON AND FOLLOWING THE ROUTE F2B1 UNLESS OTHERWISE INDICATED
MT24P1 CONNECTOR F2B15 HUMS MGB C/A
MT28P1 CONNECTOR F2B15 HUMS MGB C/A
MT26P1 CONNECTOR F2B15 HUMS MGB C/A
MT34P1 CONNECTOR F2B15 HUMS MGB C/A
P244 CONNECTOR F2B15 HUMS MGB C/A

Figure 24

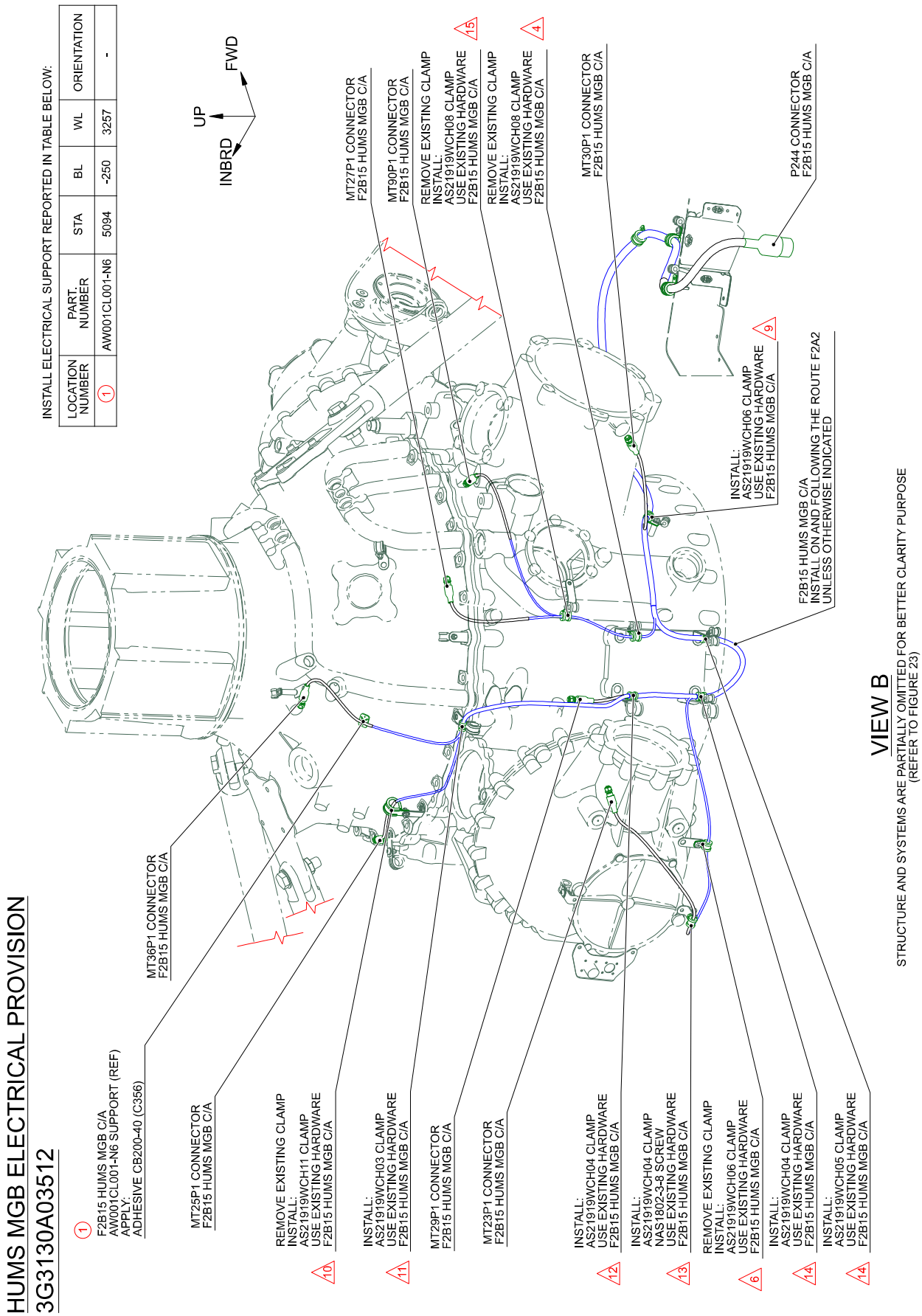
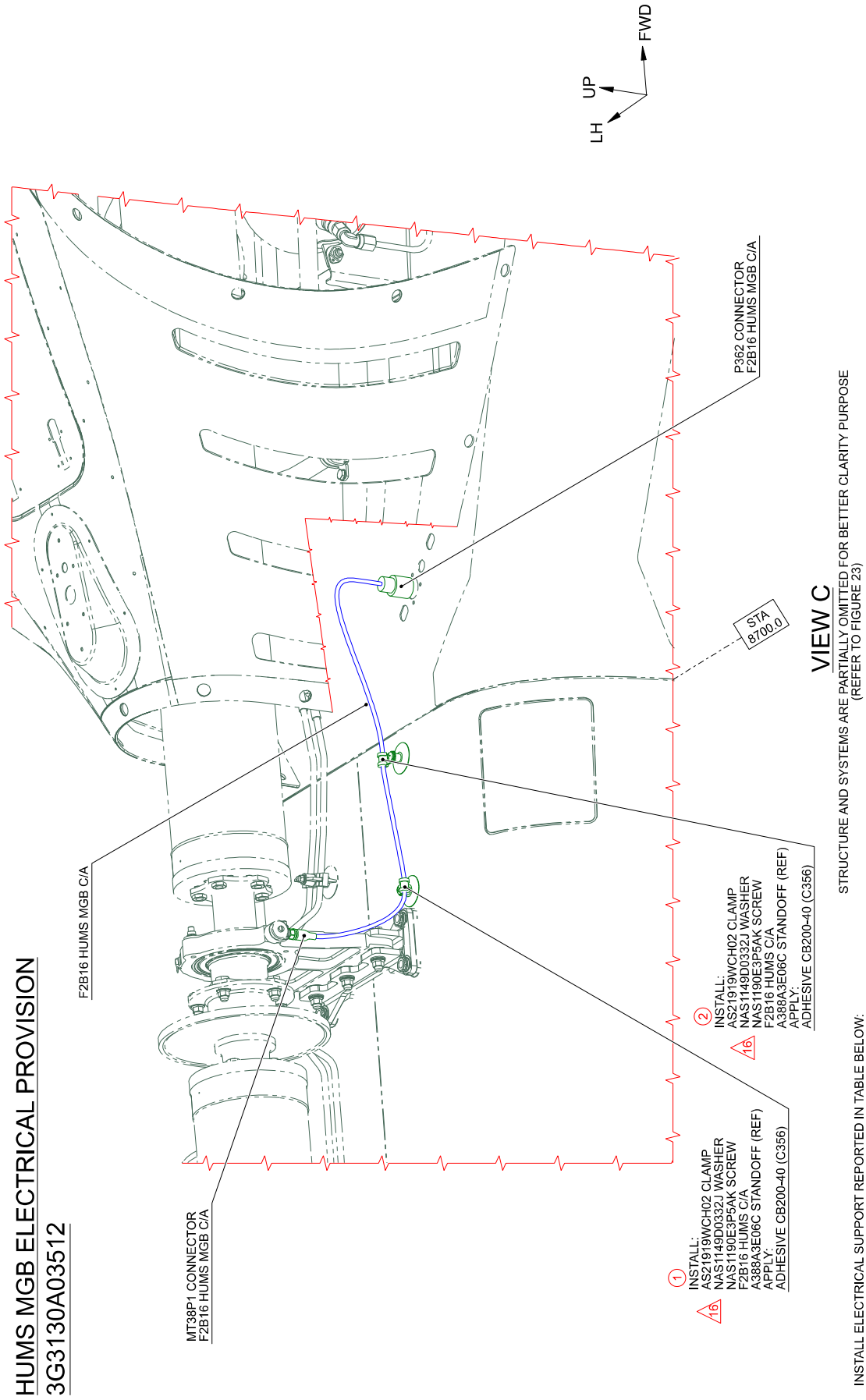

HUMS MGB ELECTRICAL PROVISION
3G3130A03512
INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:
LOCATION NUMBER
PART NUMBER
STA
BL
WL
ORIENTATION
1
AW001CL001-N6
5094
-250
3257
-
UP
FWD
INBRD
VIEW B
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 23)
1 F2B15 HUMS MGB C/A AW001CL001-N6 SUPPORT (REF) APPLY: ADHESIVE CB200-40 (C356)
MT36P1 CONNECTOR F2B15 HUMS MGB C/A
MT25P1 CONNECTOR F2B15 HUMS MGB C/A
10 REMOVE EXISTING CLAMP INSTALL: AS21919WCH11 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
11 INSTALL: AS21919WCH03 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
MT29P1 CONNECTOR F2B15 HUMS MGB C/A
MT23P1 CONNECTOR F2B15 HUMS MGB C/A
12 INSTALL: AS21919WCH04 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
13 INSTALL: AS21919WCH04 CLAMP NAS1802-3-8 SCREW USE EXISTING HARDWARE F2B15 HUMS MGB C/A
6 REMOVE EXISTING CLAMP INSTALL: AS21919WCH06 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
14 INSTALL: AS21919WCH04 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
14 INSTALL: AS21919WCH05 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
MT27P1 CONNECTOR F2B15 HUMS MGB C/A
MT90P1 CONNECTOR F2B15 HUMS MGB C/A
15 REMOVE EXISTING CLAMP INSTALL: AS21919WCH08 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
4 REMOVE EXISTING CLAMP INSTALL: AS21919WCH08 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
MT30P1 CONNECTOR F2B15 HUMS MGB C/A
P244 CONNECTOR F2B15 HUMS MGB C/A
9 INSTALL: AS21919WCH06 CLAMP USE EXISTING HARDWARE F2B15 HUMS MGB C/A
F2B15 HUMS MGB C/A INSTALL ON AND FOLLOWING THE ROUTE F2A2 UNLESS OTHERWISE INDICATED

Figure 25



INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:

