
SERVICE BULLETIN

N° **189-312**

OPTIONAL

DATE: March 14, 2024

REV. : /

TITLE

ATA 21 - LH AVIONIC BAY COOLING INSTALLATION

REVISION LOG

First Issue

1. PLANNING INFORMATION

A. EFFECTIVITY

Part I

All AW189 helicopters S/N 49054, S/N 49064 thru S/N 49067 and S/N 49073 thru S/N 49075.

Part II

All AW189 helicopters S/N 49054, S/N 49064 thru S/N 49067 and S/N 49073 thru S/N 49075.

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 kit "LH avionic bay cooling" P/N 8G2120F00511.

LHD issued this SB for the following reason:

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

E. DESCRIPTION

This Service Bulletin has been developed to install the kit "LH avionic bay cooling" P/N 8G2120F00511 in order to cool the left side rear avionics cabinet.

Part I gives information on how to perform the "LH avionic bay ventilation port structural provision" P/N 8G5310A43611 which consists in the installation of the lip P/N 8G2120A10851, the closure P/N 8G2120A10951, the wire mesh assy P/N 8G2120A10631, the EMC filter scoop LH P/N 8G2120A11551 and the EMC filter P/N 8G2120A09632 on the LH sidewall bonded assy.

Part II gives information on how to perform:

- the “LH avionic bay structural provision” P/N 8G5310A43111 which consists in the installation of the LH avionic cooling fan bracket assy P/N 8G2120A03931 and the closures P/N 8G3000A11652 and P/N 8G2120A04451 on the STA 6700 panel sub assy P/N 8G5330A67131;
- the “left avionic bay fan C/A installation” P/N 8G2120A06711 which consists in the installation of the C/A A1A468 and the C/A B1A511;
- the “left avionic bay fan equipment installation” P/N 8G2120A11111 which consists in the installation of the fan B203, the duct P/N 8G2120L03551 and the fingerguard grid P/N 70-177 on the LH av cooling fan bracket assy;
- the “avionics cooling installation” P/N 8G2120A00111 which consists in the installation of the spigot P/N 8G2120A09931, the flex duct P/N NAS1375A10CA014, the inlet assembly P/N 8G2120A00931, the duct assembly P/N 8G2120A00631, the filter P/N 8G2120A06131, the cowl assembly P/N 8G2120A01831 and the tubing.

F. APPROVAL

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 forty (40);

Part II: approximately thirty-two (32).

MMH are based on hands-on time and can change with helicopter configuration, personnel and facilities available. MMH are not comprehensive of the overall hours necessary to get access to work areas and to remove all the equipment that interferes with the application of the prescribed instructions.

H. WEIGHT AND BALANCE

PART I

WEIGHT (kg)	ARM (mm)	MOMENT (kg-mm)
		0,299
LONGITUDINAL BALANCE	6947,5	2077,16
LATERAL BALANCE	-1034,4	-309,26

PART II

	WEIGHT (kg)		1,915
		ARM (mm)	MOMENT (kg·mm)
LONGITUDINAL BALANCE		6394,2	12245,54
LATERAL BALANCE		-842,2	-1612,95

I. REFERENCES

I.1 PUBLICATIONS

Following Data Modules refer to AMP:

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM01 89-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance.	I, II
DM02 89-A-06-41-00-00A-010A-A	Access doors and panels – General data	I, II
DM03 89-A-11-00-01-00A-720A-A	Decal - Install procedure	II
DM04 89-A-46-21-00-00A-750A-A	Aircraft mission management system - Load software procedure	II
DM05 89-A-46-31-00-00A-750A-A	Cockpit display system - Load software procedure	II
DM06 89-A-24-81-00-00A-752A-A	SSEPMS - Remote electric power units (REPU) - Data loading	II
DM07 89-A-24-81-00-05A-752A-A	SSEPMS - Personality modules (PMs) - Data loading	II

Following Data Modules refer to CSSP:

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM08 CSPP-A-20-10-12-02A-920A-D	Bonded studs - Replacement	II
DM09 CSPP-A-20-10-13-00A-622A-D	Electrical contacts - Crimp	II

I.2 ACRONYMS & ABBREVIATIONS

AMD	Aircraft Material Data Information
AMMC	Aircraft Mission Management Computer
AMP	Aircraft Maintenance Publication
AR	As Required
ATA	Air Transport Association
ATP	Acceptance Test Procedure
C/A	Cable Assy
CDS	Cockpit Display System
CSPP	Common Standard Practices Publication

DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
ECDU	Electrical Control and Display Unit
EMC	Electromagnetic Compatibility
IPD	Illustrated Parts Data
ITEP	Illustrated Tool and Equipment Publication
LH	Left Hand
LHD	Leonardo Helicopters Division
MMH	Maintenance Man Hours
N.A.	Not Applicable
P/N	Part Number
REPU	Remote Electric Power Unit
S/N	Serial Number
SW	Software

I.3 ANNEX

Annex A AW189 Additional Avionic Ventilation ATP.

J. PUBLICATIONS AFFECTED

N.A.

K. SOFTWARE ACCOMPLISHMENT SUMMARY

Software to be updated:

AMMC option file P/N 8G4640AOXXXX;

CDS option file P/N 8G4630AOXXXX;

ECDU configuration file P/N 8G4620ACXXXX;

REPU configuration file P/N 8G2460ASXXXX.

Option File and Configuration File P/Ns are depending upon helicopter configuration that can be different from the one reported in relevant helicopter “Commissa 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.

<u>SW DESCRIPTION</u>	<u>S/N HELICOPTER</u>	
	<u>P/N SW INSTALLED</u> <u>(COMPILED BY CUSTOMER)</u>	<u>P/N SW TO BE ORDERED</u> <u>(COMPILED BY LEONARDO COMPANY)</u>
FCS LOADABLE SW		
AFDX CONFIG SWITCH		
AMMC DMG SW (if installed)		
AMMC OPSW		
AMMC OPTION FILE		
AMMC VAM SW		
CDS OPTION FILE		
DISPLAY UNIT SW		
DIMMER CONFIG FILE		
ECDU OP SW		
REPU CONFIG TABLE		
ICS SETTING FILE		

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

A.1 PARTS

PART I

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	8G2120F00511		KIT LH AVIONIC BAY COOLING	REF	.		-
2	8G5310A43611		LH AVIONIC BAY VENTILATION PORT STR PROV	REF	..		-
3	MS27039-1-14		Screw	4	...		139-312L1
4	MS27039-1-07		Screw	4	...		139-312L1
5	NAS1149C0316R		Washer	4	...		139-312L1
6	NAS1149D0316J		Washer	5	...		139-312L1
7	NAS1836-3-15		Insert	8	...		139-312L1
8	8G2120A10851		Lip	1	...		139-312L1
9	8G2120A10951		Closure	REF	...	(1)	-
10	8G2120A10631		Wire mesh assy	1	...		139-312L1
11	8G2120A11551		EMC filter scoop LH	1	...		139-312L1
12	8G2120A09632		EMC filter	1	...		139-312L1

PART II

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
13	8G2120F00511		KIT LH AVIONIC BAY COOLING	REF	.		-
14	8G2120A11111		LEFT AVNC BAY FAN EQPT INSTL	REF	..	(2)	-
15	ED300B203		Decal	1	...		139-312L2
16	AW001CL001-N6		Support	1	...		139-312L2
17	NAS1802-3-4		Screw	4	...		139-312L2
18	AW001CK04HS		Strap	1	...		139-312L2
19	MS35206-228		Screw	1	...		139-312L2
20	NAS1149C0332R		Washer	8	...		139-312L2
21	NAS1149DN632J		Washer	2	...		139-312L2
22	NAS1802-3-6		Screw	4	...		139-312L2
23	109-0718-46-103		Fan	1	...		139-312L2
24	M83413/8-A009AB		Bonding cable	1	...		139-312L2
25	70-177		Fingerguard grid	1	...		139-312L2
26	8G2120L03551		Duct	1	...		139-312L2
27	8G2120A06711		LEFT AVNC BAY FAN C/A INST	REF	..	(3)	-
28	NAS1190E3P6AK		Screw	2	...		139-312L3
29	NAS1802-06-7		Screw	2	...		139-312L3
30	A388A3E06C75		Standoff	2	...		139-312L3
31	AW001CB03H		Clamp	2	...		139-312L3
32	NAS1149D0332J		Washer	2	...		139-312L3
33	NAS1149DN616J		Washer	2	...		139-312L3
34	ED300TB277		Decal	1	...		139-312L3
35	8G9A21A46801	8G9A21A46801A2R or 8G9A21A46801A3R	Left avnc bay fan C/A (A1A468)	1	...		139-312L3

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
36	8G9B21A51101	8G9B21A51101A1R	Left avnc bay C/A (B1A511)	1	...		139-312L3
37	M39029/56-348		Electrical contact	1	...		139-312L3
38	M39029/56-351		Electrical contact	2	...		139-312L3
39	M39029/56-363		Electrical contact	2	...		139-312L3
40	8G2120A00111		AVIONICS COOLING INSTN	REF	..	(3)	-
41	8G2120A09931		Spigot	1	...		139-312L3
42	A428A3C11		Screw	8	...		139-312L3
43	A437A011A		Clamp	6	...		139-312L3
44	AW008TY-09-74A		Washer	1	...		139-312L3
45	AW001CK06HS		Strap	2	...		139-312L3
46	AW002CB08N-W1A		Clamp	1	...		139-312L3
47	AW002CB10N-W1A		Clamp	1	...		139-312L3
48	AN3C3A		Bolt	6	...		139-312L3
49	AN3C5A		Bolt	3	...		139-312L3
50	MS21042L3	NAS9926-3L	Nut	1	...		139-312L3
51	NAS1149C0332R		Washer	8	...		139-312L3
52	NAS1149D0332J		Washer	2	...		139-312L3
53	A413A16		Tubing	2.0 m	...		139-312L3
54	NAS1375A10CA014		Flex duct	1	...		139-312L3
55	A413A12		Tubing	4.0 m	...	(4)	139-312L3
56	MS21266-1N		Grommet	1	...		139-312L3
57	M83413/8-A007BB		Bonding cable	1	...		139-312L3
58	8G2120A00931		Inlet assembly	1	...		139-312L3
59	8G2120A00631		Duct assembly	1	...		139-312L3
60	8G2120A06131		Filter	1	...		139-312L3
61	8G2170A00531		Drain assembly	1	...		139-312L3
62	8G2170A00331		Drain assembly	1	...		139-312L3
63	8G2120A01831		Cowl assembly	1	...		139-312L3
64	8G5310A43111		LH AVIONIC BAY STR PROVISION	REF	..	(5)	-
65	8G3000A11652		Closure	1	...		139-312L4
66	8G2120A04451		Closure	1	...		139-312L4
67	NAS1836C3-16		Insert	5	...		139-312L4
68	MS21069-3	MS21069L3	Nut plate	1	...		139-312L4
69	NAS6603-6		Bolt	2	...		139-312L4
70	NAS6603-7		Bolt	2	...		139-312L4
71	NAS1399C3-2		Rivet	2	...		139-312L4
72	A363A01		Terminal	1	...		139-312L4
73	NAS1149D0332K		Washer	4	...		139-312L4
74	NAS1399C3-4		Rivet	2	...		139-312L4
75	8G2120A03931		LH av cooling fan bracket assy	1	...		139-312L4
76	8G4640AOXXXX		AMMC option file	1	.	(8)(9)	-
77	8G4630AOXXXX		CDS option file	1	.	(8)(9)	-
78	8G4620ACXXXX		ECDU conf file	1	.	(8)(9)	-
79	8G2460ASXXXX		REPU conf file	1	.	(8)(9)	-

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

Refer also to Annex A for the spares materials required to comply with this Service Bulletin.

A.2 CONSUMABLES

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

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
80	199-05-002 TY II, CL 2 Code No. 900004603	Adhesive EA 934NA AERO (C397)	AR	(7)	I, II
81	Code No. 900001742	Filler K20 fiber bubbles	AR	(7)	I, II
82	199-05-002 Type I, Class 2	Adhesive EA9309NA (C231)	AR	(7)	I, II
83	199-05-002 Type I, Class 2	Adhesive EA9309.3NA (C021)	AR	(7)	II
84	Code No. 99999999000005462 or /002V-XX_001	Sealant Av-DEC Thixoflex gray (C347)	AR	(6)(7)	I, II
85	Code No. 500215758	Sealant PR1428-B2 MIL-S-8784	AR	(7)	I, II
86	Code No. 99999999000005967	(MC780 class B2) Sealant (C465)	AR	(7)	I, II
87	Code No. 99999999000017301	Corrosion inhibitor Ardrex AV 40 (C551)	AR	(7)	I, II
88	Code No. 900002367	Copper foil tape	AR	(7)	I
89	AWMS28-002 TY I, CL 1, GR A or B Code No. 99999999000011095	Waterborne chromate free primer (C596)	AR	(7)	I
90	Code No. 99999999000012912	Corrosion preventive compound Ardrex 3204 (C564)	AR	(7)	II
91	DC-4	Compound	AR	(7)	II
92	ASTM-D-5363	Locking adhesive loctite 242	AR	(7)	II
93	199-05-152 TY I, CL 2	Adhesive RTV 732	AR	(7)	II
94	Code No. 99999999000008841	Sealant PR1764-B2 (C240)	AR	(7)	II
95	GO-AS-0107 199-05-003 TY 1, CL 2	Teflon tape C230	AR	(7)	II
96	Code No. 99999999000001675	Adhesive CB200-40 (C356)	AR	(7)	II
97	AMS-C-9084 TY VIIIA, CL 2 Code No. 900005824	Fiberglass C320	AR	(7)	II
98	199-05-152, TY I, CL 2, Code No. 900002980	Adhesive, Rubber RTV732 (C126)	AR	(7)	II
99	Code No. 900005009	Adhesive EA956.NA	AR	(7)	II

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

Refer also to Annex A for the consumable materials required to comply with this Service Bulletin.

A.3 LOGISTIC MATRIX

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

LOGISTIC P/N	Q.TY (PER HELO)	NOTE	PART
189-312L1	1		Part I
189-312L2	1	(2)	Part II
189-312L3	1	(3)	Part II
189-312L4	1	(5)	Part II
AMMC option file	1	(8)(9)	Part II
CDS option file	1	(8)(9)	Part II
ECDU conf file	1	(8)(9)	Part II
REPU conf file	1	(8)(9)	Part II

NOTES

- (1) Item NOT to be ordered in quantity but to be assembled. See Part I for dedicated instructions.
- (2) Applicable for helicopters S/N 49054 and S/N 49064 thru S/N 49067.
- (3) Applicable for helicopters S/N 49054, S/N 49064 thru S/N 49066 and S/N 49067.
- (4) The final P/N A413A12-XXXX to be installed is obtained by cutting this item at appropriate length as described in Accomplishment instructions. "XXXX" is the length in mm of the piece cut.
- (5) Applicable for helicopters S/N 49054, S/N 49064 thru S/N 49066 and S/N 49067.
- (6) As alternative it is possible to use sealant PR1428-B2.
- (7) Item to be procured as local supply.
- (8) Option File and Configuration File P/Ns is depending upon helicopter configuration that can be different from the one reported in relevant helicopter "Commissa di Vendita" Customers 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 application of this Service Bulletin.
- (9) This software will not be supplied; as specified by Information Letter AW189-19- 017, 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>.

