
SERVICE BULLETIN**N° 139-619****OPTIONAL****DATE:** February 18, 2021**REV. :** C - January 26, 2024

TITLE**ATA 56 – REPLACEMENT OF BUBBLE WINDOW WITH STANDARD WINDOW****REVISION LOG**

Helicopters already compliant with previous issues of this Service Bulletin do not need any additional action.

Revision A of this Service Bulletin introduces Part II to extend the document effectivity.

Revision B of this Service Bulletin introduces Part III to split Bubble windows replacement and HEELS installation and to further extend the document effectivity.

Revision C of this Service Bulletin extends Part II and Part III effectivity to S/N 31836, introduces, in Part II, the new first row windows external painting scheme for emergency exits (applicable only to S/N 31836) and updates the document to the latest standard.

Revision bars identify changes.

1. PLANNING INFORMATION

A. EFFECTIVITY

Part I

AW139 helicopter S/N 41509.

Part II

AW139 helicopters S/N 31763, S/N 31765, S/N 31770, S/N 31772, S/N 31773, S/N 31775 and S/N 31836.

Part III

AW139 helicopters S/N 31763, S/N 31765, S/N 31770, S/N 31772, S/N 31773, S/N 31775 and S/N 31836.

B. COMPLIANCE

At Customer's option.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin is issued to provide the necessary instructions to perform bubble windows removal, standard windows installation and HEELS application around the introduced standard windows.

LH issued this SB for the following reason:

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

E. DESCRIPTION

This Service Bulletin provides instructions to:

- remove the bubble windows P/N 3G5620L00251 and install the standard windows;
- install HEELS around the sidewall windows;

- introduce painting around recently installed standard windows to indicate the new emergency exits.

The Service Bulletin is divided in Parts which provide instructions dedicated to specific helicopters configurations:

Part I is dedicated to S/N 41509 configuration and provides instructions to perform the all the modifications listed above;

Part II and Part III provide instructions dedicated to helicopters equipped with a specific liner customization (S/Ns mentioned in SB Effectivity). In details:

- Part II provides instructions to replace bubble with standard windows and to introduce external (emergency exit) painting;
- Part III provides instructions to install HEELS around the sidewall windows and to install new liners HEELS-compatible.

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 LH 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 thirty (30) MMH;

Part II: approximately twelve (12) MMH;

Part III: approximately eighteen (18) MMH.

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)
		1.39
LONGITUDINAL BALANCE	3643	5063.77
LATERAL BALANCE	123	170.97

PART II

N.A.

PART III

WEIGHT (Kg)	ARM (mm)	MOMENT (kg mm)
		1.77
LONGITUDINAL BALANCE	2400	4248
LATERAL BALANCE	66	116.82

I. REFERENCES

I.1 PUBLICATIONS

Following Data Modules refer to AMP:

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM01 39-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance	I, II, III
DM02 39-A-06-41-00-00A-010A-A	Access doors and panels – General data	I, II, III
DM03 39-A-56-22-01-00A-920A-K	Left cabin bubble window – Replacement	I
DM04 39-A-56-22-02-00A-920A-K	Right cabin bubble window – Replacement	I
DM05 39-A-56-21-01-00A-920A-A	Left cabin window – Replacement	I, II
DM06 39-A-56-21-02-00A-920A-A	Right cabin window – Replacement	I, II
DM07 39-C-33-52-11-00A-921A-K	Left cabin window light – Replacement (remove and install a new item)	I, III
DM08 39-C-33-52-12-00A-921A-K	Right cabin window light – Replacement (remove and install a new item)	I, III
DM09 39-A-11-00-01-00A-720A-A	Decal – Install procedure	I, II, III
DM10 39-C-33-52-00-00A-340A-K	Emergency exit lighting system – Function test	I, III
DM11 39-A-51-10-01-00A-257A-A	Helicopter external surfaces – Paint and apply marking	II

Following Data Modules refer to CSRP:

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM12	CSRP-A-51-42-00-00A-720A-D Potted inserts – Install procedure	II, III

I.2 ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information	
AMP	Aircraft Maintenance Publication	
AR	As Required	
AVCS	Active Vibration Control System	
CSRP	Common Structural Repair Publication	
DM	Data Module	
DOA	Design Organization Approval	
EASA	European Union Aviation Safety Agency	
HEELS	Helicopter Emergency Exit Lighting System	
ICS	Intercommunication System	
IPD	Illustrated Parts Data Publication	
ITEP	Illustrated Tool and Equipment Publication	
LH	Left Hand	
MMH	Maintenance Man Hours	
N.A.	Not Applicable	
P/N	Part Number	
RH	Right Hand	
SB	Service Bulletin	
S/N	Serial Number	
UPR	Upper	

I.3 ANNEX

N.A.

J. PUBLICATIONS AFFECTED

N.A.