LOCATION NUMBER	PART. NUMBER	STA	BL	WL	ORIENTATION
1	A388A3E06C	8870	85	2664	-
2	A388A3E06C	8730	85	2669	-

Figure 26

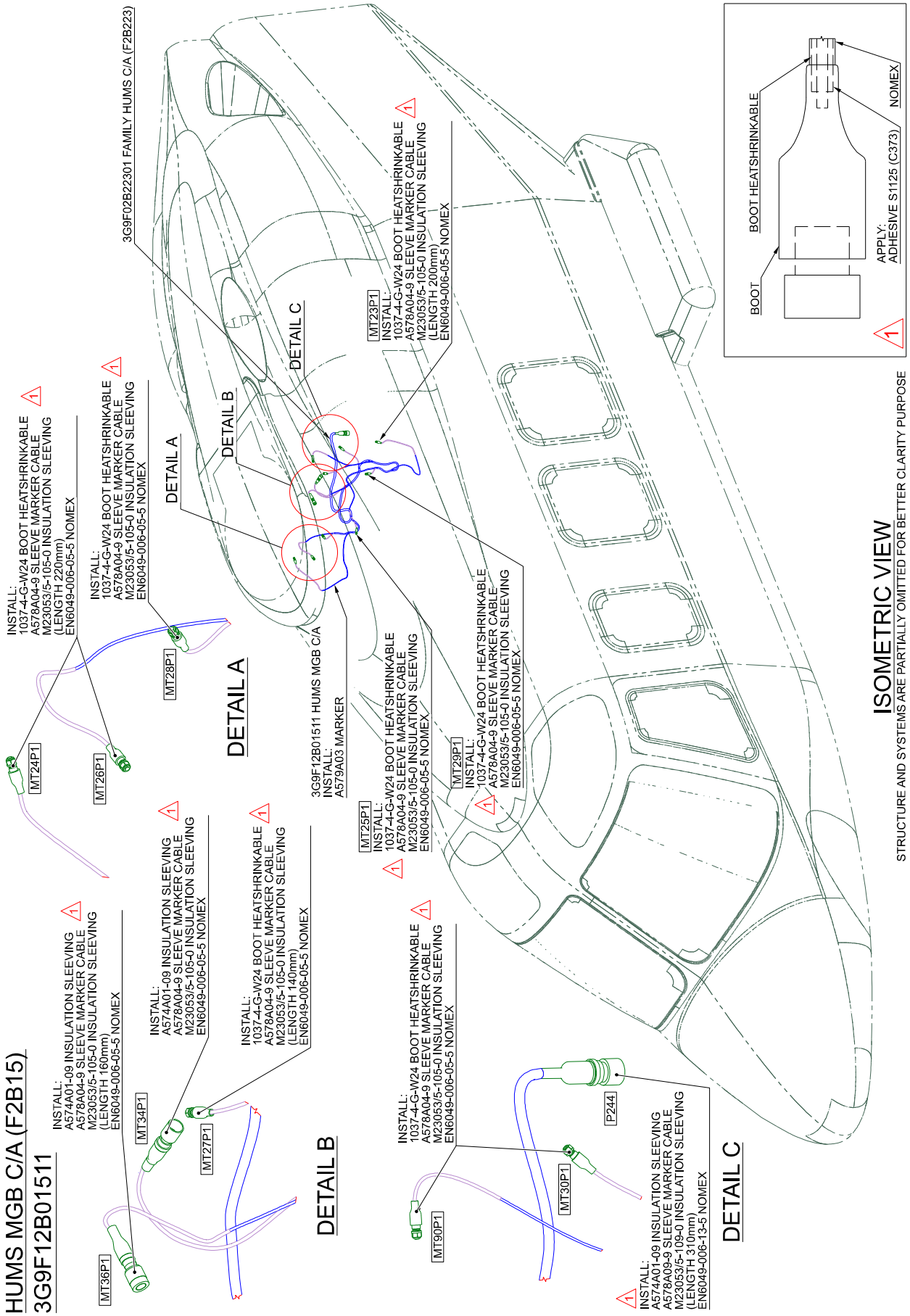

HUMS MGB C/A (F2B15)
3G9F12B01511
3G9F02B22301 FAMILY HUMS C/A (F2B223)
3G9F12B01511 HUMS MGB C/A
INSTALL:
A579A03 MARKER
DETAIL A
DETAIL B
DETAIL C
ISOMETRIC VIEW
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
BOOT HEATSHRINKABLE
BOOT
NOMEX
APPLY:
ADHESIVE S1125 (C373)
INSTALL:
1037-4-G-W24 BOOT HEATSHRINKABLE
A578A04-9 SLEEVE MARKER CABLE
M23053/5-105-0 INSULATION SLEEVING
(LENGTH 220mm)
EN6049-006-05-5 NOMEX
INSTALL:
1037-4-G-W24 BOOT HEATSHRINKABLE
A578A04-9 SLEEVE MARKER CABLE
M23053/5-105-0 INSULATION SLEEVING
(LENGTH 200mm)
EN6049-006-05-5 NOMEX
INSTALL:
A574A01-09 INSULATION SLEEVING
A578A04-9 SLEEVE MARKER CABLE
M23053/5-105-0 INSULATION SLEEVING
(LENGTH 160mm)
EN6049-006-05-5 NOMEX
INSTALL:
A574A01-09 INSULATION SLEEVING
A578A04-9 SLEEVE MARKER CABLE
M23053/5-105-0 INSULATION SLEEVING
EN6049-006-05-5 NOMEX
INSTALL:
1037-4-G-W24 BOOT HEATSHRINKABLE
A578A04-9 SLEEVE MARKER CABLE
M23053/5-105-0 INSULATION SLEEVING
(LENGTH 140mm)
EN6049-006-05-5 NOMEX
INSTALL:
1037-4-G-W24 BOOT HEATSHRINKABLE
A578A04-9 SLEEVE MARKER CABLE
M23053/5-105-0 INSULATION SLEEVING
EN6049-006-05-5 NOMEX
INSTALL:
1037-4-G-W24 BOOT HEATSHRINKABLE
A578A04-9 SLEEVE MARKER CABLE
M23053/5-105-0 INSULATION SLEEVING
EN6049-006-05-5 NOMEX
INSTALL:
1037-4-G-W24 BOOT HEATSHRINKABLE
A578A04-9 SLEEVE MARKER CABLE
M23053/5-105-0 INSULATION SLEEVING
EN6049-006-05-5 NOMEX
INSTALL:
A574A01-09 INSULATION SLEEVING
A578A09-9 SLEEVE MARKER CABLE
M23053/5-109-0 INSULATION SLEEVING
(LENGTH 310mm)
EN6049-006-13-5 NOMEX
MT23P1
MT24P1
MT25P1
MT26P1
MT27P1
MT28P1
MT29P1
MT30P1
MT34P1
MT36P1
MT90P1
P244

Figure 27

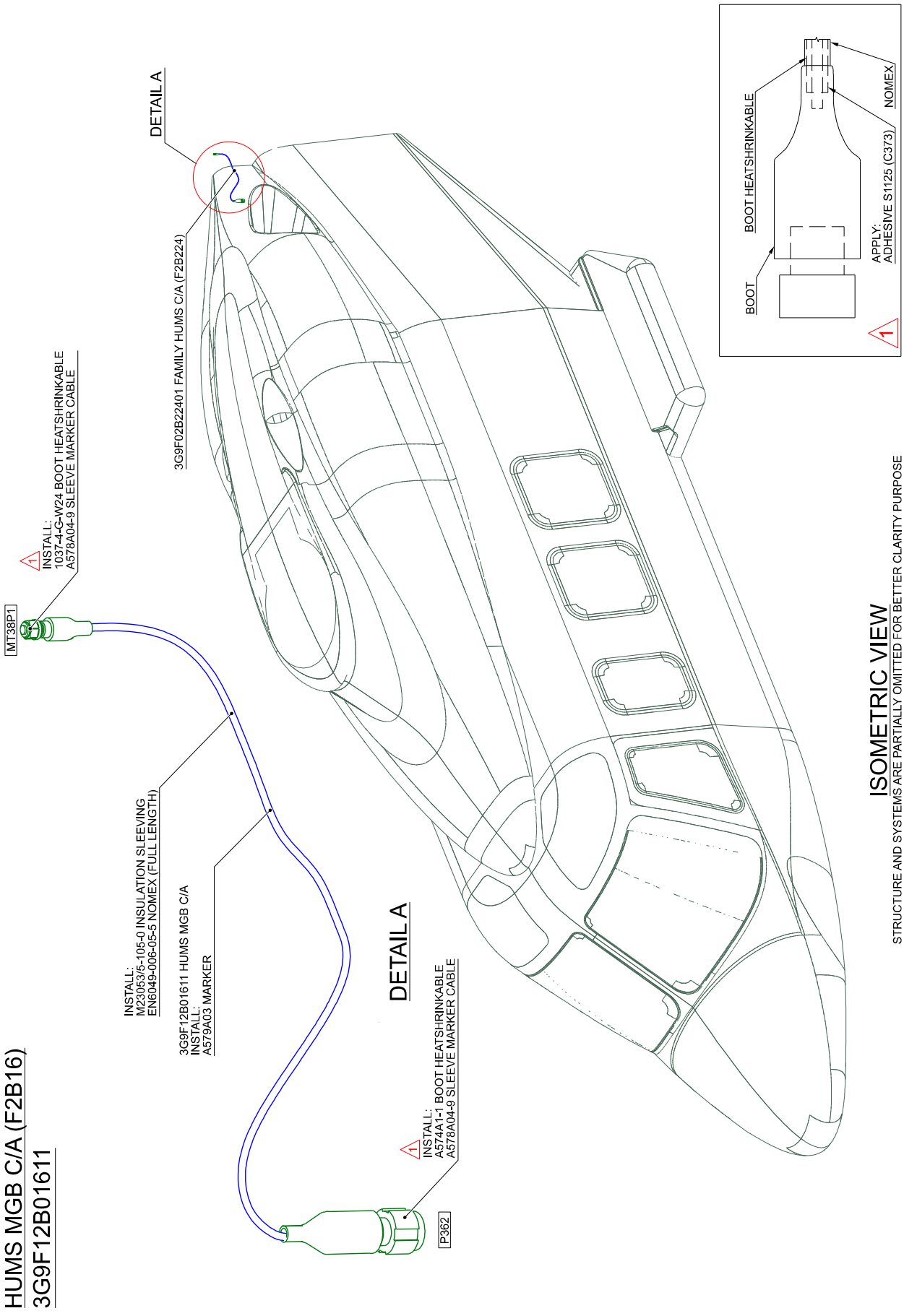

HUMS MGB C/A (F2B16)
3G9F12B01611
ISOMETRIC VIEW
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
DETAIL A
3G9F02B22401 FAMILY HUMS C/A (F2B224)
MT38P1
1 INSTALL:
1037-4-G-W24 BOOT HEATSHRINKABLE
A578A04-9 SLEEVE MARKER CABLE
INSTALL:
M23053/5-105-0 INSULATION SLEEVING
EN6049-006-05-5 NOMEX (FULL LENGTH)
3G9F12B01611 HUMS MGB C/A
INSTALL:
A579A03 MARKER
DETAIL A
1 INSTALL:
A574A1-1 BOOT HEATSHRINKABLE
A578A04-9 SLEEVE MARKER CABLE
P362
BOOT HEATSHRINKABLE
BOOT
APPLY:
ADHESIVE S1125 (C373)
NOMEX
1