B. SPECIAL TOOLS

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

#	P/N	DESCRIPTION	Q.TY	NOTE	PART
100	8G5310A43611A005A	Drilling Template	1		I
101	8G5310A43611A005B	Drilling Template	1		I
102	8G5310A43111A005A	Drilling Template	1		II
103	TECO6-144-03	Torque wrench	1		II
104	M22520/1-01	Crimping tool	1		II
105	M22520/1-02	Crimping tool	1		II
106	M22520/1-04	Crimping tool	1		II
107	M22520/2-01	Crimping tool	1		II
108	M22520/2-07	Crimping tool	1		II
109	61303060	Multimeter	1		II
110	69590039	Tweezers	1		II
111	TALL5160M1A690A	Milliohmmeter (Bondimeter)	1		Annex A
112	Commercial	DC external Power (28VDC 3KW Min)	1		Annex A
113	Commercial	DC Voltmeter Tester	1		Annex A
114	Commercial	Conductor Pins and Wire Extensions	1		Annex A
115	Commercial	Low voltage continuity tester (Bond Meter (AOIP OM 16 or equivalent)	1		Annex A

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

Refer also to Annex A for the special tools required to comply with this Service Bulletin.

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) Unless otherwise specified and except for electrical bonding areas, in low/medium indirect/direct exposure areas perform the installation of riveted structural parts and riveted vendor components by means of sealant MC-780 C (C465). Apply a layer on all faying surface and wet assemble fixing fasteners.
- h) Unless otherwise specified and except for electrical bonding areas, in low/medium indirect/direct exposure areas perform the installation of bolted structural parts and bolted vendor parts by means of jointing compound Cor-Ban 27L (C075) or jointing compound JC5A (C001). Apply a layer on all faying surface and wet assemble fixing fasteners.
- i) All lengths are in mm.

PART I

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

NOTE

Unless otherwise specified, in all level direct exposure zones and medium level indirect exposure zones (except engine and APU bays), protect all removable fasteners that are not fully coated with polyurethane paint, by means of corrosion inhibitor Ardrox AV 40 (C551).

2. In accordance with AMP DM 89-A-06-41-00-00A-010A-A and with reference to Figures 1, 2, Figure 12 and 13, Figure 15 and 16 remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform the "LH avionic bay ventilation port structural provision" P/N 8G5310A43611 as described in the following procedure:
 - 2.1 Remove and retain the LH lower shelf assy P/N 8G5315A02032 and the attaching hardware.
 - 2.2 With reference to Figure 2 View A1, remove and retain the LH lower shelf angle assy P/N 3G4315A23631 and the attaching hardware from the sidewall bonded assy LH P/N 8G5340A23231.
 - 2.3 With reference to Figure 12 Detail A, locate the drilling template P/N 8G5310A43611A005A on the sidewall bonded assy LH P/N 8G5340A23231 in accordance with the existing holes.
 - 2.4 With reference to Figure 12 Detail A, drill n°4 holes Ø4.8 on the sidewall bonded assy LH P/N 8G5340A23231 in accordance with the drilling template P/N 8G5310A43611A005A.
 - 2.5 With reference to Figure 12 Detail A, countermark the cut-out profile in accordance with the drilling template P/N 8G5310A43611A005A.
 - 2.6 Remove the drilling template P/N 8G5310A43611A005A from the sidewall bonded assy LH P/N 8G5340A23231.
 - 2.7 With reference to Figure 12 Detail A, perform the circular cut-out (Ø76.3 mm) previously countermarked thru the sidewall bonded assy LH P/N 8G5340A23231. After trimming, fill the opened cells of honeycomb with filler K20 fiber bubbles at 30% with adhesive EA9309NA (C231). Break the sharp edges with chamfering 1x1 or radius 10.25 mm.

NOTE

Restore protective treatment of any cut edges.

- 2.8 With reference to Figure 2 View A1, prepare the surface for bonding and apply n°2 plies of fiberglass C320 inside the cut-out by means of the adhesive EA9309NA (C231). Realize the closure P/N 8G2120A10951 on the sidewall bonded assy LH P/N 8G5340A23231 (only internal side Ø135.0 mm).
- 2.9 With reference to Figure 2 View A1, countermark n°4 holes positions on the closure P/N 8G2120A10951.
- 2.10 With reference to Figure 2 View A1, enlarge n°4 holes up to Ø11.48÷11.61 on the sidewall bonded assy LH P/N 8G5340A23231.
- 2.11 With reference to Figure 2 View A1, install n°4 inserts P/N NAS1836-3-15 on the sidewall bonded assy LH P/N 8G5340A23231 by means of the adhesive EA 934NA AERO (C397).
- 2.12 Disassemble the drilling template P/N 8G5310A43611A005B (internal part, external part).
- 2.13 With reference to Figure 13 Detail C, locate the internal part of the drilling template inside the cut-out of the sidewall bonded assy LH P/N 8G5340A23231 in accordance with the two holes previously performed.
- 2.14 With reference to Figure 13 Detail D, assemble the external part of the drilling template with the internal part by means of the existing bolts.
- 2.15 With reference to Figure 13 Detail D, drill n°4 holes Ø4.8 on the sidewall bonded assy LH P/N 8G5340A23231 in accordance with the drilling template P/N 8G5310A43611A005B.
- 2.16 Remove the drilling template P/N 8G5310A43611A005B (internal and external part).
- 2.17 With reference to Figure 1 Detail A1, enlarge n°4 holes up to Ø11.48÷11.61 on the sidewall bonded assy LH P/N 8G5340A23231.
- 2.18 With reference to Figure 1 Detail A1, install n°4 inserts P/N NAS1836-3-15 on the sidewall bonded assy LH P/N 8G5340A23231 by means of the adhesive EA 934NA AERO (C397).
- 2.19 With reference to Figure 1 Detail A1, prepare the surface for electrical bonding. Clean, swab degrease and carefully abrade the closure using 220 grit garnet or “scotch brite” pad until the closure surface is entirely removed and the bare metal surface of the aircraft skin is exposed.

- 2.20 With reference to Figure 15 Detail J1 and Figure 16 Detail L, cut the Scotch tape 1181 in accordance with the dimensions shown and apply the Scotch tape 1181 to the sidewall bonded assy LH P/N 8G5340A23231 (internal side) covering the closure.
- 2.21 With reference to Figure 15 Detail J1, drill n°4 holes in the Scotch tape 1181 in accordance with the existing insert holes in the sidewall bonded assy LH P/N 8G5340A23231.
- 2.22 With reference to Figure 15 Detail H1 and Figure 16 Detail K, repeat the steps 2.20 and 2.21 on the external side of the sidewall bonded assy LH P/N 8G5340A23231.

CAUTION

Do not damage the central band of the tape.

- 2.23 With reference to Figure 15 TEMPLATE, cut the Scotch tape 1181 of a specific geometry, in accordance with the dimension shown.

NOTE

Insert the scotch tape into the existing cut out with the shorter fringes towards the internal side of the lower panel assy.

NOTE

Bond first the central band of the scotch tape to the internal wall of the cut-out.

- 2.24 With reference to Figure 15 TEMPLATE, Detail H2 and Detail J2 and Figure 16, apply the Scotch tape 1181 previously shaped to the internal and external side of the sidewall bonded assy LH P/N 8G5340A23231.
- 2.25 With reference to Figure 15 Detail H2 and Detail J2, drill n°8 holes in the Scotch tape 1181 in accordance with the existing insert holes in the sidewall bonded assy LH P/N 8G5340A23231.
- 2.26 With reference to Figure 2 View A2, apply a fillet sealant around the perimeter of the internal copper foil by means of sealant PR1428-B2.
- 2.27 Clean the area reworked in the previous steps by means of Isopropyl alcohol (C039) or MEK (C005) and a clean cheesecloth (C916).
- 2.28 With reference to Figure 16 Detail K, apply the tape HT3000FR-125 covering the copper foil on the external side.
- 2.29 With reference to Figure 1 Detail A2, apply two coats of the waterborne chromate free primer (C596) on the exposed surface to allow the sealant adhesion.

- 2.30 With reference to Figure 1 Detail A2 and Figure 16 Detail K, install the wire mesh assy P/N 8G2120A10631 and the lip P/N 8G2120A10851 by means of n°4 screws P/N MS27039-1-07 and n°4 washers P/N NAS1149C0316R. Apply a fillet on the closure perimeter internal side by means of the sealant PR1428-B2.
- 2.31 With reference to Figure 2 View A2, apply two coats of the waterborne chromate free primer (C596) on the exposed surface to allow the sealant adhesion.
- 2.32 With reference to Figure 2 View A2 and Figure 16 Detail L, install the EMC filter P/N 8G2120A09632 and the EMC filter scoop LH P/N 8G2120A11551 on the closure P/N 8G2120A10951 by means of n°4 screws P/N MS27039-1-14 and n°5 washers P/N NAS1149D0316J. Apply a fillet of the sealant PR1428-B2 on the perimeter of the installed parts.
- 2.33 With reference to Figure 2 View A1, re-install the LH lower shelf angle assy P/N 3G4315A23631 on the sidewall bonded assy LH P/N 8G5340A23231 previously removed by means of the existing hardware.
- 2.34 Re-install the LH lower shelf assy P/N 8G5315A02032 previously removed by means of the existing hardware.
3. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
4. Return the helicopter to flight configuration and record for compliance with Part 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 89-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 89-A-06-41-00-00A-010A-A and with reference to Figures 3 thru 5, Figure 13 and 14, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform the "LH avionic bay structural provision" P/N 8G5310A43111 as described in the following procedure:
 - 2.1 With reference to Figure 3 View B1, remove existing rivets from the STA 6700 panel sub assy P/N 8G5330A67131 and the STA 6700 upper angle LHS P/N 4F5330A15953 in the indicated positions.
 - 2.2 With reference to Figure 3 View B1, drill n°2 holes $\varnothing 5.33 \div 5.45$ thru the STA 6700 upper angle LHS P/N 4F5330A15953 and the STA 6700 panel sub assy P/N 8G5330A67131.
 - 2.3 With reference to Figure 3 View B1, drill the hole $\varnothing 12.0$ thru the STA 6700 upper angle LHS P/N 4F5330A15953 and the STA 6700 panel sub assy P/N 8G5330A67131.
 - 2.4 With reference to Figure 3 View B1, drill the hole $\varnothing 13.0$ only thru the STA 6700 panel sub assy P/N 8G5330A67131.
 - 2.5 With reference to Figure 3 View B1, drill the hole $\varnothing 5.33 \div 5.45$ only thru the STA 6700 upper T-shape profile P/N 8G5330A25751.
 - 2.6 With reference to Figure 3 View B1, drill n°2 rivet holes thru the STA 6700 panel sub assy P/N 8G5330A67131 and thru the STA 6700 upper T-shape profile P/N 8G5330A25751.

NOTE

Restore corrosion protection prior to dry assembly.
Ensure that chemical conversion process has been performed on all cleaned surfaces.

- 2.7 With reference to Figure 3 View C1, install and assemble the terminal P/N A363A01 by means of n°2 rivets P/N NAS1399C3-4.
- 2.8 With reference to Figure 3 View B1, remove n°4 existing pins and collars from the STA 6700 lower horizontal clip LH P/N 8G5300A03651, the STA 6700 lower corner LH P/N 4F5330A37352 and the STA 6700 upper T-shape profile P/N 8G5330A25751.

- 2.9 With reference to Figure 3 View B1, drill n°4 holes $\varnothing 4.86 \pm 4.90$ thru the STA 6700 lower horizontal clip LH P/N 8G5300A03651, STA 6700 lower corner LH P/N 4F5330A37352 and the STA 6700 upper T-shape profile P/N 8G5330A25751.
- 2.10 With reference to Figure 12 View B, locate the drilling template P/N 8G5310A43111A005A on the STA 6700 panel sub assy P/N 8G5330A67131 in accordance with the existing hole.
- 2.11 With reference to Figure 12 View B, drill n°5 holes $\varnothing 4.8$ thru the STA 6700 panel sub assy P/N 8G5330A67131 in accordance with the drilling template P/N 8G5310A43111A005A.
- 2.12 With reference to Figure 12 View B, countermark the cut-out profile in accordance with the drilling template P/N 8G5310A43111A005A.
- 2.13 Remove the drilling template P/N 8G5310A43111A005A from the STA 6700 panel sub assy P/N 8G5330A67131.
- 2.14 With reference to Figure 3 View B1, perform the circular cut-out ($\varnothing 77.0$ mm) thru the STA 6700 panel sub assy P/N 8G5330A67131. After trimming, fill the opened cells of honeycomb with filler K20 fiber bubbles at 30% with adhesive EA9309NA (C231). Break the sharp edges with chamfering 1x1 or radius 1 ± 0.25 mm. Restore protective treatment of any cut edges.
- 2.15 With reference to Figure 3 View C1, temporarily locate the closure P/N 8G3000A11652 on the STA 6700 panel sub assy P/N 8G5330A67131 and countermark n°5 hole positions on the closure.
- 2.16 With reference to Figure 3 View C1, enlarge n°5 holes $\varnothing 11.48 \pm 11.61$ thru the STA 6700 panel sub assy P/N 8G5330A67131 and the closure P/N 8G3000A11652.
- 2.17 With reference to Figure 3 View C1 and Figure 4 View B2, install the closure P/N 8G3000A11652 and the closure P/N 8G2120A04451 inside the performed cut-out by means of adhesive EA9309NA (C231). If the fit between the two closures is too tight to allow the installation perform step 2.18.

NOTE

Perform step 2.18, only if the fit between the two closures P/N 8G3000A11652 and P/N 8G2120A04451 is too tight to allow the installation.