Figure 28

FAMILY HUMS CAMERA SUPPORT INSTALLATION
3G5311A35411

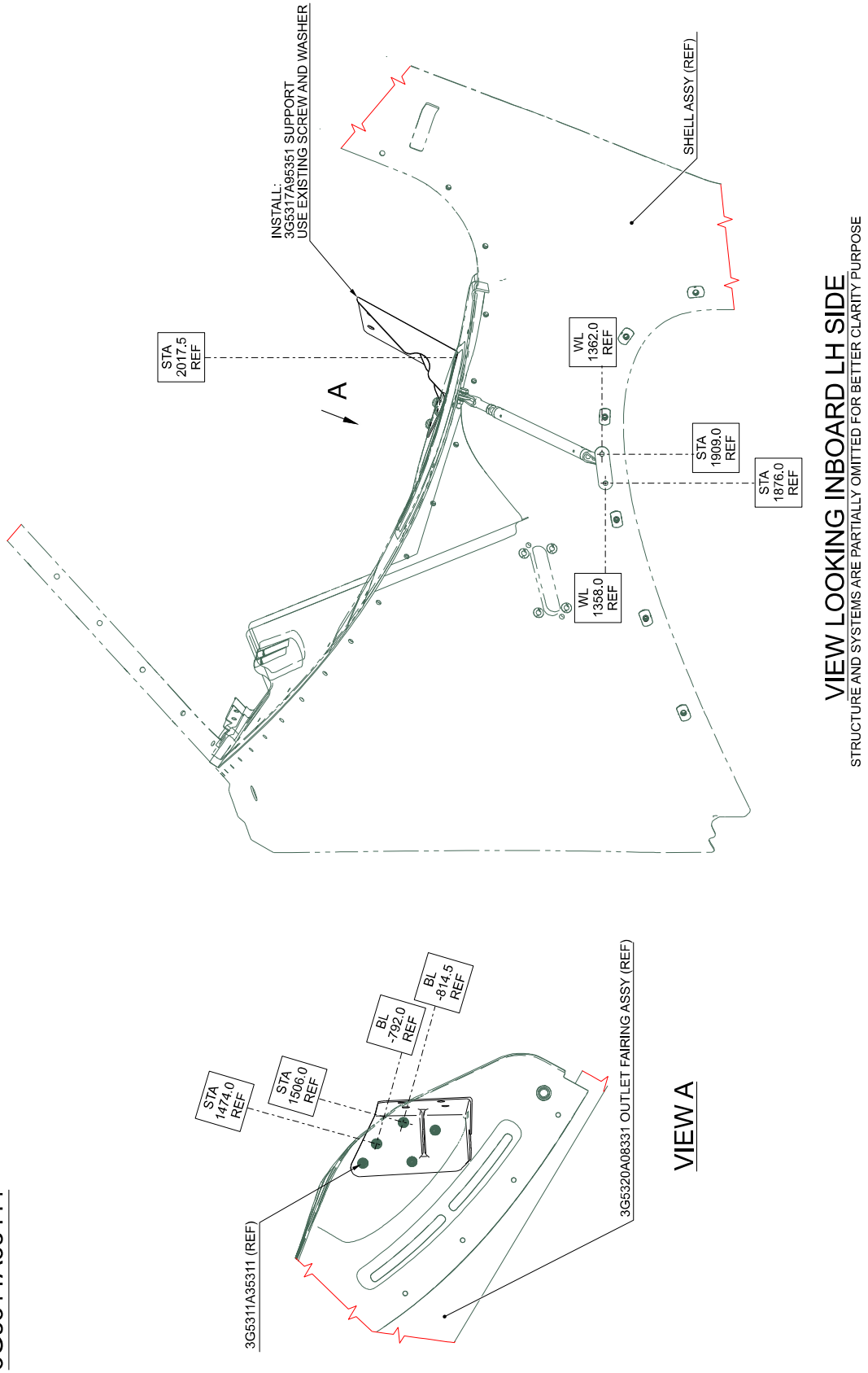


Figure 29

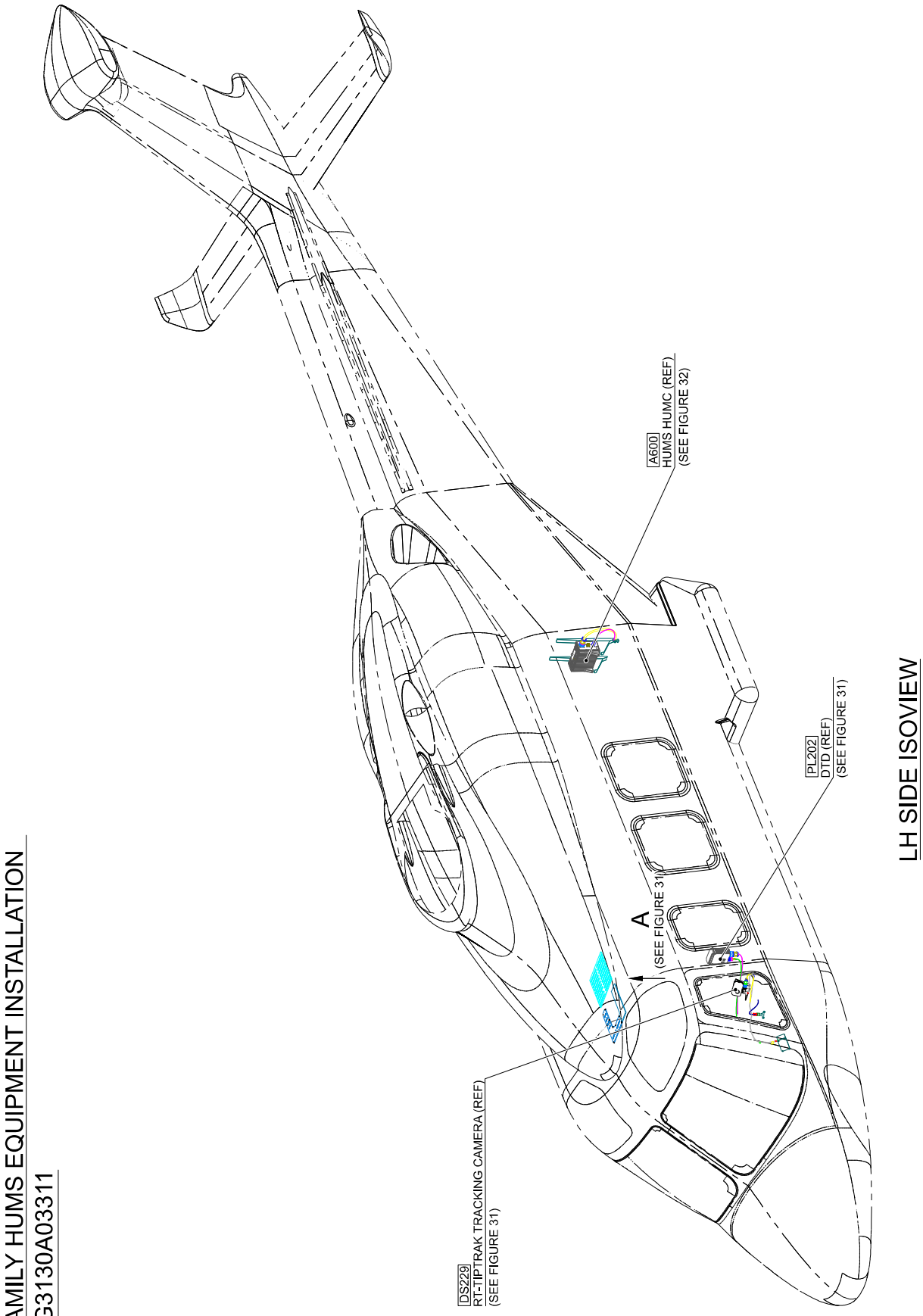
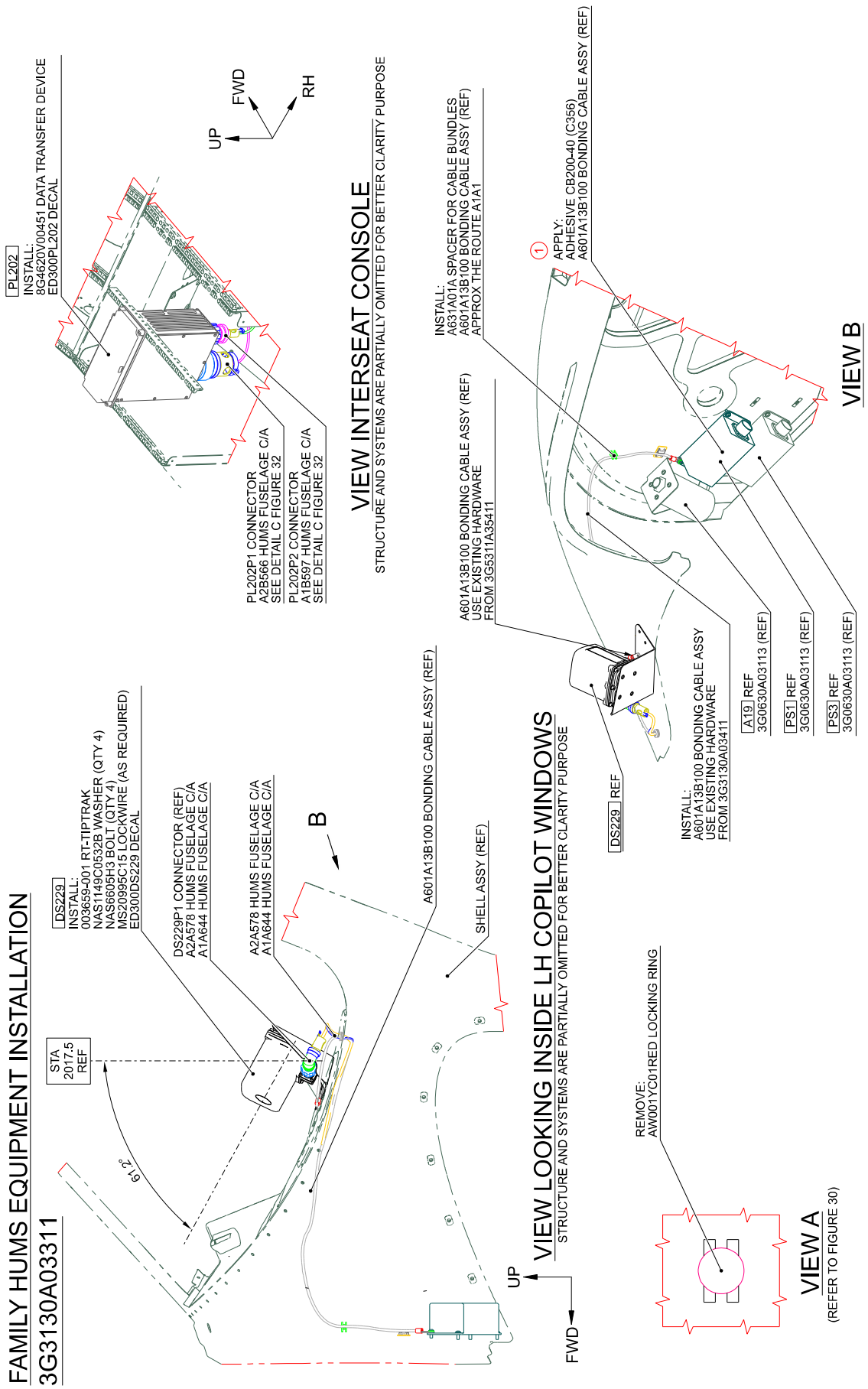

FAMILY HUMS EQUIPMENT INSTALLATION
3G3130A03311
A600
HUMS HUMC (REF)
(SEE FIGURE 32)
PL202
DTD (REF)
(SEE FIGURE 31)
A
(SEE FIGURE 31)
DS229
RT-TIPTRAK TRACKING CAMERA (REF)
(SEE FIGURE 31)
LH SIDE ISOVIEW

Figure 30



INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:

LOCATION NUMBER	PART NUMBER	STA	BL	WL	ORIENTATION
1	AW001CL008-CM	1512	-682	1396	-

Figure 31

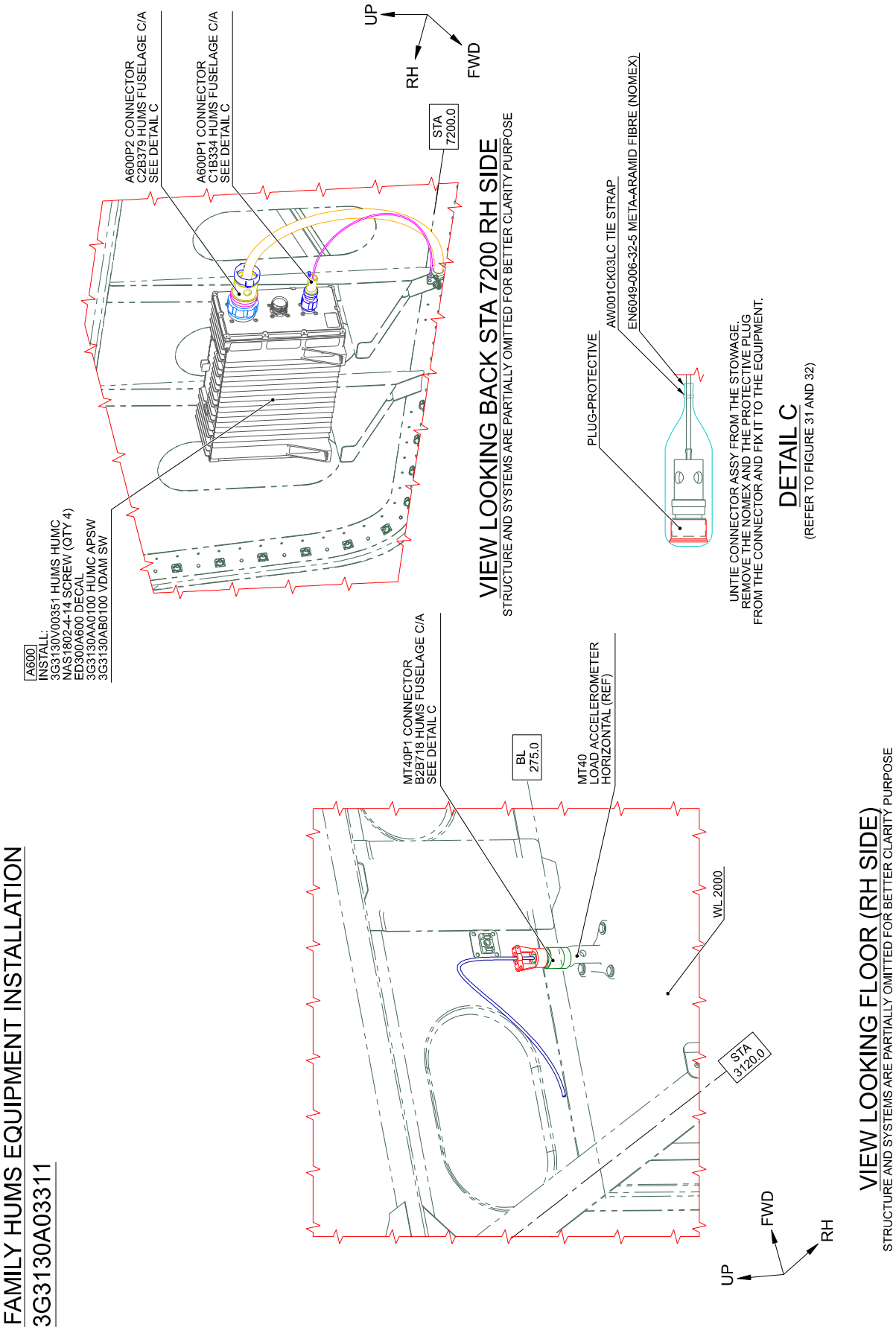

FAMILY HUMS EQUIPMENT INSTALLATION
3G3130A03311
A600
INSTALL:
3G3130V00351 HUMS HUMC
NAS1802-4-14 SCREW (QTY 4)
ED300A600 DECAL
3G3130AA0100 HUMC APSW
3G3130AB0100 VDAM SW
A600P2 CONNECTOR
C2B379 HUMS FUSELAGE C/A
SEE DETAIL C
A600P1 CONNECTOR
C1B334 HUMS FUSELAGE C/A
SEE DETAIL C
UP
RH
FWD
STA
7200.0
VIEW LOOKING BACK STA 7200 RH SIDE
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
PLUG-PROTECTIVE
AW001CK03LC TIE STRAP
EN6049-006-32-5 META-ARAMID FIBRE (NOMEX)
UNTIE CONNECTOR ASSY FROM THE STOWAGE,
REMOVE THE NOMEX AND THE PROTECTIVE PLUG
FROM THE CONNECTOR AND FIX IT TO THE EQUIPMENT.
DETAIL C
(REFER TO FIGURE 31 AND 32)
MT40P1 CONNECTOR
B2B718 HUMS FUSELAGE C/A
SEE DETAIL C
BL
275.0
MT40
LOAD ACCELEROMETER
HORIZONTAL (REF)
WL 2000
STA
3120.0
UP
FWD
RH
VIEW LOOKING FLOOR (RH SIDE)
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 32

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A1B670	P111	25	M39029/58-360	-
A1B670	P102	24	M39029/58-360	-
A1B670	PL202P2	1	M39029/56-348	-
A1B670	PL202P2	4	M39029/56-348	-
A1B670	PL202P2	2	M39029/56-348	-
A1B670	PL202P2	17	M39029/56-348	-
A1B670	TB140	F	A523A-A05	-
A1B670	PL202P2	16	M39029/56-348	-
A1B670	TB136/2	F	A523A-A05	-
A1B670	P102	3	M39029/58-360	-
A1B670	P111	15	M39029/58-360	-
A1B670	TB132P1	B	M39029/56-351	-
B1R81	J102	24	M39029/56-348	-
B1R81	J102	m	M39029/56-351	-
B1R81	J102	3	M39029/56-348	-
B1R81	J102	v	M39029/58-363	-
B1R82	PL1P10	A	M39029/58-363	-
B1R82	J212	V	M39029/56-351	-
C1B371	P202	m	M39029/58-363	-
C1B371	P212	V	M39029/58-363	-
C1B371	A600P1	A	M39029/56-352	-
C1B371	A600P1	B	M39029/56-352	-
C1B371	Tb310	B	A523A-A05	-

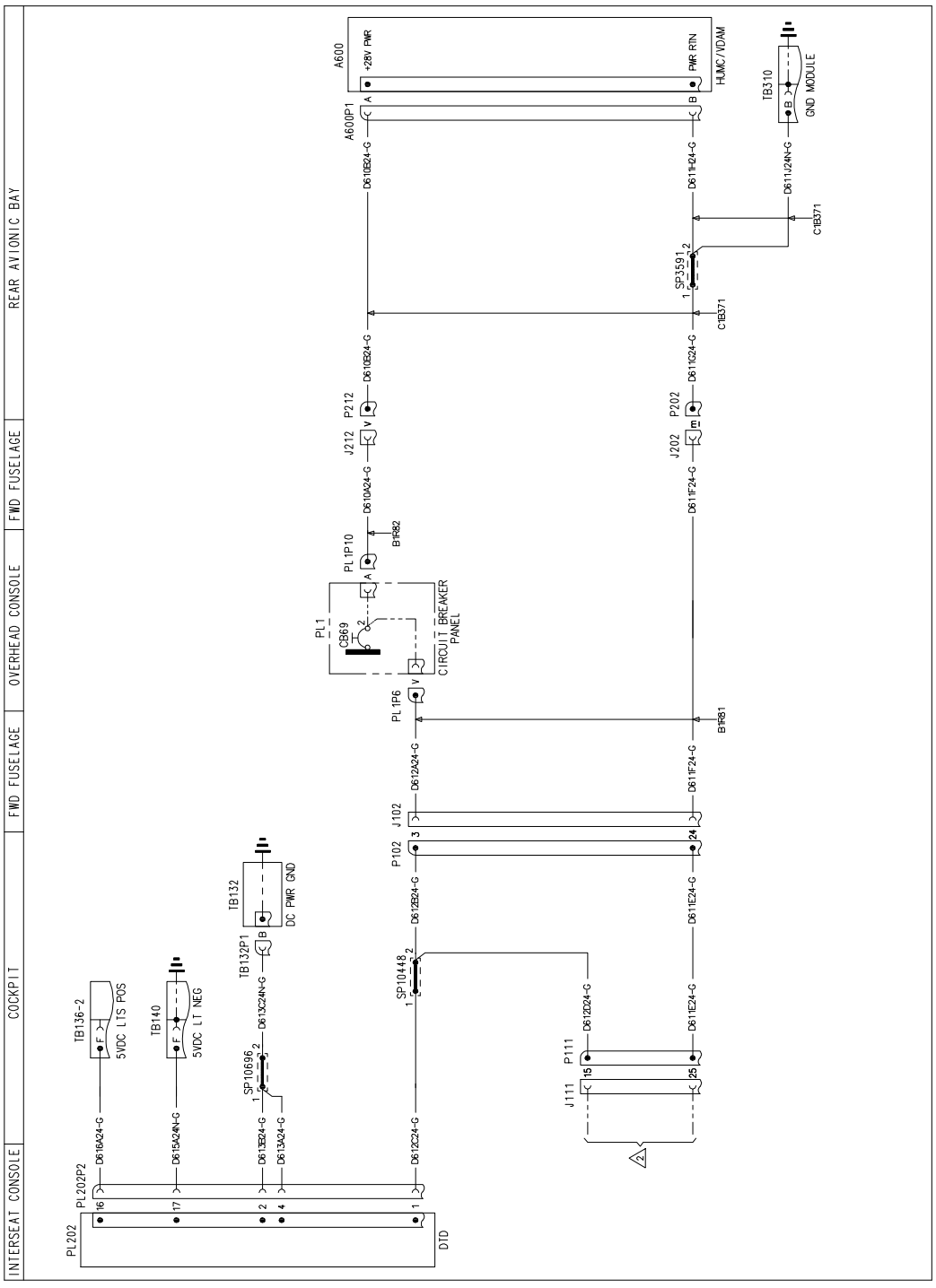
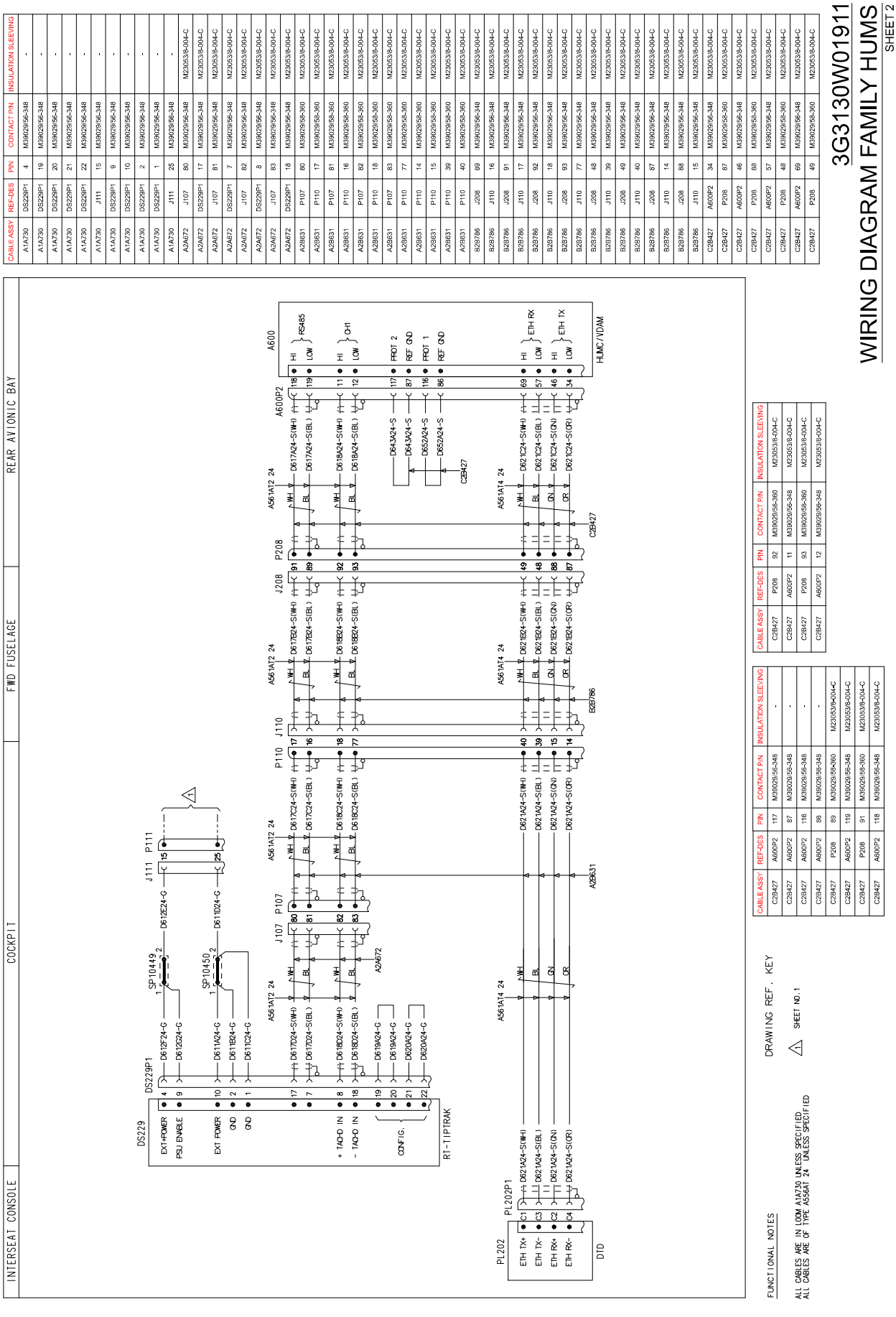


Figure 33

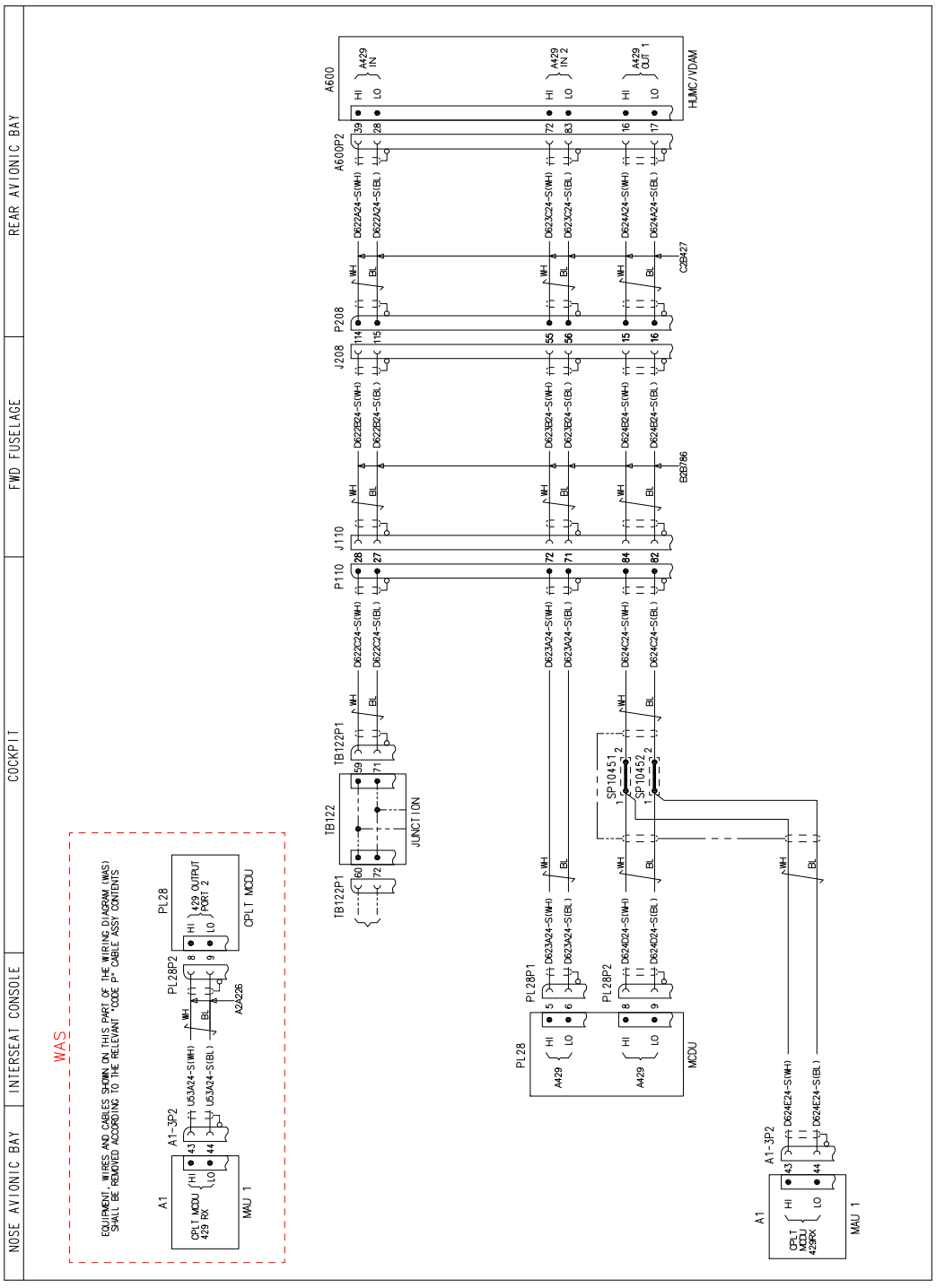


CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A1A730	DS229P1	4	M39029/56-348	-
A1A730	DS229P1	19	M39029/56-348	-
A1A730	DS229P1	20	M39029/56-348	-
A1A730	DS229P1	21	M39029/56-348	-
A1A730	DS229P1	22	M39029/56-348	-
A1A730	J111	15	M39029/56-348	-
A1A730	DS229P1	9	M39029/56-348	-
A1A730	DS229P1	10	M39029/56-348	-
A1A730	DS229P1	7	M39029/56-348	-
A1A730	DS229P1	1	M39029/56-348	-
A1A730	J111	25	M39029/56-348	-
A2A672	J107	80	M39029/56-348	M23053/6-004-C
A2A672	DS229P1	17	M39029/56-348	M23053/6-004-C
A2A672	J107	81	M39029/56-348	M23053/6-004-C
A2A672	DS229P1	7	M39029/56-348	M23053/6-004-C
A2A672	J107	82	M39029/56-348	M23053/6-004-C
A2A672	DS229P1	8	M39029/56-348	M23053/6-004-C
A2A672	J107	83	M39029/56-348	M23053/6-004-C
A2A672	DS229P1	18	M39029/56-348	M23053/6-004-C
A2B631	P107	80	M39029/58-360	M23053/6-004-C
A2B631	P110	17	M39029/58-360	M23053/6-004-C
A2B631	P107	81	M39029/58-360	M23053/6-004-C
A2B631	P110	16	M39029/58-360	M23053/6-004-C
A2B631	P107	82	M39029/58-360	M23053/6-004-C
A2B631	P110	18	M39029/58-360	M23053/6-004-C
A2B631	P107	83	M39029/58-360	M23053/6-004-C
A2B631	P110	77	M39029/58-360	M23053/6-004-C
A2B631	P110	14	M39029/58-360	M23053/6-004-C
A2B631	P110	15	M39029/58-360	M23053/6-004-C
A2B631	P110	39	M39029/58-360	M23053/6-004-C
A2B631	P110	40	M39029/58-360	M23053/6-004-C
B2B786	J208	69	M39029/56-348	M23053/6-004-C
B2B786	J110	16	M39029/56-348	M23053/6-004-C
B2B786	J208	91	M39029/56-348	M23053/6-004-C
B2B786	J110	17	M39029/56-348	M23053/6-004-C
B2B786	J208	92	M39029/56-348	M23053/6-004-C
B2B786	J110	18	M39029/56-348	M23053/6-004-C
B2B786	J208	93	M39029/56-348	M23053/6-004-C
B2B786	J110	77	M39029/56-348	M23053/6-004-C
B2B786	J208	48	M39029/56-348	M23053/6-004-C
B2B786	J110	39	M39029/56-348	M23053/6-004-C
B2B786	J208	49	M39029/56-348	M23053/6-004-C
B2B786	J110	40	M39029/56-348	M23053/6-004-C
B2B786	J208	87	M39029/56-348	M23053/6-004-C
B2B786	J110	14	M39029/56-348	M23053/6-004-C
B2B786	J208	88	M39029/56-348	M23053/6-004-C
B2B786	J110	15	M39029/56-348	M23053/6-004-C
C2B427	A600P2	34	M39029/56-348	M23053/6-004-C
C2B427	P208	87	M39029/58-360	M23053/6-004-C
C2B427	A600P2	46	M39029/56-348	M23053/6-004-C
C2B427	P208	88	M39029/58-360	M23053/6-004-C
C2B427	A600P2	57	M39029/56-348	M23053/6-004-C
C2B427	P208	48	M39029/58-360	M23053/6-004-C
C2B427	A600P2	69	M39029/56-348	M23053/6-004-C
C2B427	P208	49	M39029/58-360	M23053/6-004-C