- 2.18 With reference to Figure 14, perform the installation of the two closures P/N 8G3000A11652 and P/N 8G2120A04451 as described in the following procedure:

- 2.18.1 With reference to Figure 14 View B3, enlarge the circular cut-out up to $\varnothing 78.0$ mm thru the STA 6700 panel sub assy P/N 8G5330A67131. After trimming, fill the opened cells of honeycomb with filler K20 fiber bubbles at 30% with adhesive EA9309NA (C231). Break the sharp edges with chamfering 1x1 or radius 1 ± 0.25 mm. Restore protective treatment of any cut edges.
 - 2.18.2 With reference to Figure 14 Detail F, perform the indicated cut-out of the cylindrical flange of the closure P/N 8G3000A11652.
 - 2.18.3 With reference to Figure 14 Detail G, perform the indicated cut-out of the cylindrical flange of the closure P/N 8G2120A04451.
- NOTE**
- Align the five holes of the closure with those existing on the STA 6700 panel sub assy.
- 2.18.4 With reference to Figure 14 View C3, prepare the contact surface for bonding and install the closure P/N 8G3000A11652 around the cut-out (FWD side) on the STA 6700 panel sub assy P/N 8G5330A67131 by means of adhesive EA9309.3NA (C021).
 - 2.18.5 With reference to Figure 14 View B3, prepare the contact surface for bonding and install the closure P/N 8G2120A04451 around the cut-out (AFT side) on the STA 6700 panel sub assy P/N 8G5330A67131 by means of adhesive EA9309.3NA (C021).
 - 2.18.6 With reference to Figure 14 View B3 and View C3, apply n°1 ply of fiberglass (C320) inside the cylindrical cut-out by means of adhesive EA956.NA. Restore aircraft finish.
- 2.19 With reference to Figure 3 View C1, install n°5 inserts P/N NAS1836C3-16 on the STA 6700 panel sub assy P/N 8G5330A67131 by means of the adhesive EA 934NA AERO (C397).
 - 2.20 With reference to Figure 4 View B2, install the LH av cooling fan bracket assy P/N 8G2120A03931 by means of n°2 bolts P/N NAS6603-7, n°2 bolts P/N NAS6603-6 and n°4 washers P/N NAS1149D0332K.
 - 2.21 With reference to Figure 3 View C1, drill the hole $\varnothing 5.33 \pm 5.45$ thru the left wall P/N 8G5330A52651 and n°2 rivet holes in accordance with the dimensions shown.

NOTE

Restore corrosion protection prior to dry installation.
Ensure that chemical conversion process has been performed on all cleaned surfaces.

- 2.22 With reference to Figure 3 View C1, install the nut plate P/N MS21069-3 on the left wall P/N 8G5330A52651 by means of n°2 rivets P/N NAS1399C3-2.
- 2.23 With reference to Figure 5 View C2, remove n°4 indicated existing anchor nuts P/N A407A3C2P.
- 2.24 With reference to Figure 5 View C2 and Figure 6 Detail B, remove the vent cover LH P/N 4F5335A37651 and the drainer LH sidewall rear vent P/N 4F5335A44851 from the helicopter.

NOTE

Unless otherwise specified, in all level direct exposure zones and medium level indirect exposure zones (except engine and APU bays), protect all removable fasteners that are not fully coated with polyurethane paint, by means of corrosion inhibitor Ardrox AV 40 (C551).

- 3. In accordance with AMP DM 89-A-06-41-00-00A-010A-A and with reference to Figures 8 thru 11, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform the left avionic bay fan C/A installation P/N 8G2120A06711 as described in the following procedure:
 - 3.1 In accordance with CSPP DM CSPP-A-20-10-12-02A-920A-D and with reference to Figure 10 View E, install n°2 standoffs P/N A388A3E06C75 by means of adhesive CB200-40 (C356) in accordance with the dimensions shown.

NOTE

Use the edging P/N A236A and P/N NASM21266 on edges which are liable to cause damage to cable assemblies or where abrasion may occur.

NOTE

Install the tubing braided P/N EN6049-003 and/or P/N EN6049-006 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 install:

- clamps (diameter only) two dash greater or lesser than the nominal one;
- 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.

- 3.2 With reference to Figure 8 thru 10, lay down the following cable assemblies on the existing routes unless otherwise indicated on the figures:
- 8G9A21A46801 Left avionic bay fan C/A (A1A468)
 - 8G9B21A51101 Left avionic bay C/A (B1A511)
- 3.3 With reference to Figures 8 thru 10, secure the cable assemblies laid down at the previous step by means of existing hardware and lacing cords.
- 3.4 With reference to Figure 10 View E, install n°2 clamps P/N AW001CB03H on the C/A B1A511 by means of n°2 washers P/N NAS1149D0332J and n°2 screws P/N NAS1190E3P6AK.

NOTE

In case TB277 is already fit on the Aircraft, reuse the existing one.

- 3.5 With reference to Figure 9 Detail D, fix the terminal board TB277 of the C/A B1A511 to the structure by means of n°2 screws P/N NAS1802-06-7 and n°2 washers P/N NAS1149DN616J.
- 3.6 In accordance with AMP DM 89-A-11-00-01-00A-720A-A and with reference to Figure 9 Detail D, install the decal P/N ED300TB277 on the structure in an area adjacent the terminal board TB277.
- 3.7 In accordance with CSPP DM CSPP-A-20-10-13-00A-622A-D and with reference to Figure 11 Wiring Diagram and Table, perform the electrical connections of the C/A B1A511 to the connector J127.
- 3.8 In accordance with CSPP DM CSPP-A-20-10-13-00A-622A-D and with reference to Figure 11 Wiring Diagram and Table, perform the electrical connections of the C/A A1A468 to the connector P127, to the connector A1P1 and to the splice SP1479.
- 3.9 Apply the corrosion preventive compound Ardrex 3204 (or equivalent) on the connectors, back shells, or any metallic accessory. Additional protection by tape or tubing heat shrinkable to improve the salt spray resistance (corrosion).
- 3.10 Apply DC-4 (or equivalent) for the protection of the internal part of electrical connectors from entry of water or liquid.
- 3.11 Perform a pin-to-pin continuity check of all the electrical connections made.
4. In accordance with AMP DM 89-A-06-41-00-00A-010A-A and with reference to Figures 3, 4 and 6 remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform the left avionic bay fan equipment installation P/N 8G2120A11111 as described in the following procedure:
 - 4.1 With reference to Figure 3 View B1, install the support P/N AW001CL001-N6 on the Upper Drainage Cowling LH P/N 4F5300A00332 (not shown) installed on top of the STA 6700 panel sub assy P/N 8G5330A67131 by means of adhesive CB200-40 (C356) in accordance with the dimensions shown.
 - 4.2 With reference to Figure 4 View B2, install the finguerguard grid P/N 70-177 on the fan P/N 109-0718-46-103 by means of n°4 washers P/N NAS1149C0332R and n°4 screws P/N NAS1802-3-4.

NOTE

If necessary, remove the LH av cooling fan bracket assy P/N 8G2120A03931 and re-install in conjunction with the fan and the duct.

- 4.3 With reference to Figure 4 View B2 and Figure 6 View E, install the duct P/N 8G2120L03551 and the fan (B203) P/N 109-0718-46-103 on the LH AV cooling fan bracket assy P/N 8G2120A03931 by means of n°4 washers P/N NAS1149C0332R and n°4 screws P/N NAS1802-3-6. Tighten the screws to 3.40÷4.50 Nm torque value then paint mark the screws.
- 4.4 With reference to Figure 6 View E, apply the locking adhesive loctite 242 to secure the screws.
- 4.5 In accordance with AMP DM 89-A-11-00-01-00A-720A-A and with reference to Figure 4 View B2, install the decal P/N ED300B203 on the LH AV cooling fan bracket assy P/N 8G2120A03931.
- 4.6 With reference to Figure 4 View B2, install the bonding cable P/N M83413/8-A009AB and fix one end to the terminal P/N A363A01 by means of existing hardware and one end to the fan B203 by means of the screw P/N MS35206-228 and n°2 washers P/N NAS1149DN632J.
- 4.7 With reference to Figure 4 View B2, secure the bonding cable P/N M83413/8-A009AB to the support P/N AW001CL001-N6 by means of the strap P/N AW001CK04HS.
5. In accordance with AMP DM 89-A-06-41-00-00A-010A-A and with reference to Figures 5 thru 7, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform the avionics cooling installation P/N 8G2120A00111 as described in the following procedure:
 - 5.1 With reference to Figure 5 View C2, install the grommet P/N MS21266-1N by means of the adhesive RTV 732 (C126).
 - 5.2 With reference to Figure 5 View C2, install the filter P/N 8G2120A06131 and the spigot P/N 8G2120A09931 on the STA 6700 panel sub assy P/N 8G5330A67131 by means of n°4 bolts P/N AN3C3A and n°4 washers P/N NAS1149C0332R.
 - 5.3 With reference to Figure 5 View C2, install the bonding cable P/N M83413/8-A007BB and fix one end by means of the bolt P/N AN3C3A and the washer P/N NAS1149D0332J and one end by means of the bolt P/N AN3C5A, the washer P/N NAS1149D0332J and the washer P/N AW008TY-09-74A. Apply sealant PR1764-B2 for cable grounding connection.
 - 5.4 With reference to Figure 5 View C2, install the drain assembly P/N 8G2170A00331 by means of n°2 bolts P/N AN3C5A and n°2 washers P/N NAS1149C0332R.

- 5.5 With reference to Figure 5 View C2, cut the tubing P/N A413A12 of adequate length and install between the drain assembly P/N 8G2170A00331 and the spigot P/N 8G2120A09931 by means of n°2 clamps P/N A437A011A. Apply sealant C465 on the drain tube connections.
- 5.6 With reference to Figure 6 Detail B, if damaged, remove the existing teflon tape and apply the new teflon tape C230.

NOTE

RTV732 can be applied to the central area between inlet
assy 8G2120A00931 & duct assy 8G2120A00631 to
ensure water ingress does not occur.

- 5.7 With reference to Figure 5 View C2 and Figure 6 Detail B, install the inlet assembly P/N 8G2120A00931, the cowl assembly P/N 8G2120A01831 and the duct assembly P/N 8G2120A00631 by means of n°8 screws P/N A428A3C11.
- 5.8 With reference to Figure 6 Detail B, apply a fillet of sealant PR1428-B2 around the perimeter of the cowl assembly P/N 8G2120A01831.
- 5.9 With reference to Figure 5 View C2, install the flex duct P/N NAS1375A10CA014 between the spigot P/N 8G2120A09931 and the duct assembly P/N 8G2120A00631 by means of n°2 straps P/N AW001CK06HS.
- 5.10 With reference to Figure 7 View D, remove the flexible tubing P/N A413A16-1800 from the helicopter. Retain all fasteners for later reuse.
- 5.11 With reference to Figure 7 View D, locate the drain assembly P/N 8G2170A00531.
- 5.12 With reference to Figure 7 View D, cut the tubing P/N A413A16 of adequate length and install the tubing (A413A16-1040) between the existing drain outlet pipe P/N 4F2870A00851 and the drain assembly P/N 8G2170A00531 by means of the existing fasteners.
- 5.13 With reference to Figure 7 View D, cut the tubing P/N A413A16 of adequate length and install the tubing (A413A16-640) between the existing pipe and the drain assembly P/N 8G2170A00531 by means of the existing fasteners.
- 5.14 With reference to Figure 7 View D, cut the tubing P/N A413A12 of adequate length and install the tubing (A413A12-470) between the LH AV cooling fan bracket assy P/N 8G2120A03931 and the drain assembly P/N 8G2170A00531 by means of the existing fasteners.
- 5.15 With reference to Figure 7 View D, fix the drain assembly P/N 8G2170A00531 to n°3 tubings by means of n°3 clamps P/N A437A011A. Apply sealant C465 on the tubing connections.

- 5.16 With reference to Figure 7 View D, fix the tubing P/N A413A12 to the the LH AV cooling fan bracket assy P/N 8G2120A03931 by means of the clamp P/N A437A011A. Apply sealant C465 on the tubing connection.
- 5.17 With reference to Figure 7 View D, install the clamp P/N AW002CB08N-W1A and the clamp P/N AW002CB10N-W1A by means of the bolt P/N AN3C3A, n°2 washers P/N NAS1149C0332R and the nut P/N MS21042L3.
6. In accordance with the applicable steps of AMP DM 89-A-46-21-00-00A-750A-A, perform the load software procedure of the AMMC.
7. In accordance with the applicable steps of AMP DM 89-A-46-31-00-00A-750A-A, perform the load software procedure of the CDS.
8. In accordance with the applicable steps of AMP DM 89-A-24-81-00-00A-752A-A, perform the load software procedure of the ECDU.
9. In accordance with the applicable steps of AMP DM 89-A-24-81-00-05A-752A-A, perform the load software procedure of the REPU.
10. In accordance with Annex A, perform the AW189 additional avionic ventilation ATP.
11. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
12. Return the helicopter to flight configuration and record for compliance with Part II of this Service Bulletin on the helicopter logbook.
13. Gain access to My Communications section on Leonardo WebPortal and compile the "Service Bulletin Application Communication".

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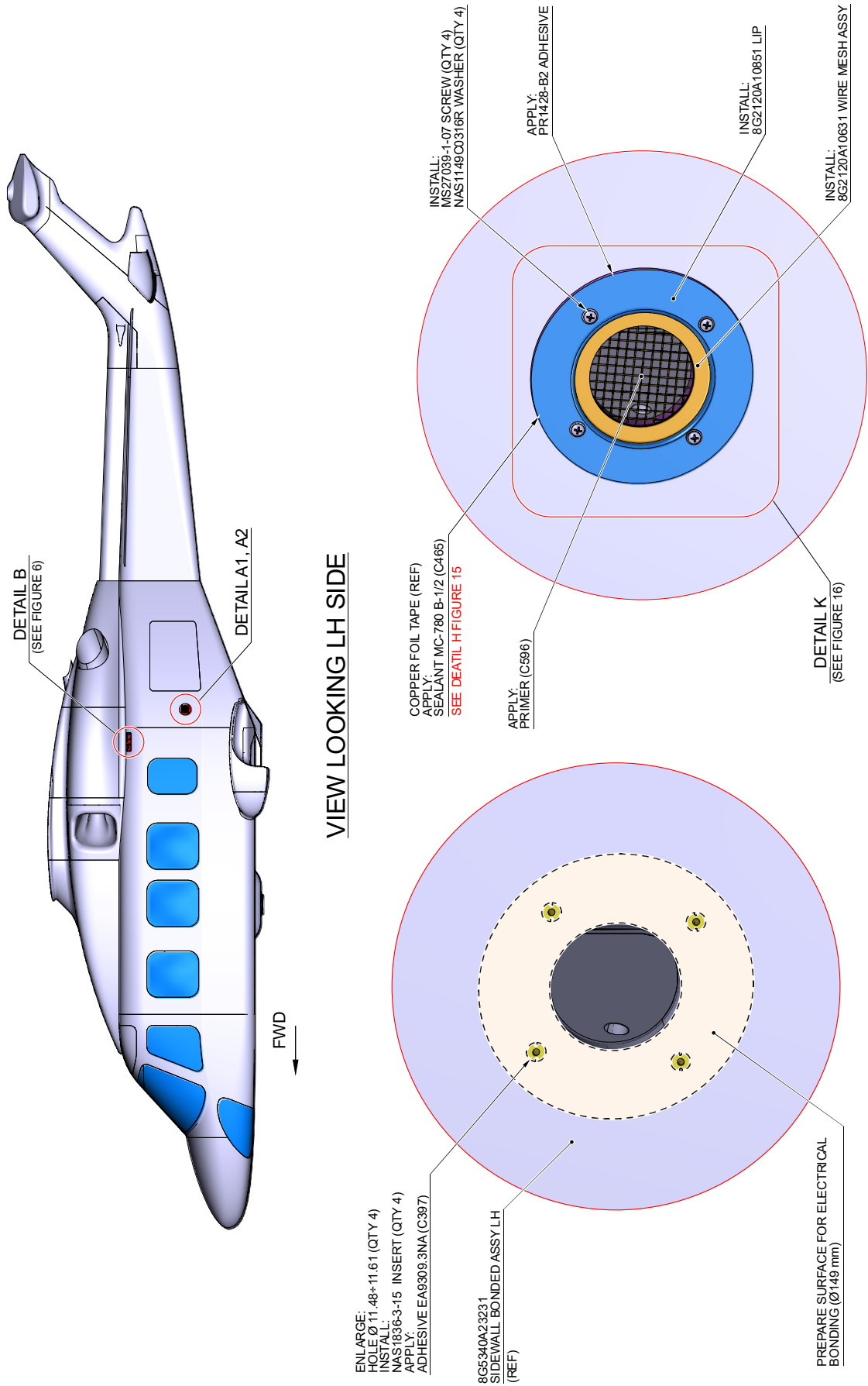
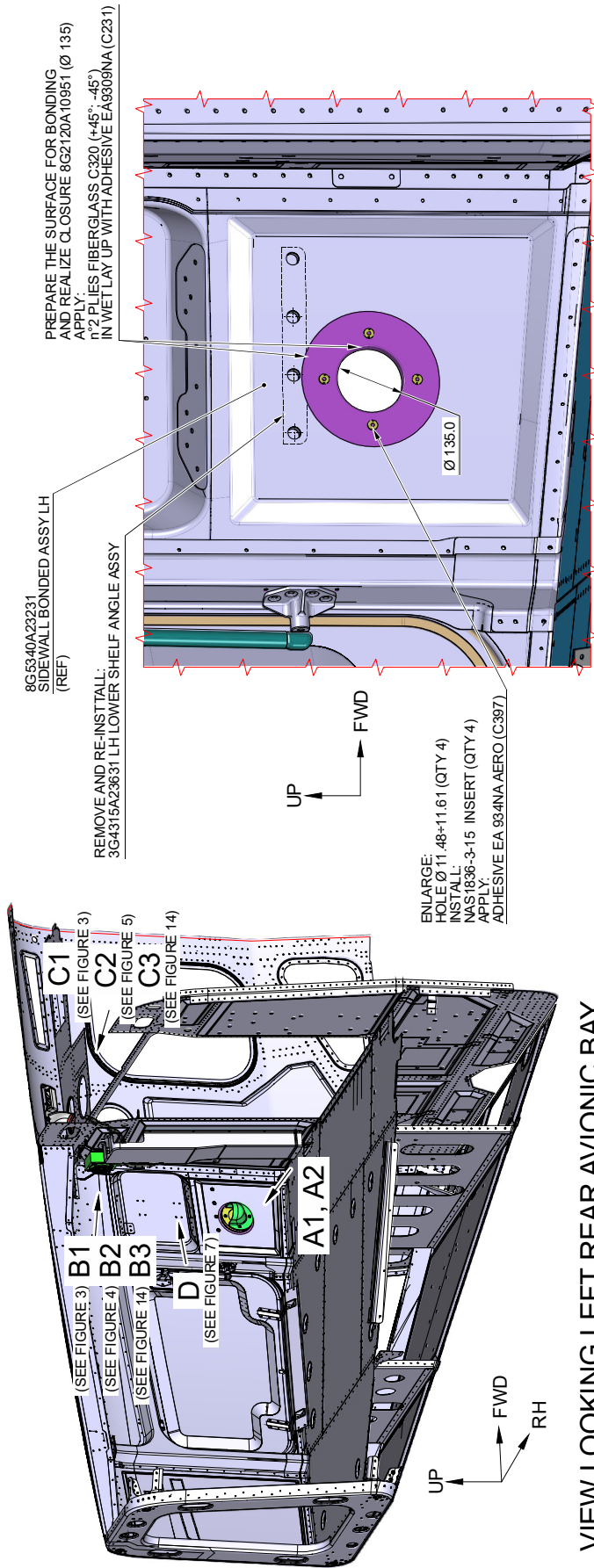


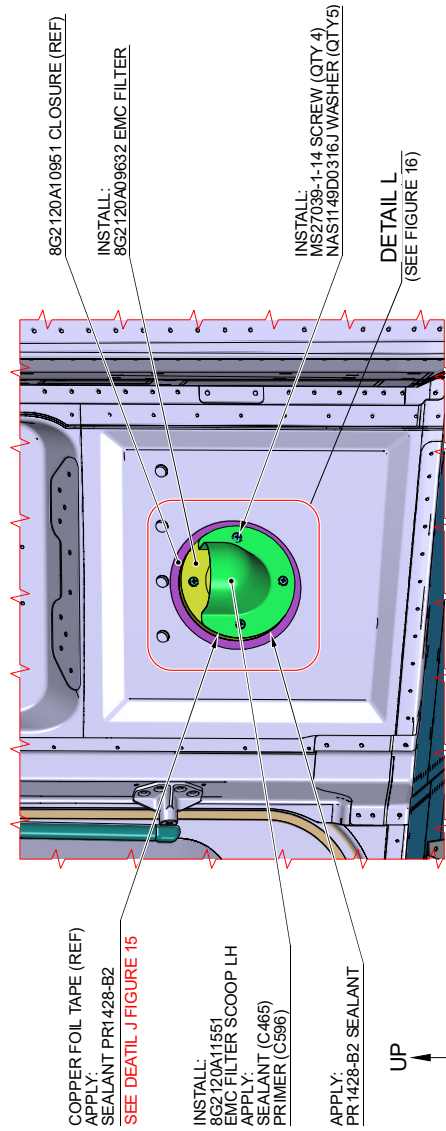
Figure 1

S.B. N°189-312 OPTIONAL
DATE: March 14, 2024
REVISION: /



VIEW LOOKING LEFT REAR AVIONIC BAY

VIEW A1
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED
FOR BETTER CLARITY PURPOSE



VIEW A2
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 2

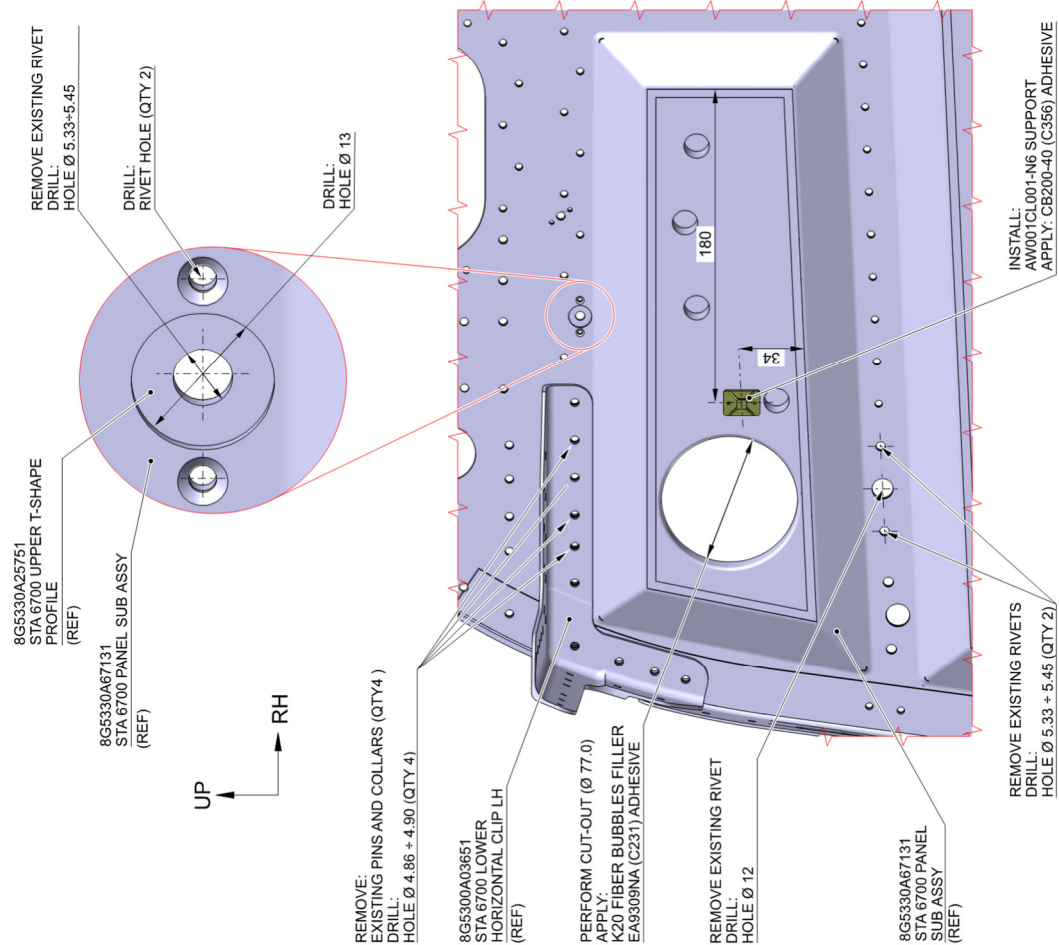
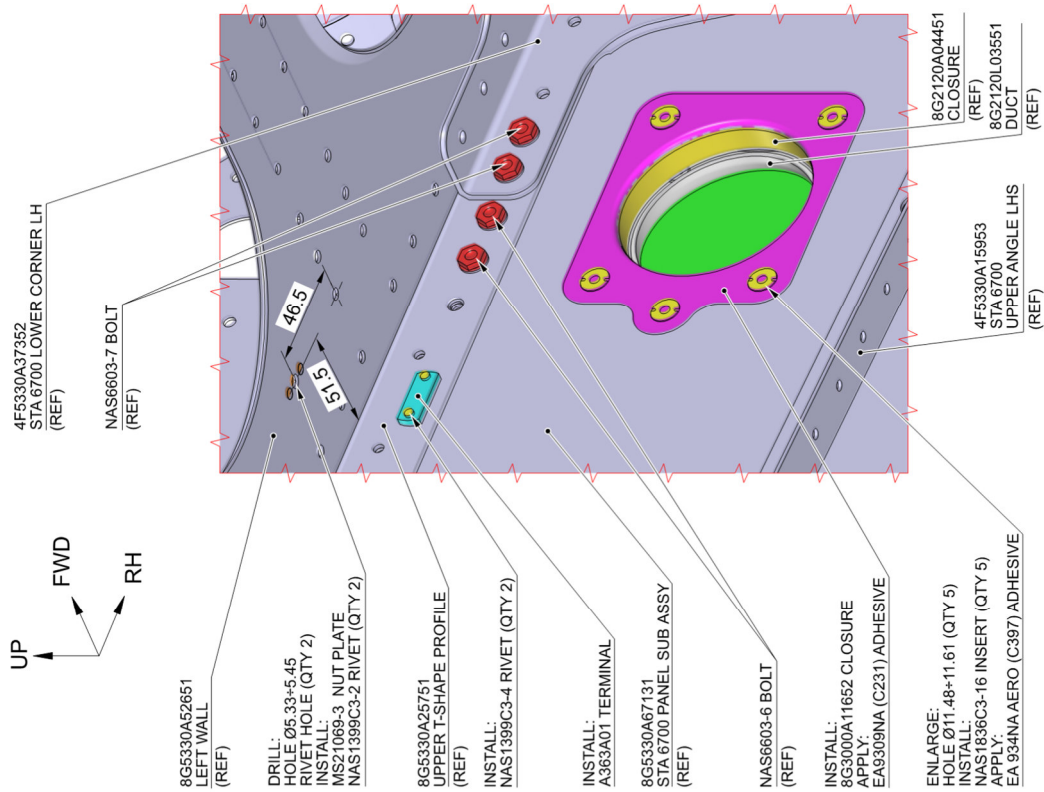