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
C2B427	A600P2	117	M39029/56-348	-
C2B427	A600P2	87	M39029/56-348	-
C2B427	A600P2	116	M39029/56-348	-
C2B427	A600P2	86	M39029/56-348	-
C2B427	P208	89	M39029/58-360	M23053/6-004-C
C2B427	A600P2	119	M39029/56-348	M23053/6-004-C
C2B427	P208	91	M39029/58-360	M23053/6-004-C
C2B427	A600P2	118	M39029/56-348	M23053/6-004-C

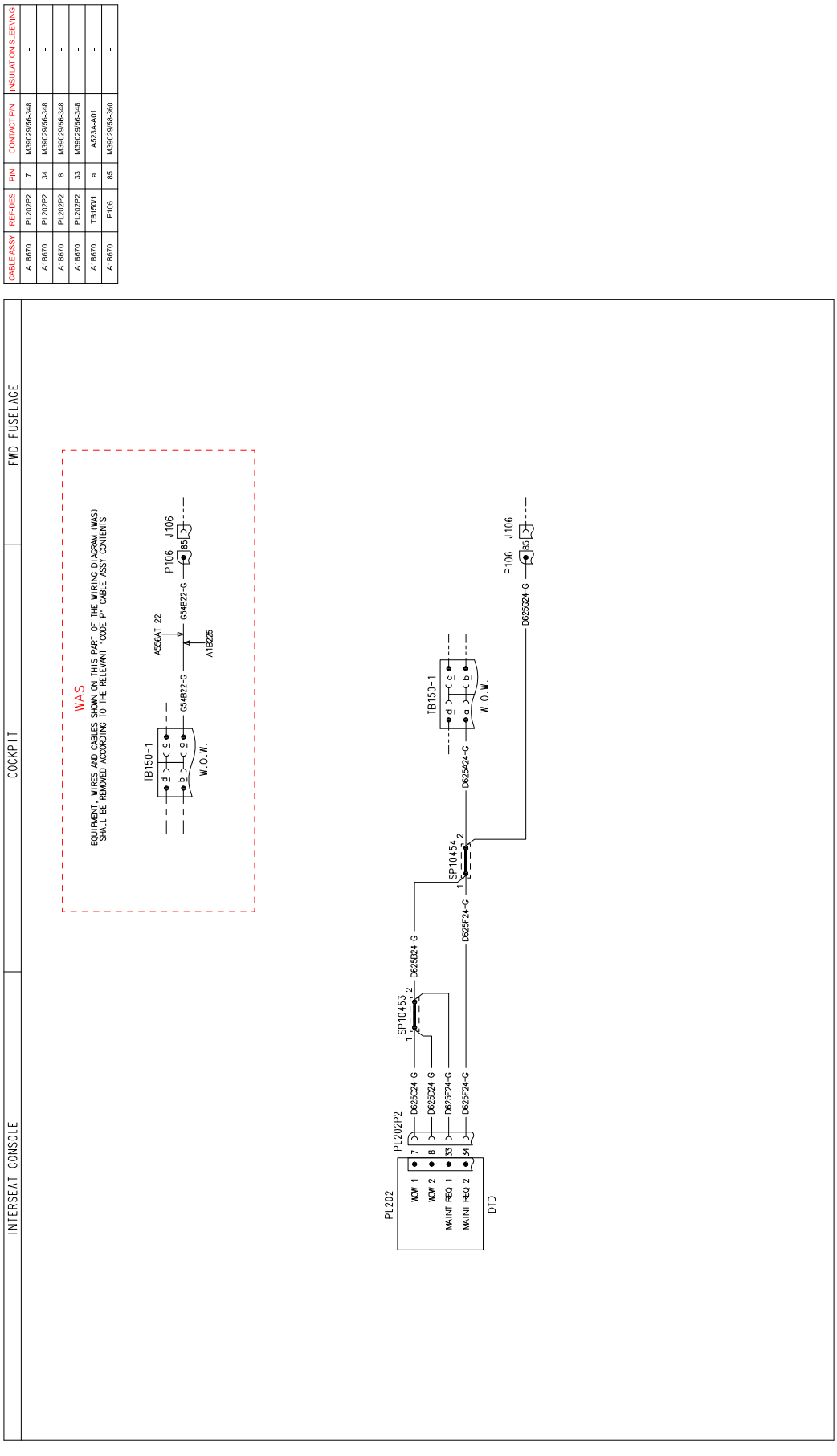
CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
C2B427	P208	92	M39029/58-360	M23053/6-004-C
C2B427	A600P2	11	M39029/56-348	M23053/6-004-C
C2B427	P208	93	M39029/58-360	M23053/6-004-C
C2B427	A600P2	12	M39029/56-348	M23053/6-004-C

Figure 34



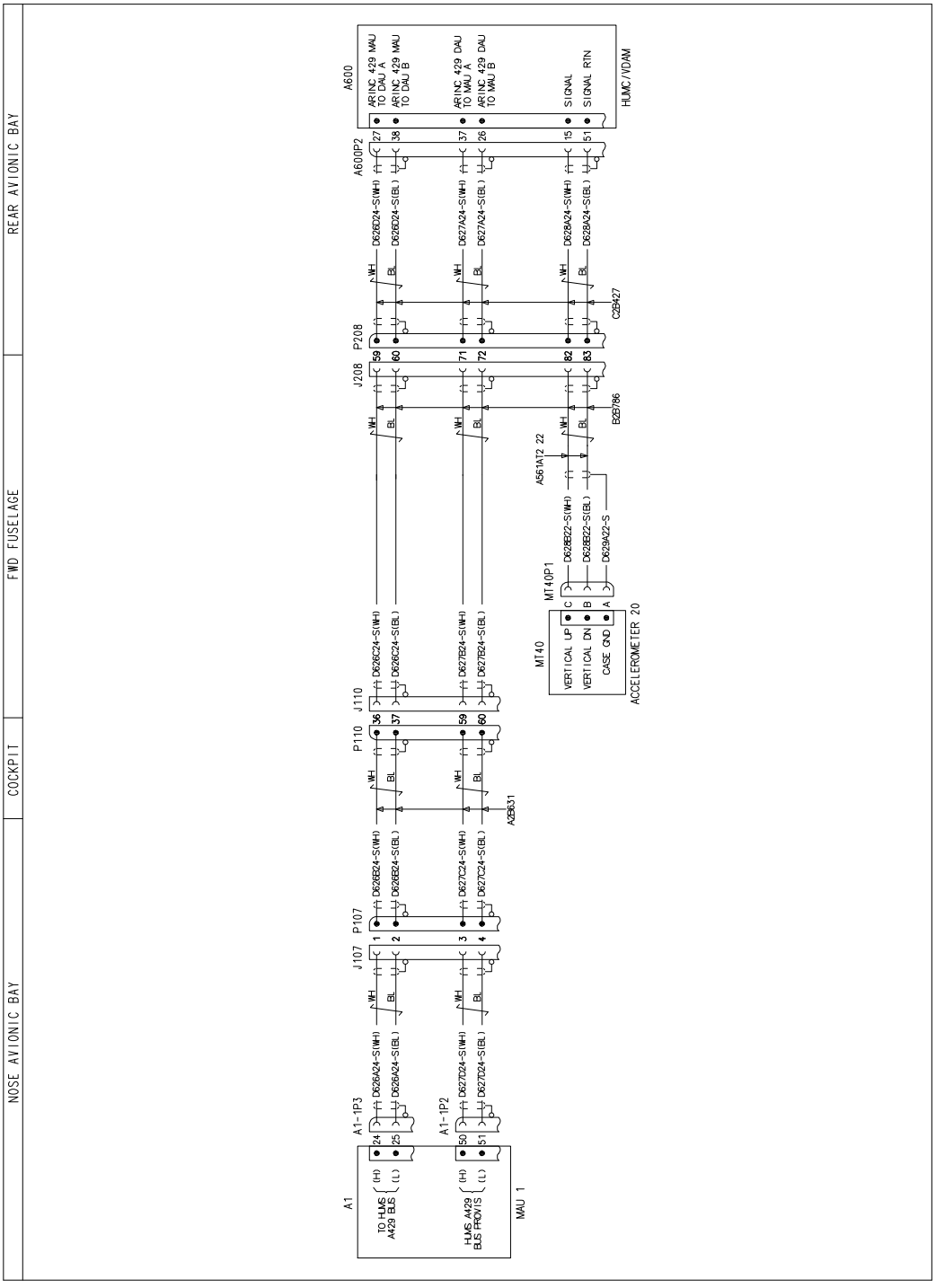
CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A2B631	A1-3P2	43	M39029/57-354	M23053/8-004-C
A2B631	A1-3P2	44	M39029/57-354	M23053/8-004-C
A2B631	P110	71	M39029/58-360	M23053/8-004-C
A2B631	PL28P1	6	M39029/5-115	M23053/8-004-C
A2B631	P110	72	M39029/58-360	M23053/8-004-C
A2B631	PL28P1	5	M39029/5-115	M23053/8-004-C
A2B631	P110	82	M39029/58-360	M23053/8-004-C
A2B631	P110	84	M39029/58-360	M23053/8-004-C
A2B631	PL28P2	8	M39029/5-115	M23053/8-004-C
A2B631	PL28P2	9	M39029/5-115	M23053/8-004-C
A2B631	TB122P1	59	M39029/56-348	M23053/8-004-C
A2B631	P110	28	M39029/58-360	M23053/8-004-C
A2B631	TB122P1	71	M39029/56-348	M23053/8-004-C
A2B631	P110	27	M39029/58-360	M23053/8-004-C
B2B786	J110	27	M39029/56-348	M23053/8-004-C
B2B786	J208	115	M39029/56-348	M23053/8-004-C
B2B786	J110	28	M39029/56-348	M23053/8-004-C
B2B786	J208	114	M39029/56-348	M23053/8-004-C
B2B786	J208	55	M39029/56-348	M23053/8-004-C
B2B786	J110	72	M39029/56-348	M23053/8-004-C
B2B786	J208	56	M39029/56-348	M23053/8-004-C
B2B786	J110	71	M39029/56-348	M23053/8-004-C
B2B786	J208	15	M39029/56-348	M23053/8-004-C
B2B786	J110	84	M39029/56-348	M23053/8-004-C
B2B786	J208	16	M39029/56-348	M23053/8-004-C
B2B786	J110	82	M39029/56-348	M23053/8-004-C
C2B427	P208	114	M39029/58-360	M23053/8-004-C
C2B427	A600P2	39	M39029/56-348	M23053/8-004-C
C2B427	P208	115	M39029/58-360	M23053/8-004-C
C2B427	A600P2	28	M39029/56-348	M23053/8-004-C
C2B427	P208	55	M39029/58-360	M23053/8-004-C
C2B427	A600P2	72	M39029/56-348	M23053/8-004-C
C2B427	P208	56	M39029/58-360	M23053/8-004-C
C2B427	A600P2	83	M39029/56-348	M23053/8-004-C
C2B427	P208	15	M39029/58-360	M23053/8-004-C
C2B427	A600P2	16	M39029/56-348	M23053/8-004-C
C2B427	P208	16	M39029/58-360	M23053/8-004-C
C2B427	A600P2	17	M39029/56-348	M23053/8-004-C