Figure 3

S.B. N°189-312 OPTIONAL
DATE: March 14, 2024
REVISION: /

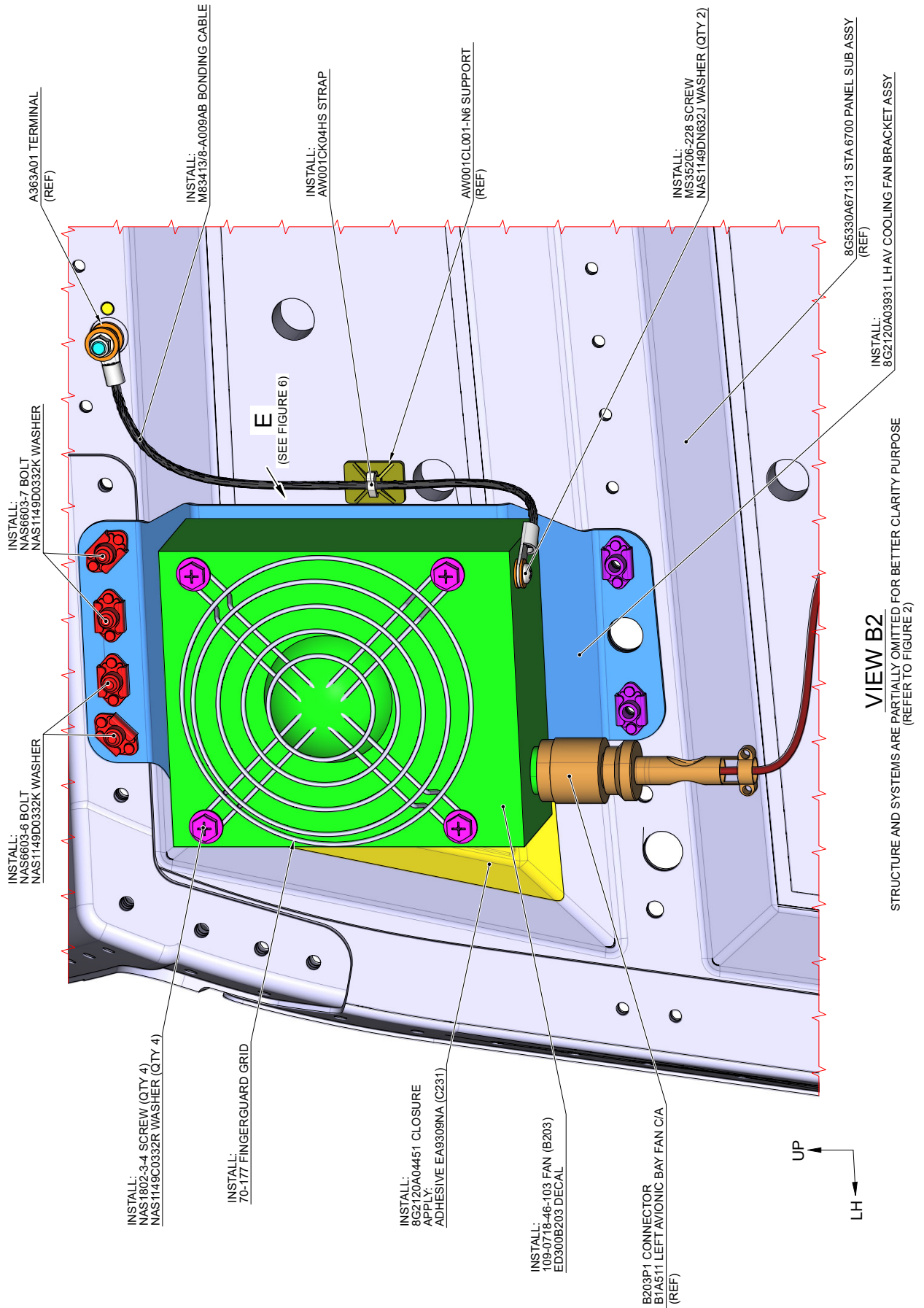
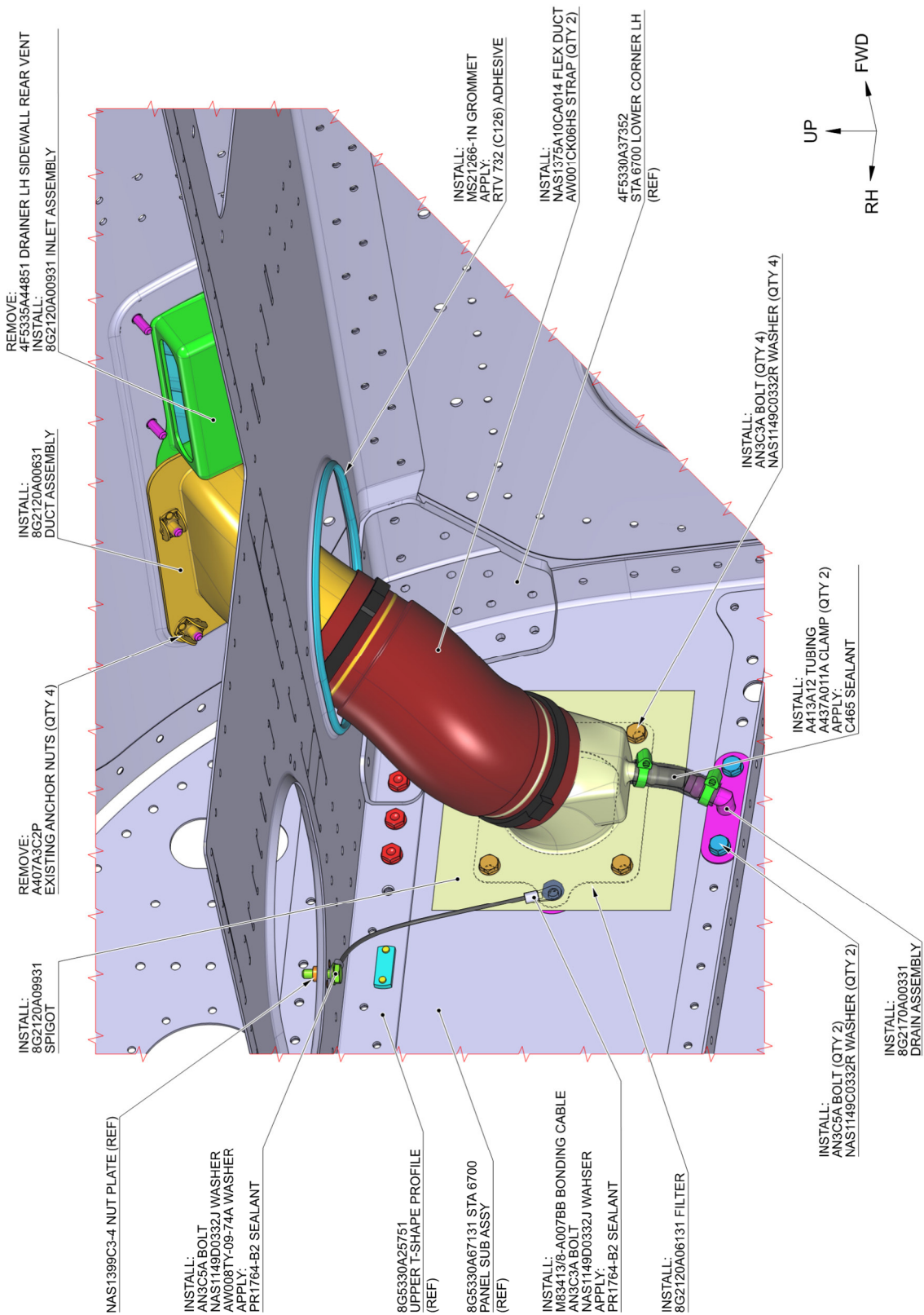


Figure 4



VIEW C2

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE (REFER TO FIGURE 2)

Figure 5

S.B. N°189-312 OPTIONAL
DATE: March 14, 2024
REVISION: /

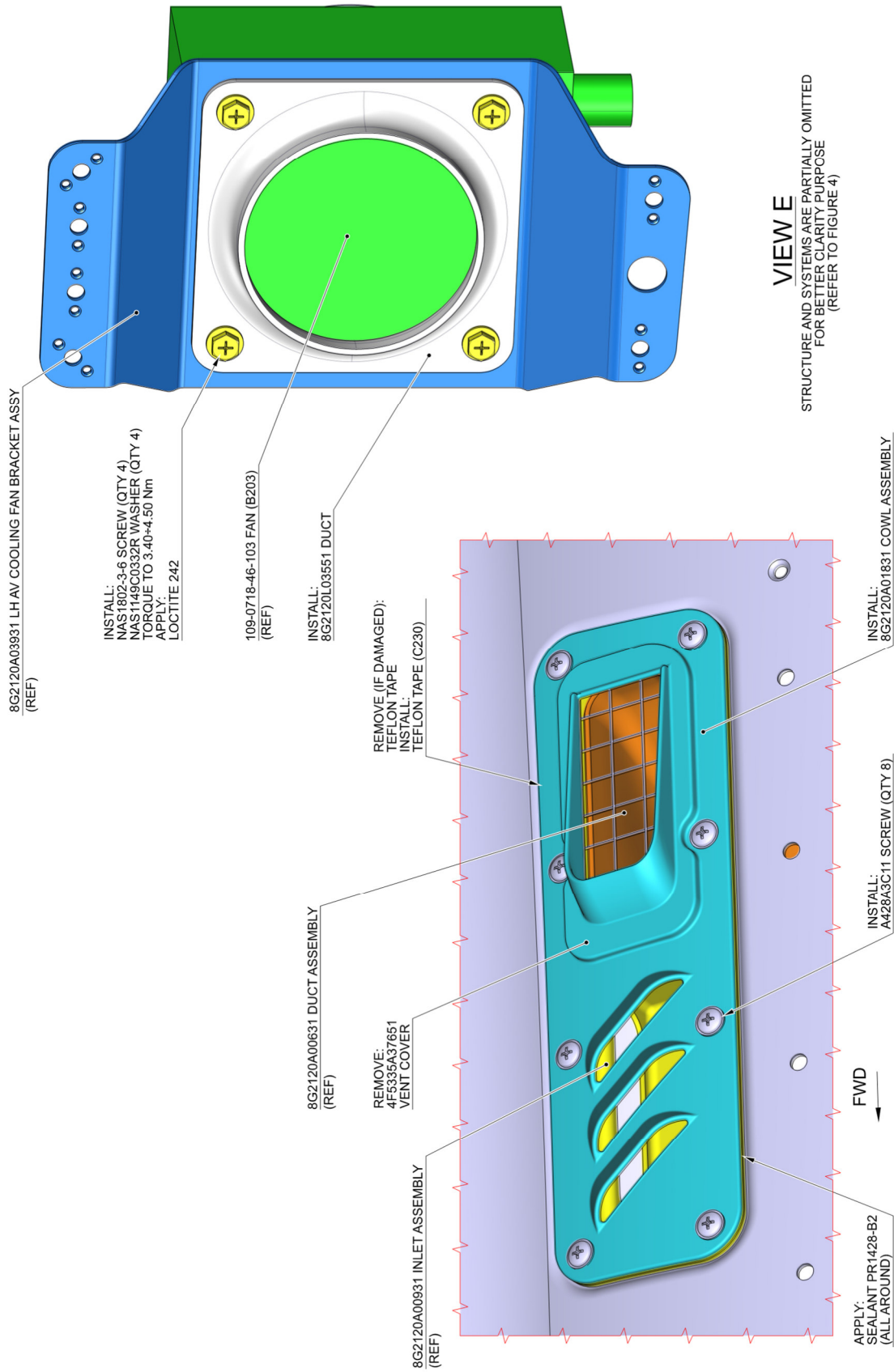
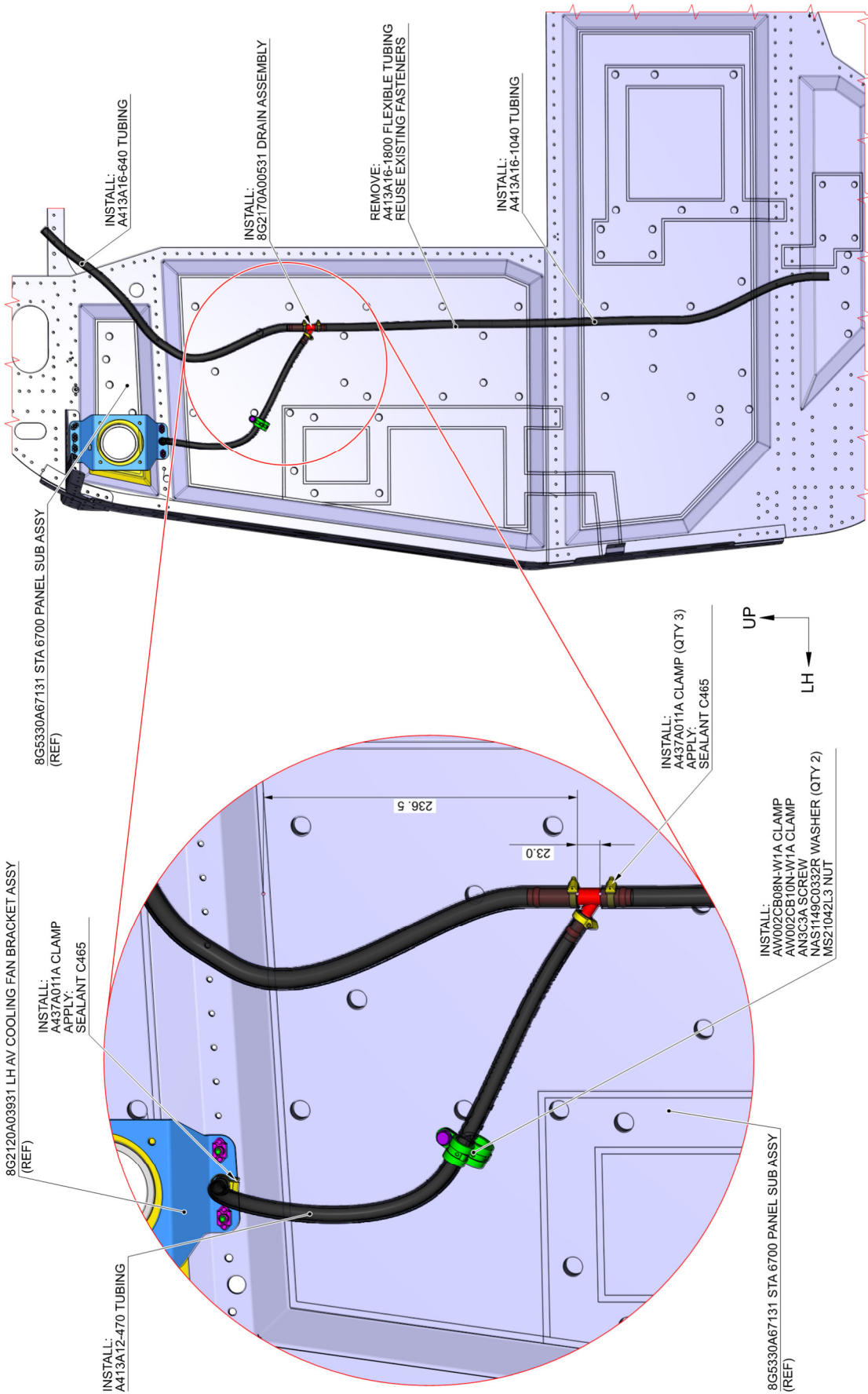