Figure 35



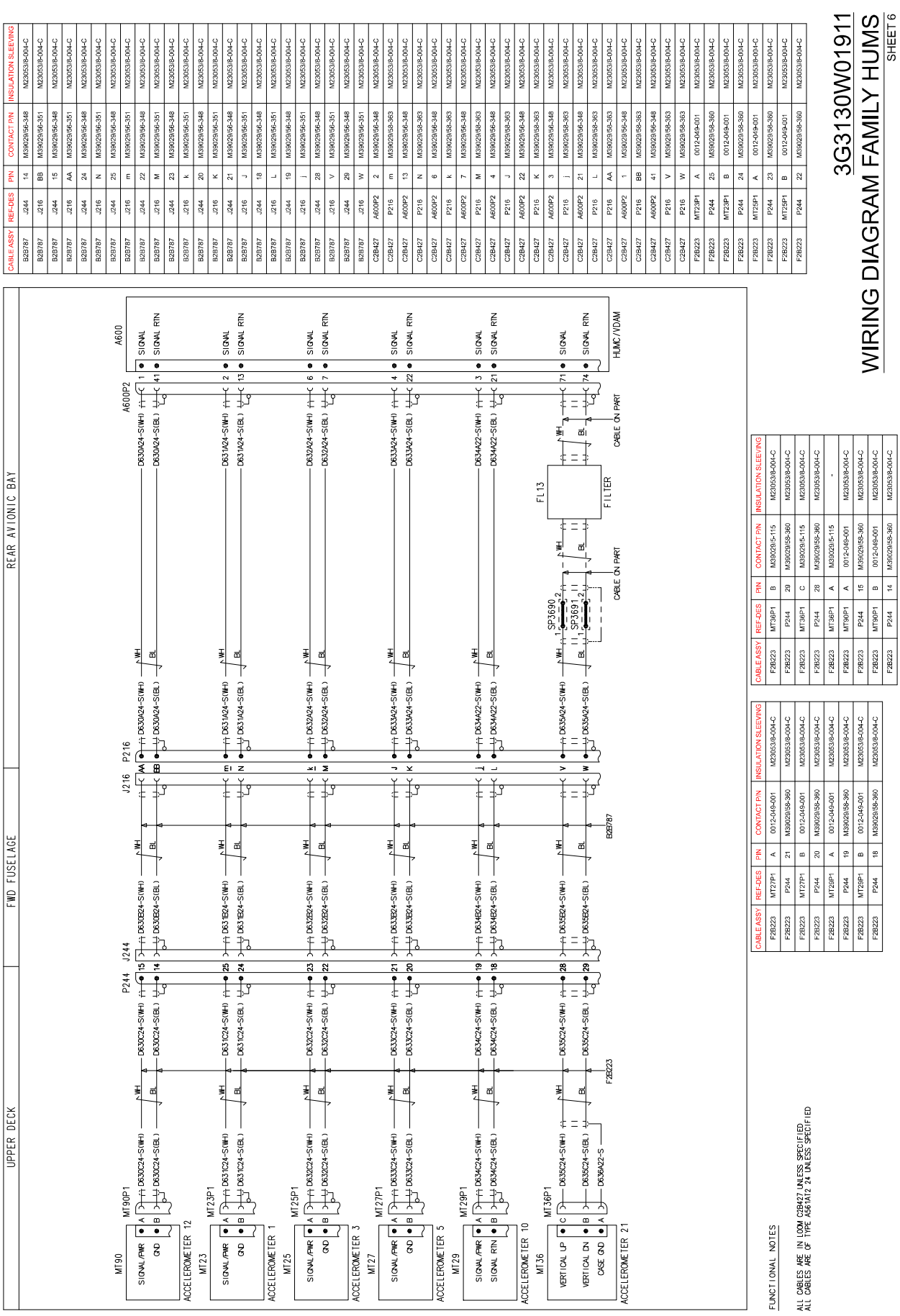
CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A1B670	PL202P2	7	M39029/56-348	-
A1B670	PL202P2	34	M39029/56-348	-
A1B670	PL202P2	8	M39029/56-348	-
A1B670	PL202P2	33	M39029/56-348	-
A1B670	TB150/1	a	A5234-A01	-
A1B670	P106	85	M39029/58-360	-

Figure 36



CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A2A672	A1-1P2	50	M39029/57-354	M23053/8-004-C
A2A672	J107	3	M39029/56-348	M23053/8-004-C
A2A672	A1-1P2	51	M39029/57-354	M23053/8-004-C
A2A672	J107	4	M39029/56-348	M23053/8-004-C
A2A672	A1-1P3	24	M39029/57-354	M23053/8-004-C
A2A672	J107	1	M39029/56-348	M23053/8-004-C
A2A672	A1-1P3	25	M39029/57-354	M23053/8-004-C
A2A672	J107	2	M39029/56-348	M23053/8-004-C
A25631	P107	1	M39029/58-360	M23053/8-004-C
A25631	P110	36	M39029/58-360	M23053/8-004-C
A25631	P107	2	M39029/58-360	M23053/8-004-C
A25631	P110	37	M39029/58-360	M23053/8-004-C
A25631	P107	3	M39029/58-360	M23053/8-004-C
A25631	P110	59	M39029/58-360	M23053/8-004-C
A25631	P107	4	M39029/58-360	M23053/8-004-C
A25631	P110	60	M39029/58-360	M23053/8-004-C
B28786	J208	59	M39029/56-348	M23053/8-004-C
B28786	J110	36	M39029/56-348	M23053/8-004-C
B28786	J208	60	M39029/56-348	M23053/8-004-C
B28786	J110	37	M39029/56-348	M23053/8-004-C
B28786	J208	71	M39029/56-348	M23053/8-004-C
B28786	J110	59	M39029/56-348	M23053/8-004-C
B28786	J208	72	M39029/56-348	M23053/8-004-C
B28786	J110	60	M39029/56-348	M23053/8-004-C
B28786	MT40P1	B	M39029/5-115	M23053/8-004-C
B28786	J208	83	M39029/56-348	M23053/8-004-C
B28786	MT40P1	C	M39029/5-115	M23053/8-004-C
B28786	J208	82	M39029/56-348	M23053/8-004-C
B28786	MT40P1	A	M39029/5-115	M23053/8-004-C
C28427	A600P2	27	M39029/56-348	M23053/8-004-C
C28427	P208	59	M39029/58-360	M23053/8-004-C
C28427	A600P2	38	M39029/56-348	M23053/8-004-C
C28427	P208	60	M39029/58-360	M23053/8-004-C
C28427	P208	71	M39029/58-360	M23053/8-004-C
C28427	A600P2	37	M39029/56-348	M23053/8-004-C
C28427	P208	72	M39029/58-360	M23053/8-004-C
C28427	A600P2	26	M39029/56-348	M23053/8-004-C
C28427	P208	82	M39029/58-360	M23053/8-004-C
C28427	A600P2	15	M39029/56-348	M23053/8-004-C
C28427	P208	83	M39029/58-360	M23053/8-004-C
C28427	A600P2	51	M39029/56-348	M23053/8-004-C

Figure 37



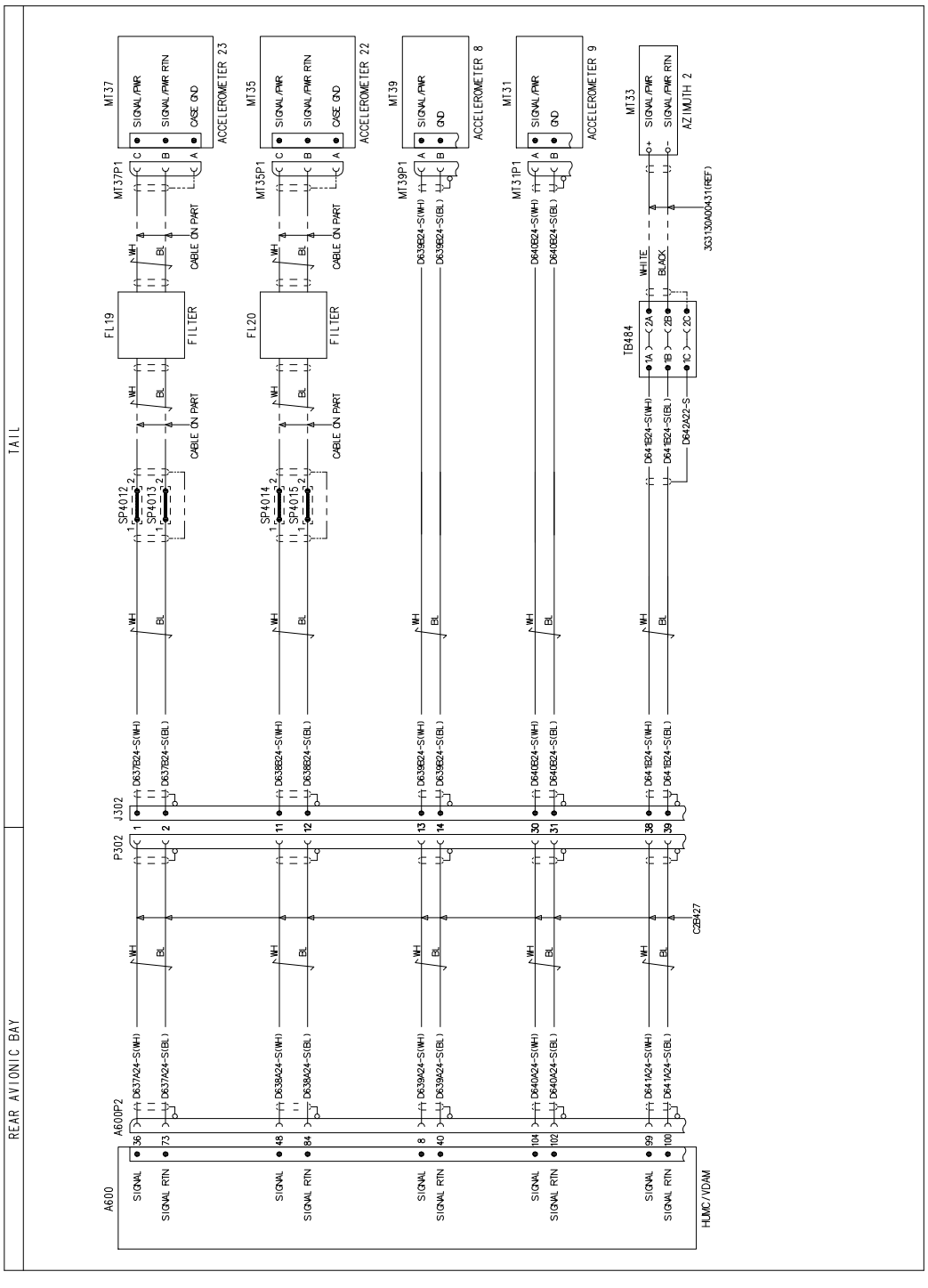
CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
B2B787	J244	14	M39029/56-348	M23053/6-004-C
B2B787	J216	BB	M39029/56-351	M23053/6-004-C
B2B787	J244	15	M39029/56-348	M23053/6-004-C
B2B787	J216	AA	M39029/56-351	M23053/6-004-C
B2B787	J244	24	M39029/56-348	M23053/6-004-C
B2B787	J216	N	M39029/56-351	M23053/6-004-C
B2B787	J244	25	M39029/56-348	M23053/6-004-C
B2B787	J216	m	M39029/56-351	M23053/6-004-C
B2B787	J244	22	M39029/56-348	M23053/6-004-C
B2B787	J216	M	M39029/56-351	M23053/6-004-C
B2B787	J244	23	M39029/56-348	M23053/6-004-C
B2B787	J216	k	M39029/56-351	M23053/6-004-C
B2B787	J244	20	M39029/56-348	M23053/6-004-C
B2B787	J216	K	M39029/56-351	M23053/6-004-C
B2B787	J244	21	M39029/56-348	M23053/6-004-C
B2B787	J216	J	M39029/56-351	M23053/6-004-C
B2B787	J244	18	M39029/56-348	M23053/6-004-C
B2B787	J216	L	M39029/56-351	M23053/6-004-C
B2B787	J244	19	M39029/56-348	M23053/6-004-C
B2B787	J216	j	M39029/56-351	M23053/6-004-C
B2B787	J244	28	M39029/56-348	M23053/6-004-C
B2B787	J216	V	M39029/56-351	M23053/6-004-C
B2B787	J244	29	M39029/56-348	M23053/6-004-C
B2B787	J216	W	M39029/56-351	M23053/6-004-C
C2B427	A600P2	2	M39029/56-348	M23053/6-004-C
C2B427	P216	m	M39029/58-363	M23053/6-004-C
C2B427	A600P2	13	M39029/56-348	M23053/6-004-C
C2B427	P216	N	M39029/58-363	M23053/6-004-C
C2B427	A600P2	6	M39029/56-348	M23053/6-004-C
C2B427	P216	k	M39029/58-363	M23053/6-004-C
C2B427	A600P2	7	M39029/56-348	M23053/6-004-C
C2B427	P216	M	M39029/58-363	M23053/6-004-C
C2B427	A600P2	4	M39029/56-348	M23053/6-004-C
C2B427	P216	J	M39029/58-363	M23053/6-004-C
C2B427	A600P2	22	M39029/56-348	M23053/6-004-C
C2B427	P216	K	M39029/58-363	M23053/6-004-C
C2B427	A600P2	3	M39029/56-348	M23053/6-004-C
C2B427	P216	j	M39029/58-363	M23053/6-004-C
C2B427	A600P2	21	M39029/56-348	M23053/6-004-C
C2B427	P216	L	M39029/58-363	M23053/6-004-C
C2B427	P216	AA	M39029/58-363	M23053/6-004-C
C2B427	A600P2	1	M39029/56-348	M23053/6-004-C
C2B427	P216	BB	M39029/58-363	M23053/6-004-C
C2B427	A600P2	41	M39029/56-348	M23053/6-004-C
C2B427	P216	V	M39029/58-363	M23053/6-004-C
C2B427	P216	W	M39029/58-363	M23053/6-004-C
F2B223	MT23P1	A	0012-049-001	M23053/6-004-C
F2B223	P244	25	M39029/58-360	M23053/6-004-C
F2B223	MT23P1	B	0012-049-001	M23053/6-004-C
F2B223	P244	24	M39029/58-360	M23053/6-004-C
F2B223	MT25P1	A	0012-049-001	M23053/6-004-C
F2B223	P244	23	M39029/58-360	M23053/6-004-C
F2B223	MT25P1	B	0012-049-001	M23053/6-004-C
F2B223	P244	22	M39029/58-360	M23053/6-004-C

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
F2B223	MT27P1	A	0012-049-001	M23053/8-004-C
F2B223	P244	21	M39029/58-360	M23053/8-004-C
F2B223	MT27P1	B	0012-049-001	M23053/8-004-C
F2B223	P244	20	M39029/58-360	M23053/8-004-C
F2B223	MT29P1	A	0012-049-001	M23053/8-004-C
F2B223	P244	19	M39029/58-360	M23053/8-004-C
F2B223	MT29P1	B	0012-049-001	M23053/8-004-C
F2B223	P244	18	M39029/58-360	M23053/8-004-C

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
F2B223	MT36P1	B	M39029/5-115	M23053/8-004-C
F2B223	P244	29	M39029/58-360	M23053/8-004-C
F2B223	MT36P1	C	M39029/5-115	M23053/8-004-C
F2B223	P244	28	M39029/58-360	M23053/8-004-C
F2B223	MT36P1	A	M39029/5-115	-
F2B223	MT90P1	A	0012-049-001	M23053/8-004-C
F2B223	P244	15	M39029/58-360	M23053/8-004-C
F2B223	MT90P1	B	0012-049-001	M23053/8-004-C
F2B223	P244	14	M39029/58-360	M23053/8-004-C

Figure 38

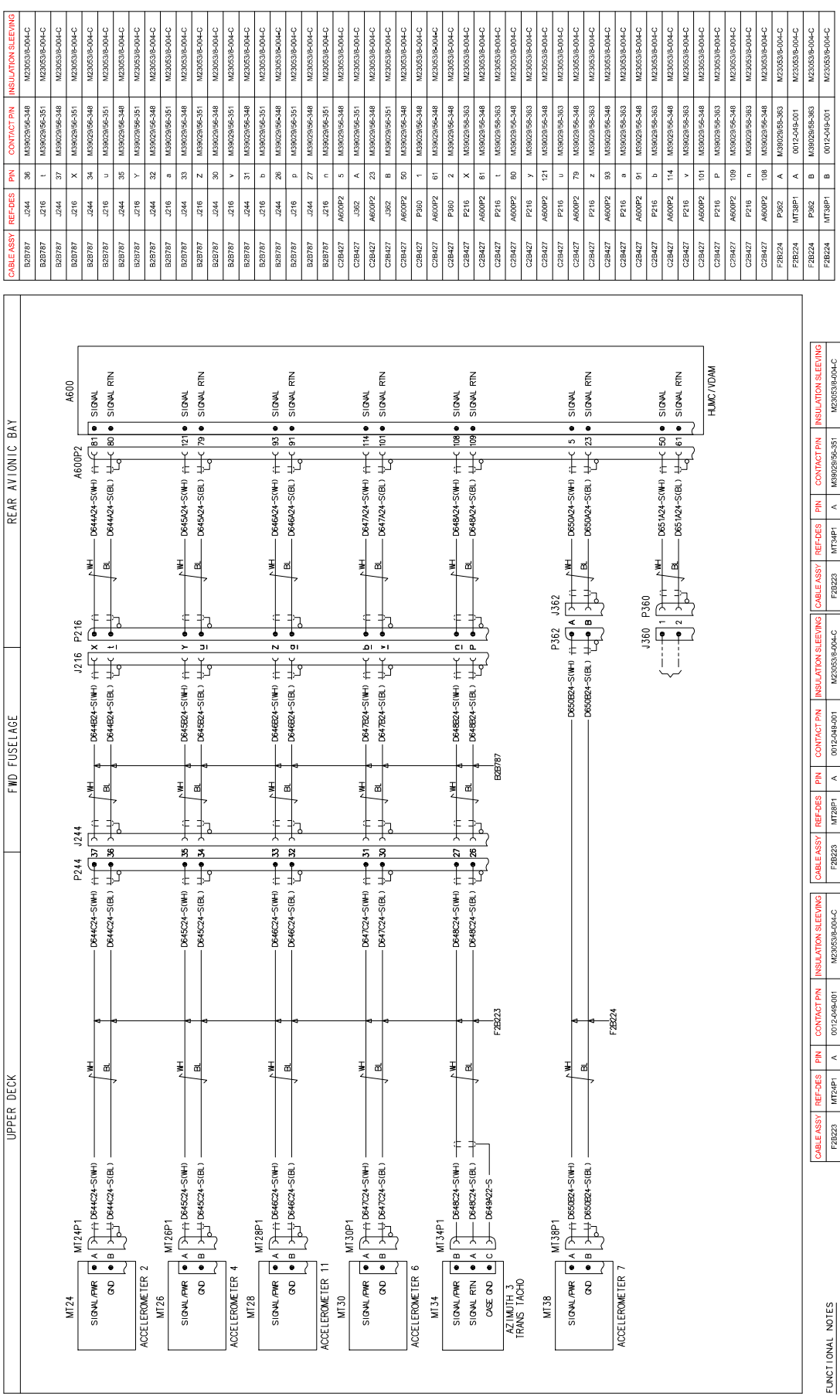
CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
C2B427	A600P2	36	M39029/56-348	M23053/6-004-C
C2B427	P302	1	M39029/56-348	M23053/6-004-C
C2B427	A600P2	73	M39029/56-348	M23053/6-004-C
C2B427	P302	2	M39029/56-348	M23053/6-004-C
C2B427	A600P2	48	M39029/56-348	M23053/6-004-C
C2B427	P302	11	M39029/56-348	M23053/6-004-C
C2B427	A600P2	84	M39029/56-348	M23053/6-004-C
C2B427	P302	12	M39029/56-348	M23053/6-004-C
C2B427	A600P2	8	M39029/56-348	M23053/6-004-C
C2B427	P302	13	M39029/56-348	M23053/6-004-C
C2B427	A600P2	40	M39029/56-348	M23053/6-004-C
C2B427	P302	14	M39029/56-348	M23053/6-004-C
C2B427	A600P2	102	M39029/56-348	M23053/6-004-C
C2B427	P302	31	M39029/56-348	M23053/6-004-C
C2B427	A600P2	104	M39029/56-348	M23053/6-004-C
C2B427	P302	30	M39029/56-348	M23053/6-004-C
C2B427	A600P2	99	M39029/56-348	M23053/6-004-C
C2B427	P302	38	M39029/56-348	M23053/6-004-C
C2B427	A600P2	100	M39029/56-348	M23053/6-004-C
C2B427	P302	39	M39029/56-348	M23053/6-004-C
D2B232	J302	30	M39029/58-360	M23053/6-004-C
D2B232	J302	31	M39029/58-360	M23053/6-004-C
D2B232	J302	13	M39029/58-360	M23053/6-004-C
D2B232	J302	14	M39029/58-360	M23053/6-004-C
D2B232	J302	1	M39029/58-360	M23053/6-004-C
D2B232	J302	2	M39029/58-360	M23053/6-004-C
D2B232	J302	11	M39029/58-360	M23053/6-004-C
D2B232	J302	12	M39029/58-360	M23053/6-004-C
D2B232	J302	38	M39029/58-360	M23053/6-004-C
D2B232	J302	39	M39029/58-360	M23053/6-004-C



FUNCTIONAL NOTES

ALL CABLES ARE IN LOOM D2B232 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE AS6141 24 UNLESS SPECIFIED

Figure 39



CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
F2B223	MT24P1	A	0012-049-001	M23053/8-004-C
F2B223	P244	37	M39029/58-360	M23053/8-004-C
F2B223	MT24P1	B	0012-049-001	M23053/8-004-C
F2B223	P244	36	M39029/58-360	M23053/8-004-C
F2B223	MT26P1	A	0012-049-001	M23053/8-004-C
F2B223	P244	35	M39029/58-360	M23053/8-004-C
F2B223	MT26P1	B	0012-049-001	M23053/8-004-C
F2B223	P244	34	M39029/58-360	M23053/8-004-C

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
F2B223	MT28P1	A	0012-049-001	M23053/8-004-C
F2B223	P244	33	M39029/58-360	M23053/8-004-C
F2B223	MT28P1	B	0012-049-001	M23053/8-004-C
F2B223	P244	32	M39029/58-360	M23053/8-004-C
F2B223	MT30P1	A	0012-049-001	M23053/8-004-C
F2B223	P244	31	M39029/58-360	M23053/8-004-C
F2B223	MT30P1	B	0012-049-001	M23053/8-004-C
F2B223	P244	30	M39029/58-360	M23053/8-004-C

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
F2B223	MT34P1	A	M39029/56-351	M23053/8-004-C
F2B223	P244	26	M39029/56-360	M23053/8-004-C
F2B223	MT34P1	B	M39029/56-351	M23053/8-004-C
F2B223	P244	27	M39029/56-360	M23053/8-004-C
F2B223	MT34P1	C	M39029/56-351	-

FUNCTIONAL NOTES

ALL CABLES ARE IN LOOM C2B427 UNLESS SPECIFIED.
ALL CABLES ARE OF TYPE AS81612 24 UNLESS SPECIFIED

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
B28787	J244	36	M39029/56-348	M23053/8-004-C
B28787	J216	t	M39029/56-351	M23053/8-004-C
B28787	J244	37	M39029/56-348	M23053/8-004-C
B28787	J216	X	M39029/56-351	M23053/8-004-C
B28787	J244	34	M39029/56-348	M23053/8-004-C
B28787	J216	u	M39029/56-351	M23053/8-004-C
B28787	J244	35	M39029/56-348	M23053/8-004-C
B28787	J216	Y	M39029/56-351	M23053/8-004-C
B28787	J244	32	M39029/56-348	M23053/8-004-C
B28787	J216	a	M39029/56-351	M23053/8-004-C
B28787	J244	33	M39029/56-348	M23053/8-004-C
B28787	J216	Z	M39029/56-351	M23053/8-004-C
B28787	J244	30	M39029/56-348	M23053/8-004-C
B28787	J216	v	M39029/56-351	M23053/8-004-C
B28787	J244	31	M39029/56-348	M23053/8-004-C
B28787	J216	b	M39029/56-351	M23053/8-004-C
B28787	J244	27	M39029/56-348	M23053/8-004-C
B28787	J216	n	M39029/56-351	M23053/8-004-C
C28427	A600P2	5	M39029/56-348	M23053/8-004-C
C28427	J362	A	M39029/56-351	M23053/8-004-C
C28427	A600P2	23	M39029/56-348	M23053/8-004-C
C28427	J362	B	M39029/56-351	M23053/8-004-C
C28427	A600P2	50	M39029/56-348	M23053/8-004-C
C28427	P360	1	M39029/58-363	M23053/8-004-C
C28427	A600P2	61	M39029/56-348	M23053/8-004-C
C28427	P360	2	M39029/56-348	M23053/8-004-C
C28427	P216	X	M39029/58-363	M23053/8-004-C
C28427	A600P2	81	M39029/56-348	M23053/8-004-C
C28427	P216	t	M39029/58-363	M23053/8-004-C
C28427	A600P2	80	M39029/56-348	M23053/8-004-C
C28427	P216	y	M39029/58-363	M23053/8-004-C
C28427	A600P2	121	M39029/56-348	M23053/8-004-C
C28427	P216	u	M39029/58-363	M23053/8-004-C
C28427	A600P2	79	M39029/56-348	M23053/8-004-C
C28427	P216	z	M39029/58-363	M23053/8-004-C
C28427	A600P2	93	M39029/56-348	M23053/8-004-C
C28427	P216	a	M39029/58-363	M23053/8-004-C
C28427	A600P2	91	M39029/56-348	M23053/8-004-C
C28427	P216	b	M39029/58-363	M23053/8-004-C
C28427	A600P2	114	M39029/56-348	M23053/8-004-C
C28427	P216	v	M39029/58-363	M23053/8-004-C
C28427	A600P2	101	M39029/56-348	M23053/8-004-C
C28427	P216	P	M39029/58-363	M23053/8-004-C
C28427	A600P2	109	M39029/56-348	M23053/8-004-C
C28427	P216	n	M39029/58-363	M23053/8-004-C
C28427	A600P2	108	M39029/56-348	M23053/8-004-C
F2B224	P362	A	M39029/58-363	M23053/8-004-C
F2B224	MT38P1	A	0012-049-001	M23053/8-004-C
F2B224	P362	B	M39029/58-363	M23053/8-004-C
F2B224	MT38P1	B	0012-049-001	M23053/8-004-C

3G3130W01911

WIRING DIAGRAM FAMILY HUMS

SHEET 8

Figure 40

ANNEX A

FAMILY HUMS

BONDING CHECK AND FUNCTIONAL TEST

1. Perform the HUMS system bonding check as follows:
   1.1 Perform the bonding check of the DTD (PL202) as follows:
      1.1.1 Disconnect all the electrical connectors from the DTD.
      1.1.2 Measure the electrical resistance between the DTD and the nearest local structure mass point by means of a Milliohm meter.
      1.1.3 Make sure that the electrical resistance is not more than 10 mΩ.
      1.1.4 Connect all the electrical connectors to the DTD.
   1.2 Perform the bonding check of the HUMC (A600) as follows:
      1.2.1 Disconnect all the electrical connectors from the HUMC.
      1.2.2 Measure the electrical resistance between the HUMC and the nearest local structure mass point by means of a Milliohm meter.
      1.2.3 Make sure that the electrical resistance is not more than 2.5 mΩ.
      1.2.4 Connect all the electrical connectors to the HUMC.
   1.3 Perform the bonding check of the RT-TipTrak camera (DS229) as follows:
      1.3.1 Disconnect all the electrical connectors from the RT-TipTrak camera.
      1.3.2 Measure the electrical resistance between the RT-TipTrak camera and the nearest local structure mass point by means of a Milliohm meter.
      1.3.3 Make sure that the electrical resistance is not more than 10 mΩ.
      1.3.4 Connect all the electrical connectors to the RT-TipTrak camera.
2. Perform the functional test of the HUMS system as follows:
   2.1 In accordance with AMP DM 39-A-12-41-00-00A-730A-A, connect the external DC electrical power to the helicopter and set it to ON.
   2.2 Power ON the avionics.
   2.3 On the MCDU press the dedicated MENU button to enter the MCDU MENU 1/2 page.
   2.4 On the MCDU press the MENU 2/2 line selection key to enter the MCDU MENU 2/2 page.
   2.5 In the MENU page press the HUMS line selection key to enter the HUMS page.
   2.6 In the HUMS page press the CONFIG INFO line selection key to enter the CONFIG INFO page.
   2.7 In the CONFIG INFO page verify that:
      - OPSW P/N is: 3G3130AA0100;
      - OPSW CRC is: 2955D6BA;
      - VAM1 P/N is: 3G3130AB0100;
      - VAM1 CRC is: E25F6F2F;
      - VAM2 P/N is: 3G3130AB0100;
      - VAM2 CRC is: E25F6F2F.