Figure 6

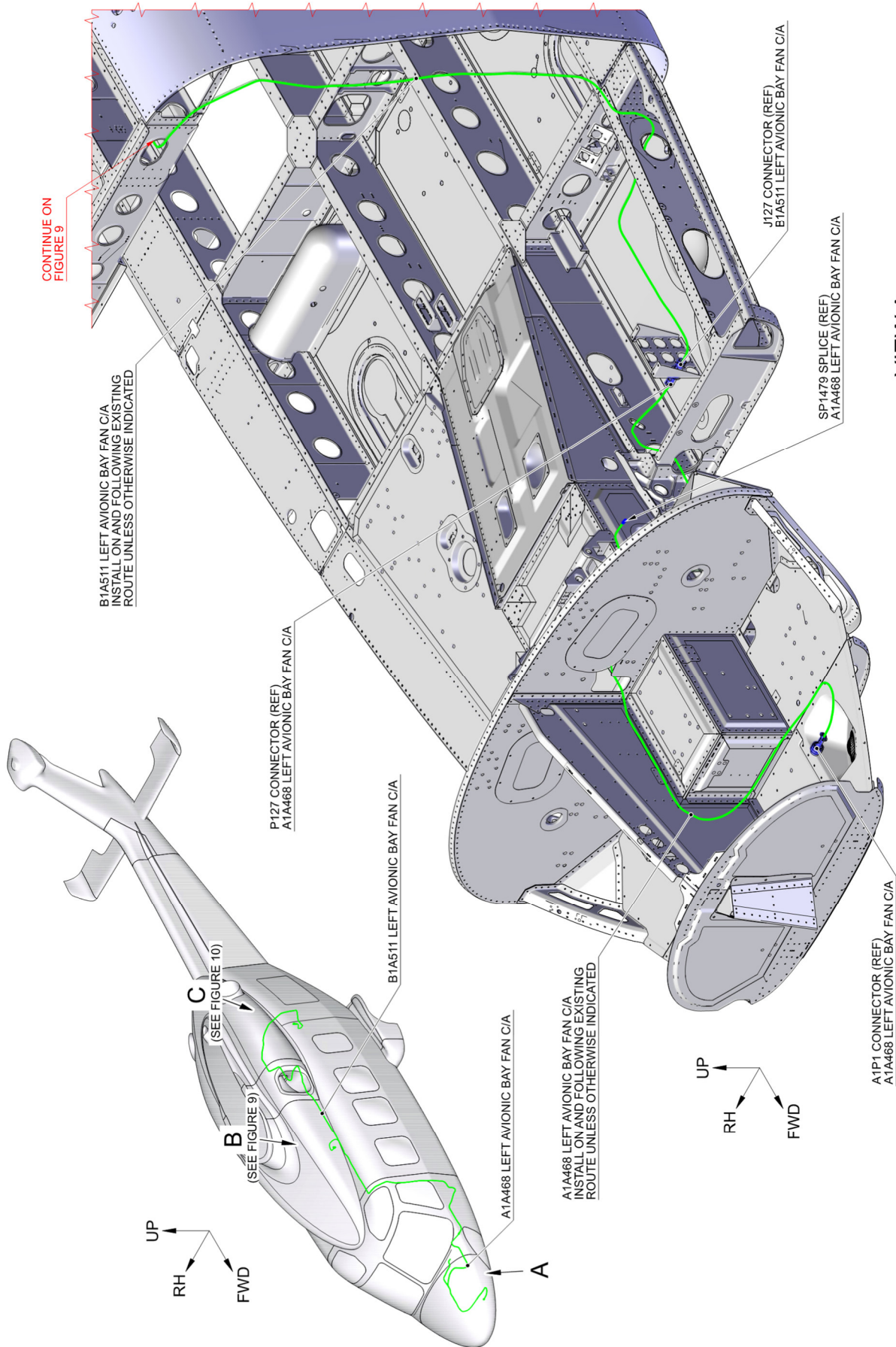


VIEW D

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE (REFER TO FIGURE 2)

Figure 7

S.B. N°189-312 OPTIONAL
DATE: March 14, 2024
REVISION: /



VIEW A

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 8

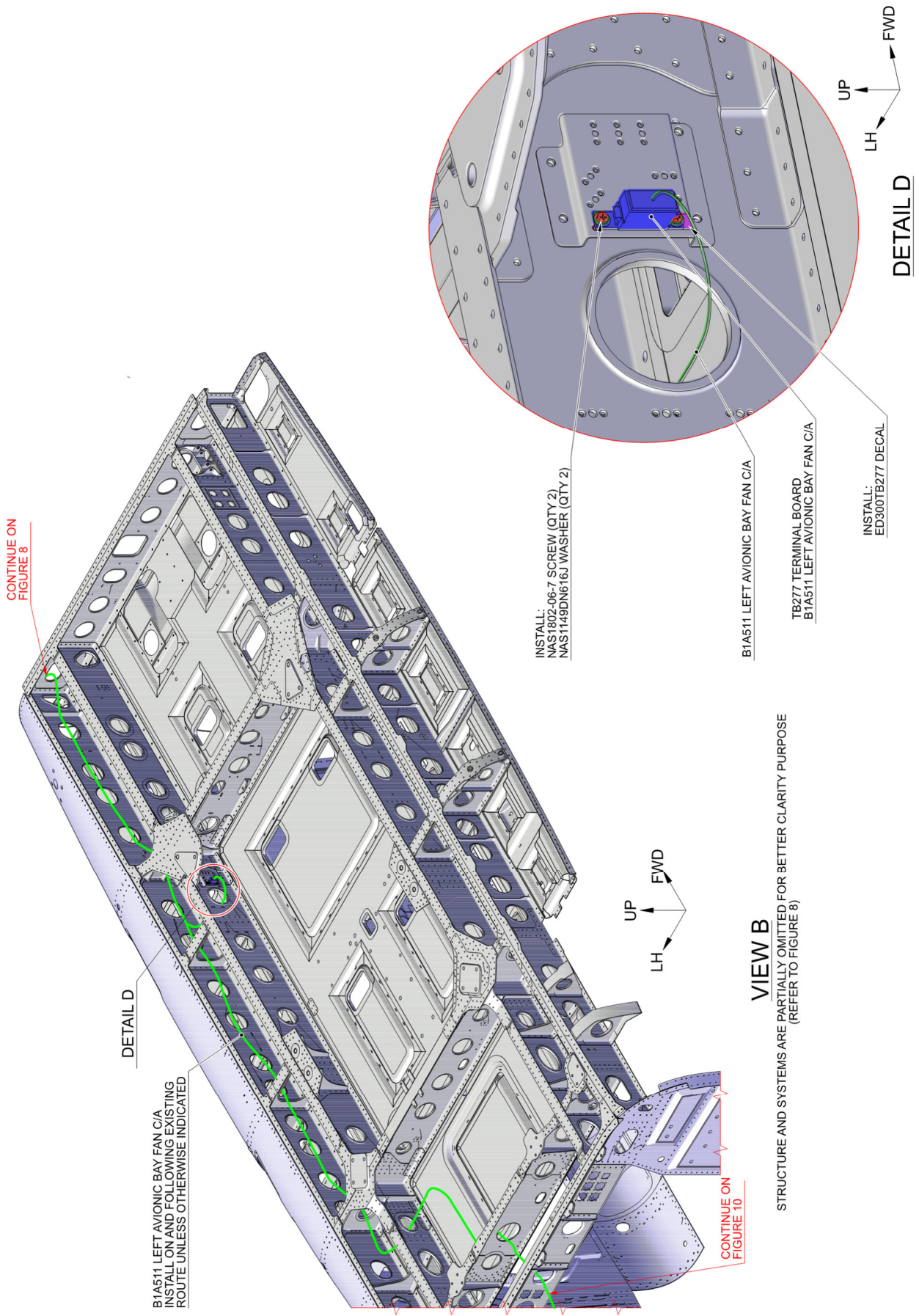


Figure 9

S.B. N°189-312 OPTIONAL
DATE: March 14, 2024
REVISION: /

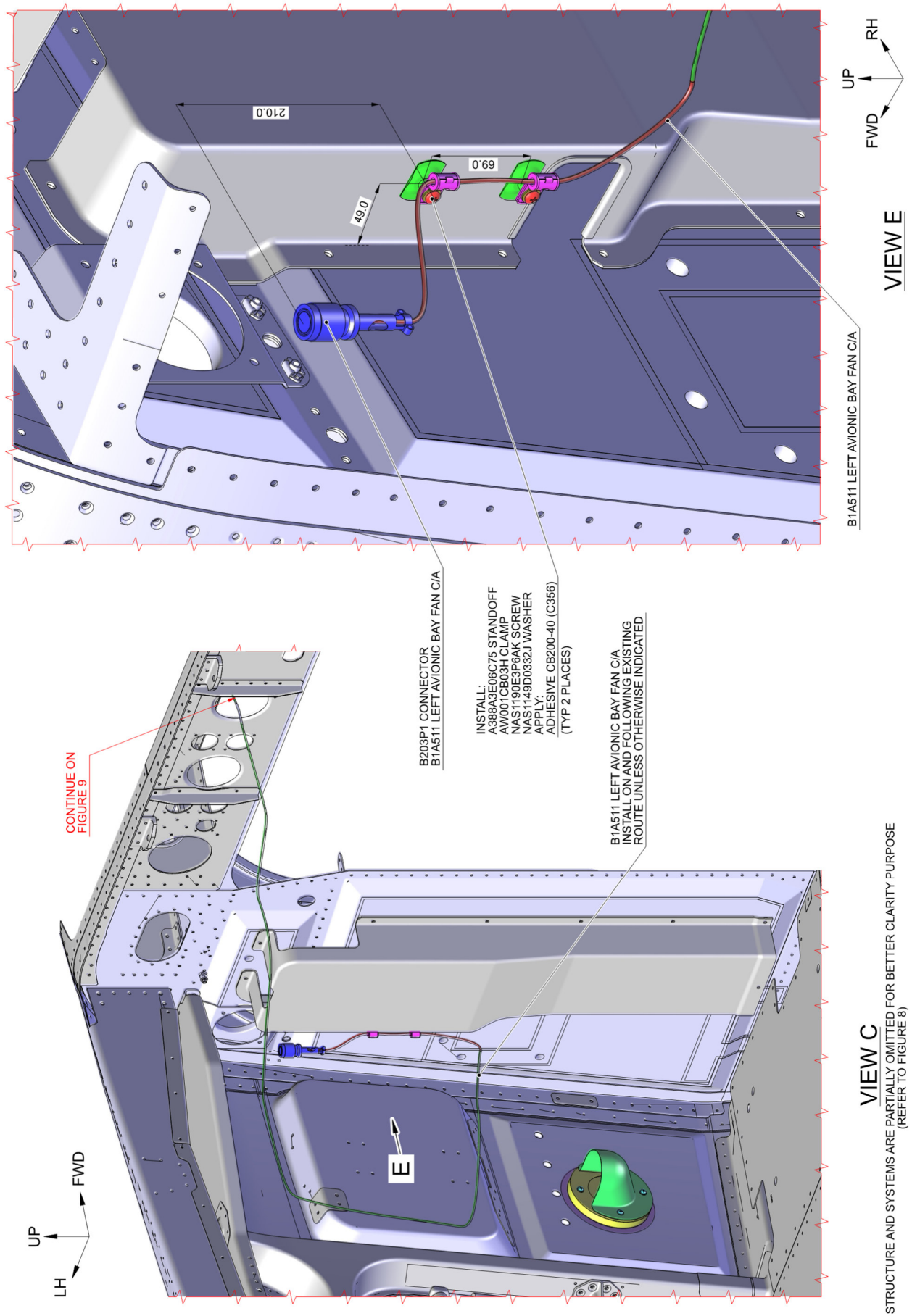
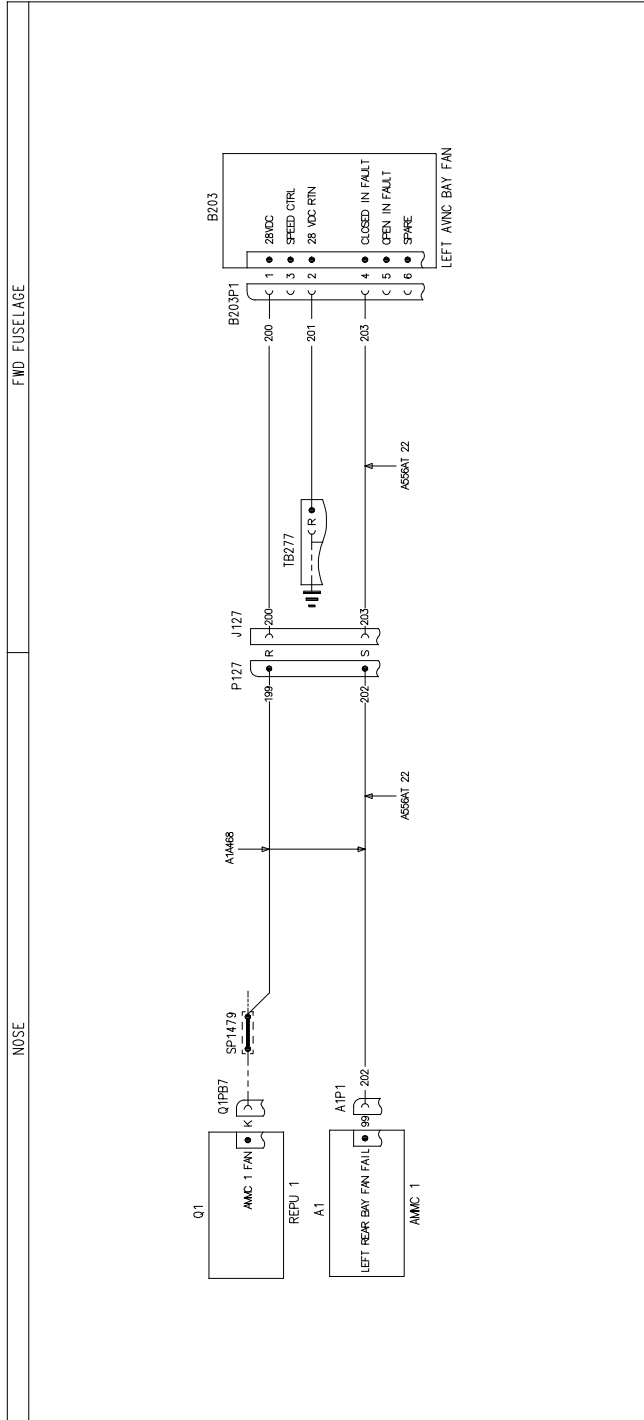


Figure 10



FUNCTIONAL NOTES

ALL CABLES ARE IN LOOM B1A511 UNLESS SPECIFIED.
 ALL CABLES ARE OF TYPE ASSGN 20 UNLESS SPECIFIED.
 CABLE IDENT. EVERY WIRE NUMBER IS PRECEDED BY THE ATA 100 DESCRIPTION 2120 AND FOLLOWED BY WIRE SIZE AND BMC CODE.