2.8 On the MCDU return to the HUMS page.

2.9 In HUMS page press the DTD SAVE line selection key to enter DTD SAVE page.

2.10 In the DTD SAVE page verify that:

- H/C S/N is correct;
- EQ STATUS is ON.

2.11 On the MCDU return to the HUMS page.

2.12 In the HUMS page press the SYSTEM STS line selection key to enter the VM SYSTEM STATUS page 1/3.

2.13 Press the dedicated PREV or NEXT button on the MCDU keyboard to enter the VM SYSTEM STATUS page 2/3 and 3/3.

2.14 In the three VM SYSTEM STATUS pages verify the status of the following VHM system components:

- ACCnn, where “nn” is the number of the accelerometer: display of the accelerometer status (either GO or FAIL); a specific label and status indication is displayed for each sensor; the sensors displayed in the left-hand column of the MCDU are interfaced by VDAM1; those displayed in the right-hand column are interfaced by VDAM2;
- VDAM1: display of the VDAM1 status (either GO or FAIL);
- VDAM2: display of the VDAM1 status (either GO or FAIL);
- NR VDAM1: display of the transmission NR sensor status (either GO or FAIL), as reported by the VDAM1 Built In Test (NOTE: this Built In Test is reliable only with NR around 100%);
- NR VDAM2: display of the transmission NR sensor status (either GO or FAIL), as reported by the VDAM2 Built In Test (NOTE: this Built In Test is reliable only with NR around 100%);
- 1R VDAM1: display of the Main Rotor 1xRev sensor status (either GO or FAIL), as reported by the VDAM1 Built In Test (NOTE: this Built In Test is reliable only with NR around 100%);
- 1R VDAM2: display of the Main Rotor 1xRev sensor status (either GO or FAIL), as reported by the VDAM2 Built In Test (NOTE: this Built In Test is reliable only with NR around 100%);
- 1T VDAM1: display of the Tail Rotor 1xRev sensor status (either GO or FAIL), as reported by the VDAM1 Built In Test (NOTE: this Built In Test is reliable only with NR around 100%);

- 1T VDAM2: display of the Tail Rotor 1xRev sensor status (either GO or FAIL), as reported by the VDAM2 Built In Test (NOTE: this Built In Test is reliable only with NR around 100%);
- TRACKER: display of the RTB Tracking Camera status (either GO or FAIL) (NOTE: this Built In Test monitors the presence of data communication with the tracking camera; the FAIL status is also displayed when the camera is not installed)

2.15 On the MCDU return to the HUMS page.

2.16 In the HUMS page press the DTD SAVE line selection key to enter the DTD SAVE page.

2.17 In the DTD SAVE page verify that:

2.17.1 EQ STATUS is ON. If the EQ STATUS is FAIL, stop the download procedure and refer to DTD operating instructions

2.17.2 The H/C S/N is correct. If the helicopter serial number is not correct perform the operations from step 2.17.3 to 2.17.6.

2.17.3 Continue with the download process.

2.17.4 After download completion, tag the downloaded data with the indication of the detected wrong H/C S/N together with the correct serial number.

2.17.5 Send the downloaded data to the Manufacturer. Do not analyse the downloaded data on the Heliwise ground station.

2.17.6 Refer to the helicopter maintenance manual and set the correct H/C S/N.

2.18 In the DTD SAVE page press the MNT LOG line selection key. Make sure that the IN PROGRESS status message is displayed under the MNT LOG label and replaced by the SUCCESS status message at the end of the data transfer.

2.19 In DTD SAVE press the LAST SAVE line selection key to enter LAST SAVE page.

2.20 In the LAST SAVE page verify the result status for each of the following files transferred from the HUMC non-volatile memory to the DTD:

- MAINTUSG (aircraft usage data);
- MAINTFLR (aircraft fault and exceedance data);
- MAINTTVM (vibration health monitoring data produced by VDAM1);
- MAINTTVM (vibration health monitoring data produced by VDAM2);
- AMSMNTFL (AMS log failures).

2.21 If the transfer result of one or more of the files is FAIL, press the RTN line selection key to return to the DTD SAVE page and repeat the download process.

2.22 In accordance with AMP DM 39-A-71-00-00-00A-13BA-A perform a ground run.

2.23 Repeat steps 2.3 thru 2.5 and steps 2.12 thru 2.21.

ANNEX B

AW139 HUMC OPSW AND VDAM SW

UPLOAD PROCEDURE

1 SOFTWARE INSTALLATION PROCEDURE

1.1 PROCEDURES PREREQUISITIES

- The electrical wiring harness shall have been successfully tested for proper isolation resistance (DIT-MCO)
- Verify that the External Power Bench is operative and set to the appropriate Voltage (28 VDC)
- Before starting with the procedure, make a visual inspection of the proper installation of the avionic equipment listed below:
    - Co-Pilot MCDU (Cockpit)
    - 1 DTD (Pedestal)
    - 1 HUMC (Baggage)
- Verify that the systems involved in this procedures are powered ON.
- Verify that the WOW are set ON GROUND, if needed connect the WOW simulator kit to set the Helicopter ON GROUND.

1.2 TOOLING REQUIRED

The following equipment are required for the software installation:

- DC External Power Bench (28 VDC);
- Computer with:
    - Windows XP or above operating system
    - RS232 port and HyperTerminal (or similar) application
- WOW SIMULATOR kit;
- HUMC OPSW and VDAM SW dedicated CD;
- Cabling harness P/N 3G3130G00131 for operational software upload

- DC External Power Bench (28 VDC);
- Computer with:
    - Windows XP or above operating system
    - RS232 port and HyperTerminal (or similar) application
- WOW SIMULATOR kit;
- HUMC OPSW and VDAM SW dedicated CD;
- Cabling harness P/N 3G3130G00131 for operational software upload

1.3 HUMC OPSW and VDAM SOFTWARE UPLOAD PROCEDURE

Step Num.	ACTION	PASS/FAIL
1	Transfer to the DTD internal memory (via Ethernet, WiFi or removable USB media) in /ssd/ams directory the 3G3130AA0xxx.bin (OPSW) and the 3G3130AB0xxx.sre (VDAM SW) files found on the release media (where xxx identifies the release version)	
2	Power off the HUMC	
3	Connect one end of the cabling harness P/N 3G3130G00131 to J3 HUMC connector	
4	Connect the CPU RS232 connector on the other end of the cabling harness to the PC RS232 port	
5	Power on the PC and open HyperTerminal application; if needed configure it to use the communication port to which the cabling harness has been connected (eg. COM1) with the following parameters: Bits per second: 115200 Data bits: 8 Parity: None Stop bits: 1 Flow control: None	
6	Power on the HUMC and verify that in the HyperTerminal application screen the following menu is presented AMMS-L AUTOMA APM460 Rel 1.0.0 CRC 0xD99450AD Jun 22 2017 12:17:07 FPGA Rev 1.1 (20) WATCHDOG DISABLED! PCIe 0 OK System Controller startup counter: 2134 Startup: COLD Wait for SYSOK: HIGH IOs initialization... NAD : available	

	VDAM : available VDAM2 : available Starting IOs BIT... VDAM : PBIT started VDAM2 : PBIT started Local BIT : SDRAM PASSED ECC PASSED CACHE PASSED UART PASSED GPIO PASSED FPGA PASSED Ethernet PASSED DMA PASSED TIMER PASSED RTC PASSED I2C PASSED NVRAM PASSED FLASH APSW PASSED Temperature NAD : 42 Degrees Temperature CPU SENSOR 1 : 42 Degrees Temperature CPU SENSOR 2 : 44 Degrees Temperature PSU : 49 Degrees Performing IOs BIT NAD : PBIT FPGA DISCRETI : PASSED FPGA ARINC : PASSED	

NVRAM NAD : PASSED

Get IOs BIT result...

VDAM : BIT PASSED

VDAM2 : BIT PASSED

Debug active,

Start IO Applicative...

VDAM : applicative started

VDAM2 : applicative started

Ethernet #0 MAC: 0x0-0x13-0xD-0x2-0x28-0xFF

IP Address: 193.70.210.21

Run Loader at 0xFE004000... ...

```
+                                                    +
|                    APM460 ETHERNET-LOADER          |
|                  FTP ELF and S-RECORD LOADER       |
|                         Selex-ES                   |
|      S1001599    V. 01.00.00    Apr 29 2015 10:10:53 |
+                                                      +
```

---------- [FTPC DOWNLOAD BOOT] ----------

- FNAME - Setup FTP Filename
- LOCAL - Set Board IP address
- REMOTE - Set Remote Host IP address
- GATEWAY - Set GATEWAY IP address
- MASK - Set SUBNET MASK
- USERNAME - Set FTP Username
- PASSWORD - Set FTP Password
- DIR_REMOTE - Set DIR in Remote Host
- M - Enter Monitor state

	- FTP - Start FTP Client - GOTO - Go To Downloaded Entrypoint - FTP_GO - Start FTP and Go To Entrypoint - FLASH - Flash Binary File - VDAM_PROG - Update VDAM FW FTP LOADER - select a command >	
7	Configure the loader parameters as follows. For each parameter digit the parameter's name, then press "RETURN" and then the parameter value to enter Parameter Name — Parameter Value REMOTE — 193.70.210.242 GATEWAY — 193.70.210.242 MASK — 255.255.255.0 LOCAL — 193.70.210.20 USERNAME — anonymous PASSWORD — anonymous DIR_REMOTE — /ssd/ams FNAME — 3G3130AA0xxx.bin Execute a power-off / power on cycle of the HUMC	
8	When the loader prompt shown in step 7 is presented again digit: FLASH↵ p↵ the file is transferred via FTP from the DTD to the HUMC	
9	When requested verify that the requested checksum coincides with the one reported in applicable SCI document and press y↵	
10	Wait for the flash memory to be erased and for the OPSW to be written in flash memory (it takes 15-20 minutes); when completed the loader verifies that the stored checksum coincides with the one confirmed in previous step. If the check succeeds the operation has been successfully completed	
11	For VDAM SW upload configure the FNAME loader parameters as follows: FNAME: 3G3130AB0xxx.sre (Where xxx identifies the SW release) ↵	

12	digit: VDAM_PROG↵	
13	Following Menu will appear: Select which VDAM board: 1 - VDAM 1 (base address 0xcb000000) 2 - VDAM 2 (base address 0xcc000000)	
14	Select 1 for VDAM1 to Flash the VDAM SW on VDAM BOARD 1	
15	Following request will appear: Send file to VDAM 1 (Y/N) ? y	
16	Select y↵	
17	Wait for the flash memory to be erased and for the VDAM SW to be written in the VDAM BOARD memory (it takes few minutes); when completed the loader verifies that the stored checksum coincides with the one confirmed in previous step. If the check succeeds the operation has been successfully completed	
18	Repeat step 12 to 17 for VDAM BOARD2	

The operational software upload will take about 15-20 minutes the VDAM SW upload fewminutes.

In case of failure of the operation:

- verify that all the procedure prerequisites are respected
- without powering off the HUMC repeat the procedure from step 1

If the procedure including prerequisite verification fails for 3 times the HUMC LRU is considered failed.

1.4 VERIFICATION METHOD

Once that any of the item (OPSW or VDAM SW) has been successfully loaded proceed with the following verification procedure

Step Num.	ACTION	PASS/FAIL
1	Once that the following SWs are correctly installed proceed with the Verification procedure; ➢ HUMC and VDAM SW operational software	
2	On CO-PILOT MCDU, verify in the HUMS Menu on CONFIG INFO page that the expected software P/N and CRC are displayed. Refer to applicable SW installation drawing and SCI document for applicable P/N and CRC.	
3		

2 UPLOAD RESULT

AgustaWestland A Finmeccanica Company		Annex to DOC 139G3130X004 Rev A Sheet 1/2
AW139 HUMC Software Loading – DATA RECORD		
AW HW P/N:	**SW P/N:**	**BOM N° or HELIC. S/N:**
VENDOR HW P/N:	**SW Rel.:**	**O.L./S.d.M.**
DESCRIPTION:	**S/N ITEM:**	**DATE:**
NOTE		
APPROVED BY		
Operator date		Quality date
Customer date		U.S.T. date

AgustaWestland A Finmeccanica Company	Annex to DOC 139G3130X004 Rev A Sheet 2/2

AW139 HUMC Software Loading – DATA RECORD

Par.	Description	Result	Notes
AW139 HUMC OPSW and VDAM Software upload			
§1.3 steps 1-19	OPSW and VDAM SW upload operation setup		
§1.3 step 11 & 18	OPSW and VDAM SW upload operation completion		
§1.4	OPSW and VDAM SW upload verification		

APPROVED BY

Operator	date	Quality	date
Customer	date	U.S.T.	date

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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.