8G2120W00401
WIRING DIAGRAM LEFT AVNC BAY FAN
 SHEET 1

CABLE ASSY	WIRE		FROM REF-DES	ELECTRICAL CONTACT	TO REF-DES	ELECTRICAL CONTACT
	ID	COL.				
8G9A21A46801 (A1A468)	2120-202-22G	-	A1P1	M39029/56-348	P127	M39029/56-363
8G9A21A46801 (A1A468)	2120-199-20G	-	SP1479	-	P127	M39029/56-363
8G9B21A51101 (B1A511)	2120-200-20G	-	J127	M39029/56-351	B203P1	850-018-22 (REF)
8G9B21A51101 (B1A511)	2120-203-22G	-	J127	M39029/56-351	B203P1	M39029/56-348 (REF)

TABLE

CRIMP ON WIRES THE ELECTRICAL CONTACT INDICATED

Figure 11

S.B. N°189-312 OPTIONAL
 DATE: March 14, 2024
 REVISION: /

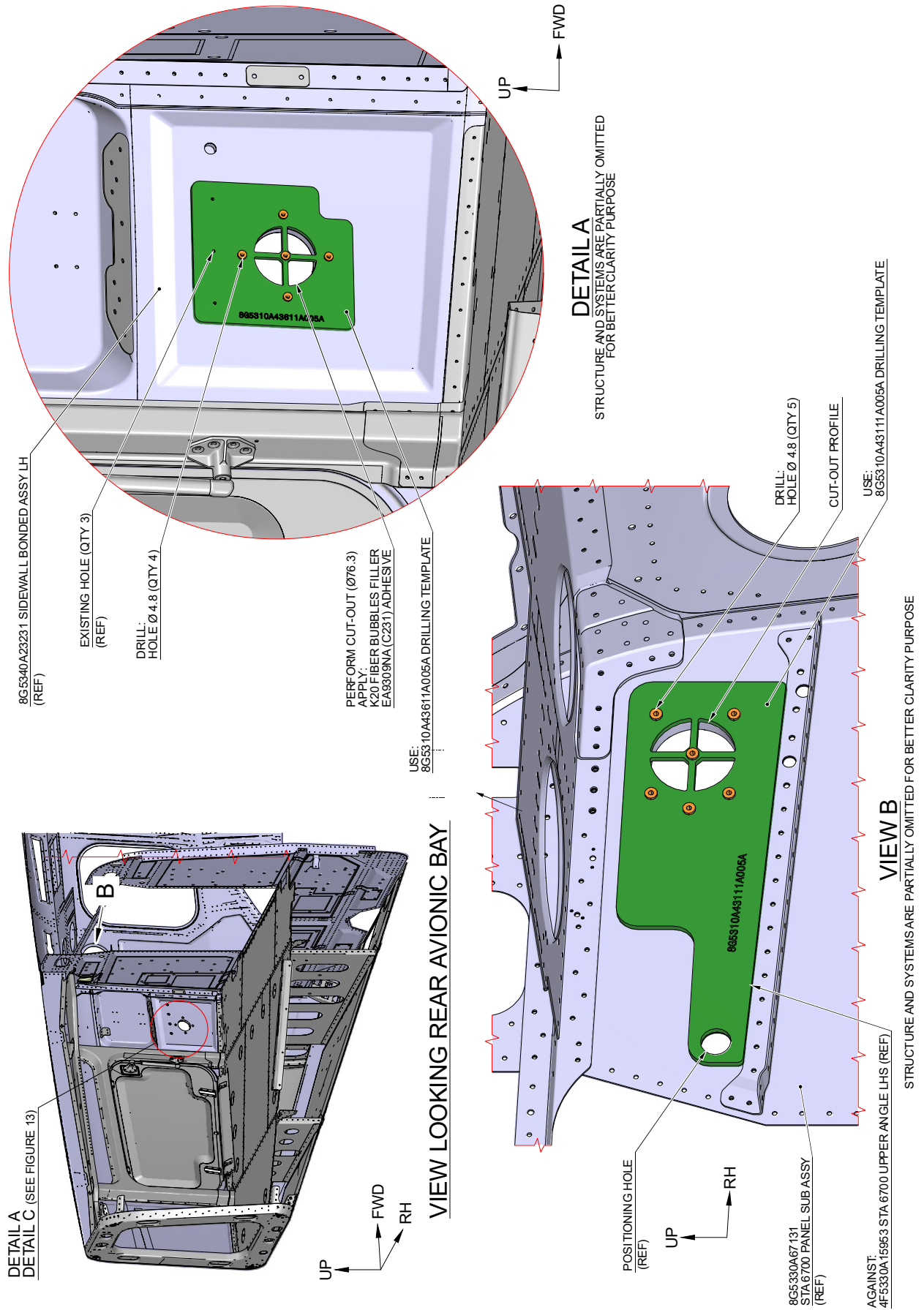


Figure 12

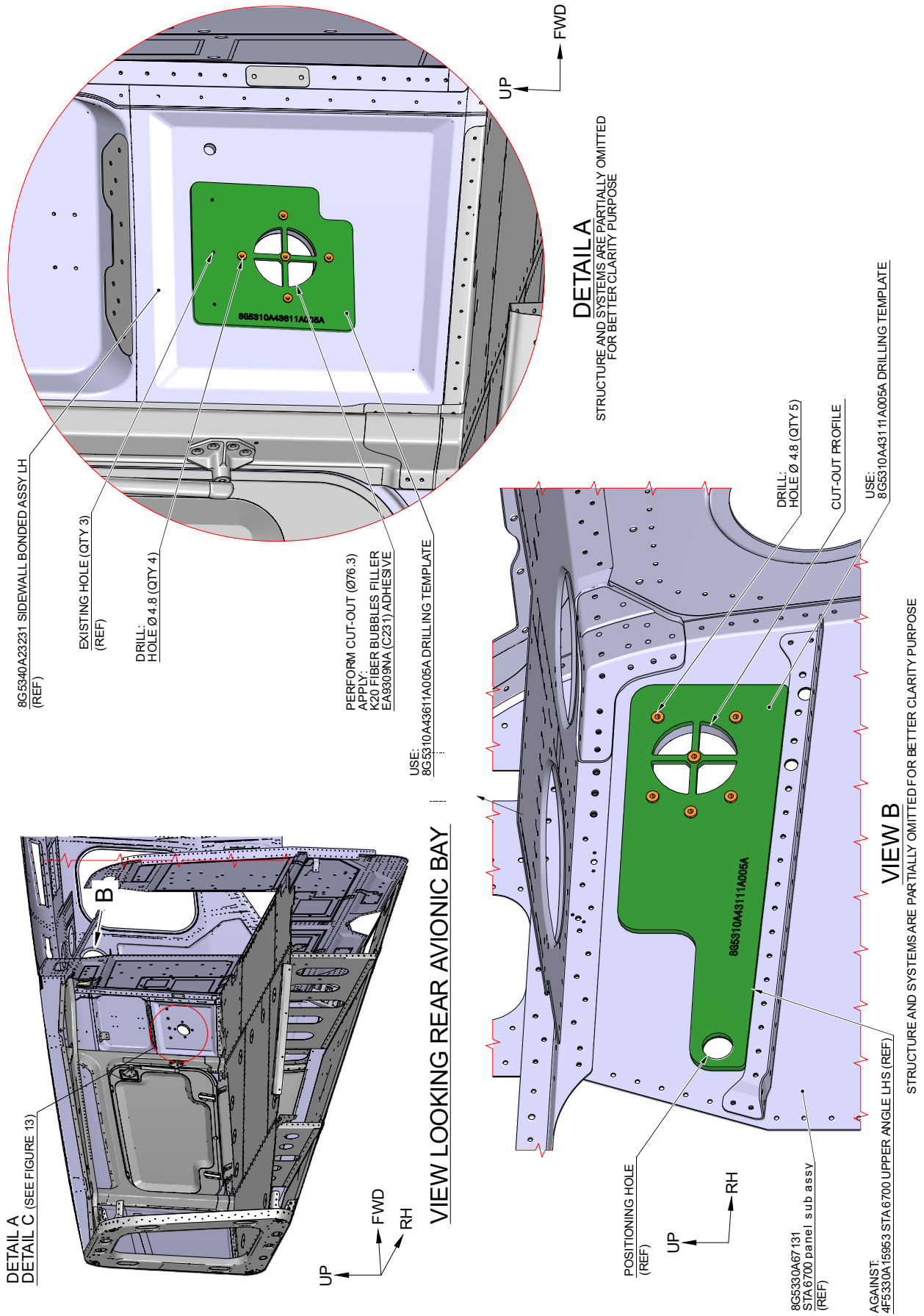


Figure 13

S.B. N°189-312 OPTIONAL
DATE: March 14, 2024
REVISION: /

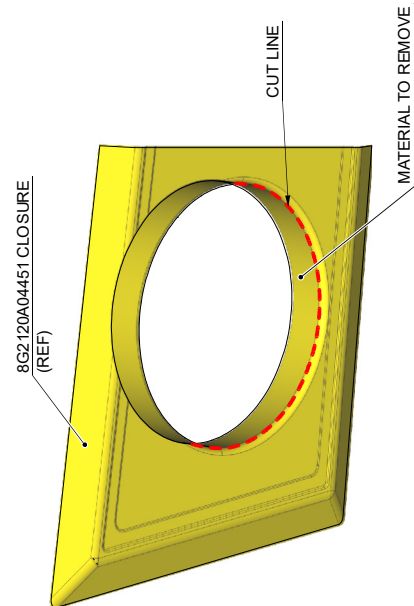
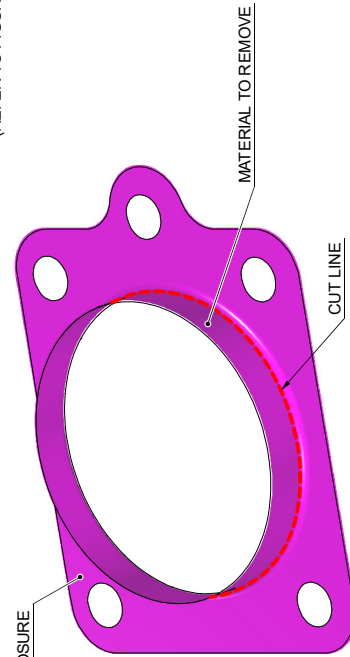
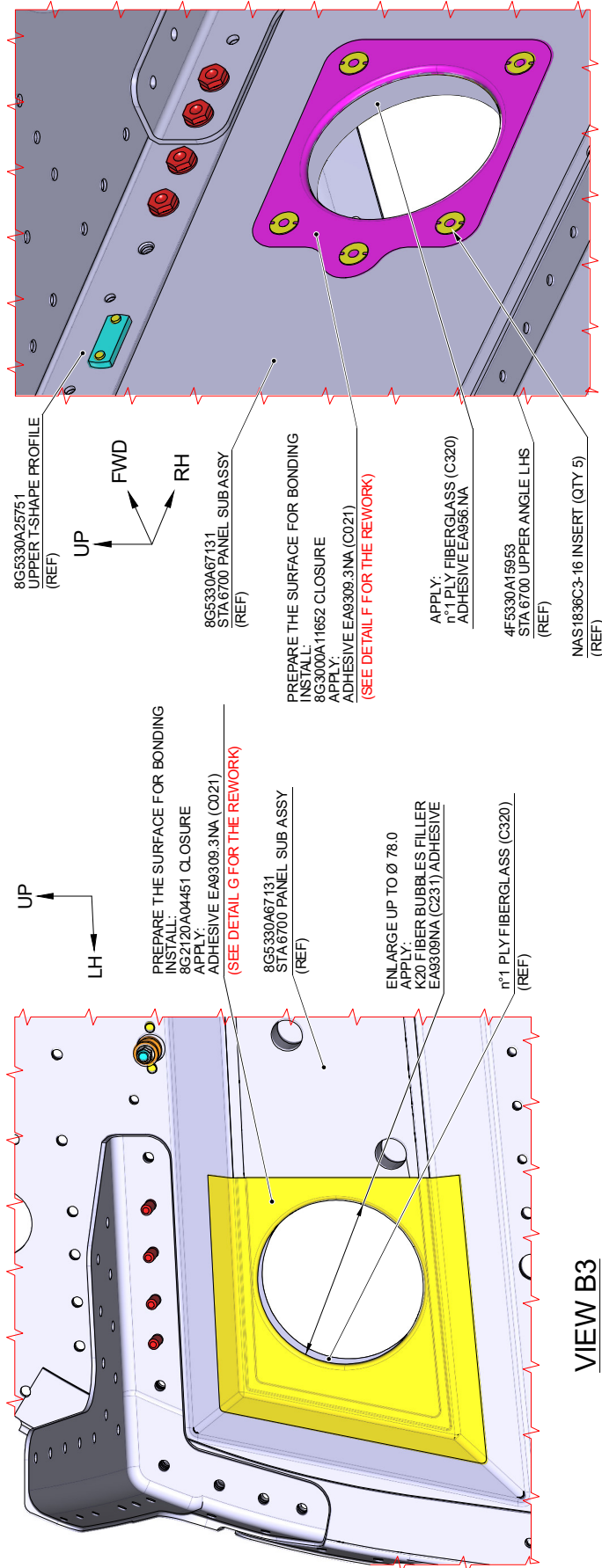


Figure 14

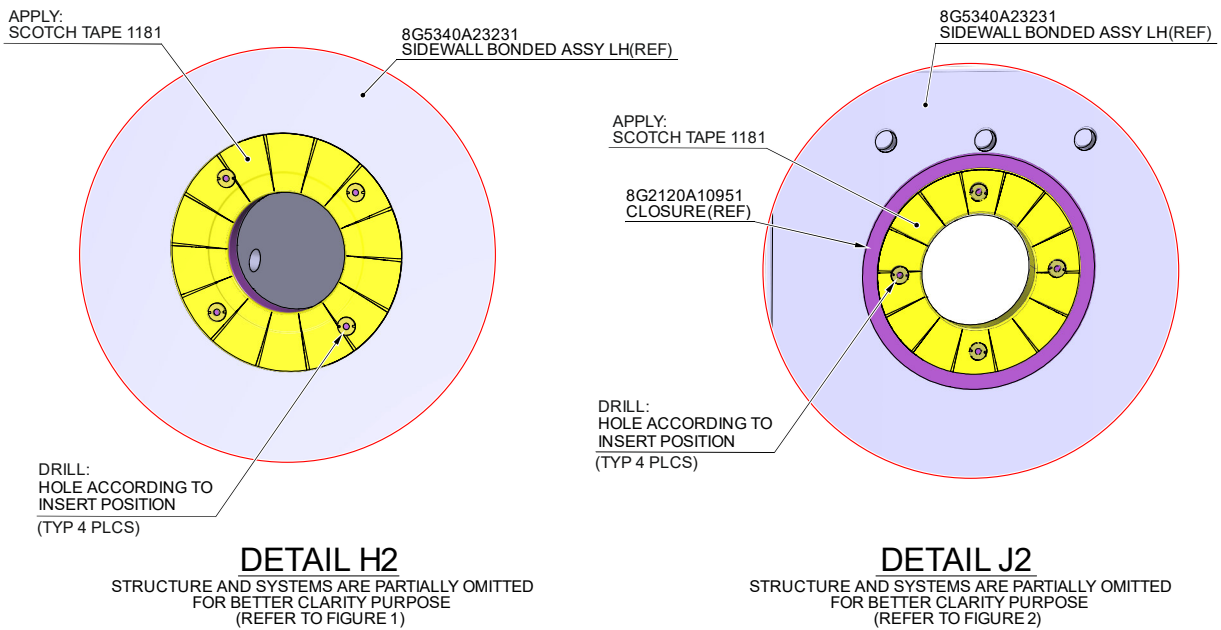
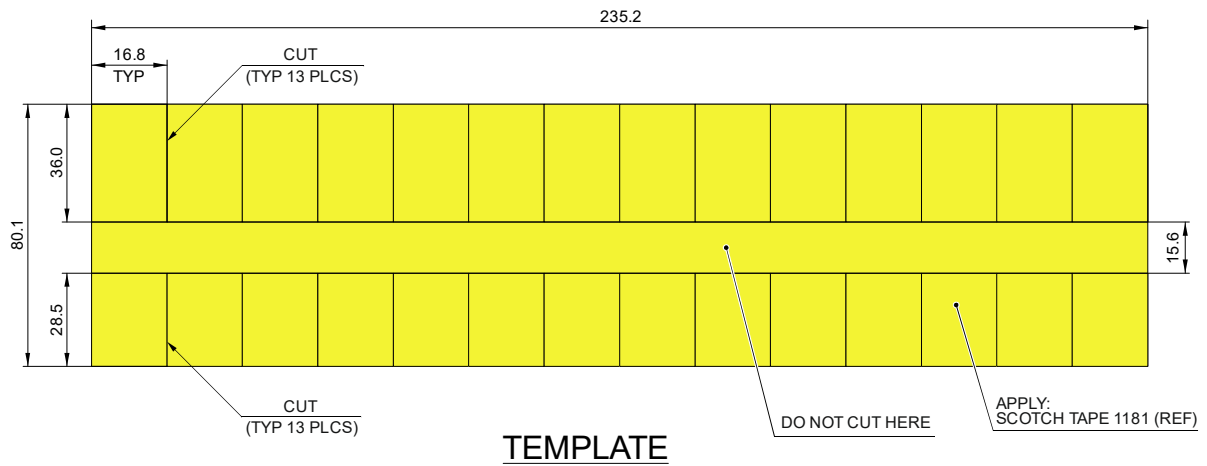
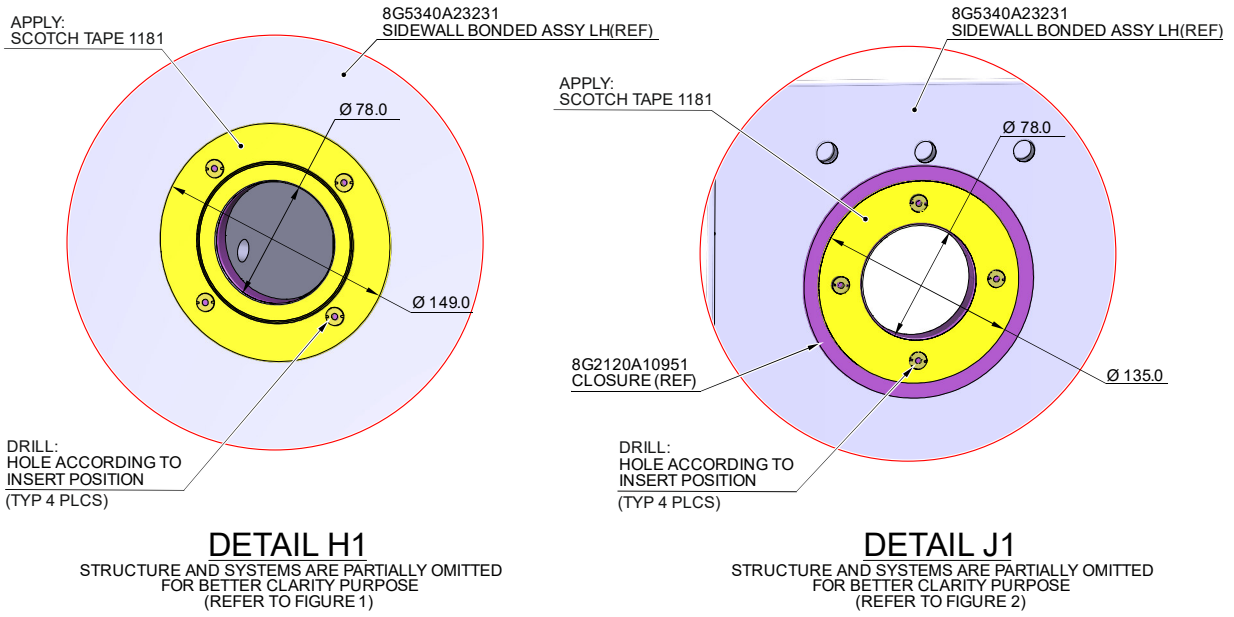
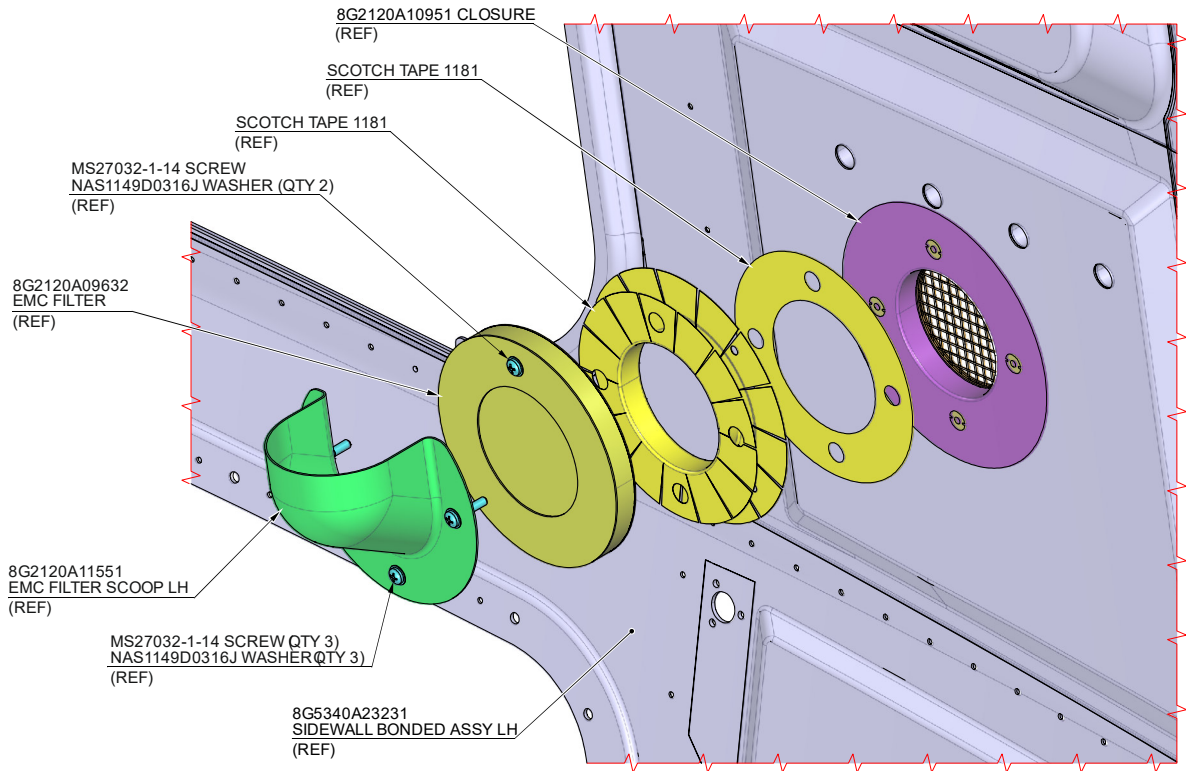
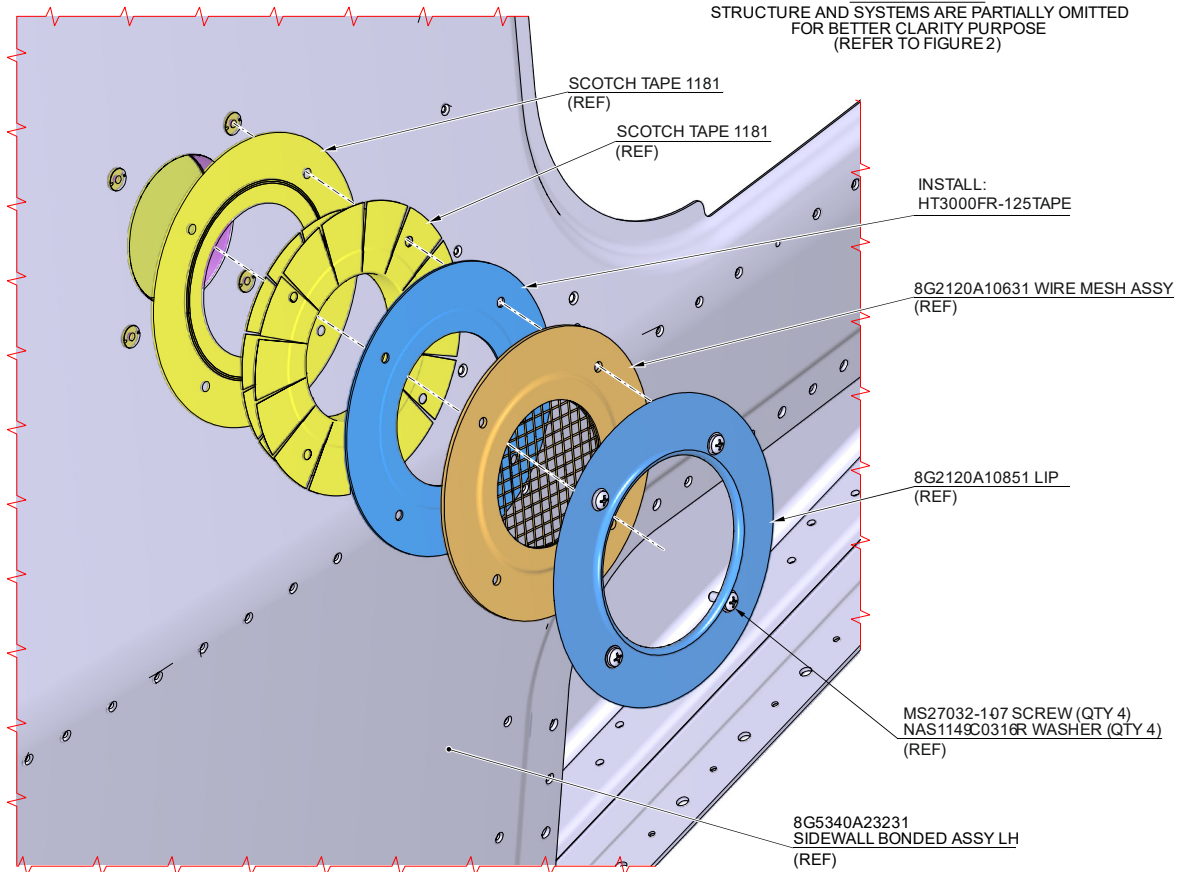


Figure 15



DETAIL L

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE (REFER TO FIGURE 2)



DETAIL K

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

Figure 16

ANNEX A

AW189 ADDITIONAL AVIONIC VENTILATION ACCEPTANCE TEST PROCEDURE

1 PRELIMINARY TEST

1.1 SAFETY PROVISION

- When required, for continuity testing a low voltage tester may be used.
- When it is required testing at pins and sockets of plug and receptacles connectors, contact is to be made by means of the correct mating socket or pin.
- No electrical Power Supply applied to the aircraft before starting with the Test Procedure.
- The ATP is to be performed with External Power.

Under no circumstances must be used any other form of probe.

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

1.2 EXPERIMENTAL EQUIPMENT

- DC external Power (28VDC 3KW Min)
- DC Voltmeter Tester for troubleshooting operations
- Conductor Pins and Wire Extensions for troubleshooting operation
- Low voltage continuity tester (Bond Meter (AOIP OM 16 or equivalent)
- Milliohmeter (Bondimeter).

1.3 TEST PREREQUISITES

The following requirements shall be fulfilled prior to proceeding with the test procedures described within this document:

CAUTION: Do not handle plug/receptacle connectors while voltage is on.

TEST DESCRIPTION	PASS/FAIL
1. The electrical wiring harness installation has been successfully tested by DIT-MCO checking the correct electrical voltage, end-points continuity (pin-to-pin) and proper insulation resistance.	
2. The following system shall be operative: EPGDS, AMMS and ECDU.	
3. Before all the test procedures verify that the External Power Bench is operative and set to the appropriate Voltage (28 VDC);	
4. <u>During test with helicopter, both ENG 1 & 2 selector installed on ENG CNTR PNL called "ENG MODE" are in OFF position.</u>	

2 FUNCTIONAL TESTS

2.1 LEFT REAR BAY FAN

2.1.1 BONDING CHECK

Phase	Test Description	Check	Pass/Fail
1	Ensure the helicopter is powered OFF		
2	Disconnect the external power		
3	Disconnect external grounding cable		
4	Measure the LEFT REAR BAY FAN (B203) bonding value between FAN Bonding Point and local H/C structure on which it is bonded through bonding cable		
5	Register the value in the table below		
6	Re-Connect external grounding cable		
7	Re-Connect the external power		

LRU	Ref. Des.	Measured Value	Max value
LEFT REAR BAY FAN	B203		$\leq 6m\Omega$

2.1.2 INSTALLATION AND POWER SUPPLY CHECKS

THE ELECTRICAL CHECK CAN BE AVOIDED ONLY IF THE AIRCRAFT HARNESS HAS BEEN TESTED WITH DT-MCO.

Select "ON" the electrical generation system by the DC external power.

Phase	Test Description	Check	Pass/Fail
1	Visually verify the proper installation of the LEFT AVIONIC BAY FAN		
2	Turn OFF the following CB: NOSE FAN 1		

3	Disconnect B203P1 connector from B203 FAN		
4	Disconnect A1P1 connector from AMMC1		
5	Verify the continuity between LEFT AVIONIC BAY FAN (B203P1) and AMMC1 connector (A1P1).	Check the continuity between the following pin: - B203P1 pin 4 to A1P1 pin 99	
6	Connect A1P1 connector to AMMC1		
7	Turn ON the following CB: NOSE FAN 1		
8	Verify the presence of power supply	- Check with a voltmeter the 28 VDC signal on following pin of B203P1 LEFT AVIONIC BAY FAN connector: - PIN 1 (+); - Check with a voltmeter the GND signal on following pin of B203P1 LEFT AVIONIC BAY FAN connector: - PIN 2 (-);	
9	Turn OFF the following CB: NOSE FAN 1		
10	Connect B203P1 connector to B203 FAN		
11	Turn ON the following CB: NOSE FAN 1		
12	Verify FAN functionality	Visually check that the fan is working properly (the fan is spinning)	
13	Turn OFF the following CB: NOSE FAN 1		

3 TEST RESULT

<p><u>TEST RESULT SUMMARY</u> A/C N°:</p> <p>189H2120D002</p> <p>AW189 ADDITIONAL AVIONIC VENTILATION ATP</p>				
REF.	DESCRIPTION	OPERATOR	DATE	REMARKS
1.1	Safety provisions			
1.2	Experimental Equipment			
1.3	Test Prerequisites			
2.1.1	Bonding Check			
2.1.2	Installation and Power Supplies check (*)	DT-MCO		
		ATP		
<p>Engineering dept signature (if required):-----</p>				
<p>Quality dept approval:-----</p>				

(*) Specify whether DT-MCO or ATP have been carried out to cover Power Supply checks.