K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

A.1 PARTS

PART I

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	3G2500P01511		BABCOCK VARIANT	REF	.		-
2	3G1110P00111		EXTERIOR PAINT SCHEME RETROMOD	REF	..		-
3	3G2580P22211		LINER RETROMOD	REF	..		-
4	3G2580P02233		Window liner UPR RH mod hoist breeze/HEELS	1	...	(1)	-
5	3G2580P02331		Window liner UPR LH mod ICS with HEELS	1	...	(1)	-
6	999-2701-45-509		Decal	2	...		139-619L1
7	A180A005E2		Decal	2	...		139-619L1
8	A180A009E2		Decal	2	...		139-619L1
9	A487A003A		Strap assembly	2	...		139-619L1
10	MS27980-18B	MS27980-18N	Fastener	2	...		139-619L1
11	3G3350A04311		HEEL LIGHTS CABIN WINDOWS VARIANT	REF	..		-
12	001755-105-02	A593A-A05	Terminal board	1	...		139-619L1
13	3G3350A00611		HEELS light assy	2	...		139-619L1
14	3G3350A01711		Power supply assy	1	...		139-619L1
15	3G3350A01811		Battery assy	1	...		139-619L1
16	3G5318A18911		HEELS HIGH VISIBILITY STRUCT PROV	REF	...		-
17	3G3350V00351		Mounting bracket	2	....		139-619L1
18	A414A02V209E1		Connector support	2	....		139-619L1
19	MS27039-1-07		Screw	4	....		139-619L1
20	MS35207-260		Screw	8	....		139-619L1
21	NAS1149D0316J		Washer	8	....		139-619L1
22	NAS1832-3-5		Insert	4	....		139-619L1
23	NAS1836C08-13M		Insert	2	....		139-619L1
24	NAS1836C3-13M		Insert	8	....		139-619L1
25	3G9B01A29802	3G9B01A29801A10R	HEEL lights cabin windows C/A (B1A298)	1	...	(2)	139-619L1
26	3G9B01B29802	4G3350A00112A1R	HEEL lights cabin windows C/A (B1B298)	1	...	(2)	139-619L1
27	3G9B01B32602		HEEL lights cabin windows C/A (B1B326)	1	...	(2)	139-619L1
28	A366A3E12C		Stud	5	...		139-619L1
29	A388A3E12C		Standoff	3	...		139-619L1
30	A522A02A		Mounting rail	1	...		139-619L1
31	AW001CB04H		Clamp	6	...		139-619L1
32	AW001CB05H		Clamp	1	...		139-619L1
33	AW001CB06H		Clamp	6	...		139-619L1
34	AW001CL000A-X3		Electrical support	16	...		139-619L1
35	AW001CL001-N6		Electrical support	3	...		139-619L1
36	AW001CL005C01-X1		Electrical support	2	...		139-619L1
37	AW001CL009-CM		Electrical support	4	...		139-619L1
38	AW001CL509-N6		Electrical support	2	...		139-619L1
39	ED300BT7		Decal	1	...		139-619L1

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
40	ED300DS66		Decal	1	...		139-619L1
41	ED300DS67		Decal	1	...		139-619L1
42	ED300DS68		Decal	1	...		139-619L1
43	ED300DS69		Decal	1	...		139-619L1
44	ED300DS70		Decal	1	...		139-619L1
45	ED300DS86		Decal	1	...		139-619L1
46	ED300DS87		Decal	1	...		139-619L1
47	ED300DS88		Decal	1	...		139-619L1
48	ED300DS89		Decal	1	...		139-619L1
49	ED300DS90		Decal	1	...		139-619L1
50	ED300G7		Decal	1	...		139-619L1
51	ED300J283		Decal	1	...		139-619L1
52	ED300J284		Decal	1	...		139-619L1
53	ED300S113		Decal	1	...		139-619L1
54	ED300S114		Decal	1	...		139-619L1
55	ED300TB2047		Decal	1	...		139-619L1
56	ED300TB2054		Decal	1	...		139-619L1
57	ED300TB263		Decal	1	...		139-619L1
58	M85049/95-12A-A		Flange connector	2	...		139-619L1
59	MS21043L3	MS21043-3	Nut	5	...		139-619L1
60	MS35206-241		Screw	2	...		139-619L1
61	MS35489-20		Grommet	1	...		139-619L1
62	NAS1149D0332J		Washer	8	...		139-619L1
63	NAS1149D0416J		Washer	8	...		139-619L1
64	NAS1149DN816J		Washer	2	...		139-619L1
65	NAS1190E3P6AK		Screw	3	...		139-619L1
66	NAS1190E3P8AK		Screw	3	...		139-619L1
67	NAS1802-04-7		Screw	8	...		139-619L1
68	NAS1802-3-18		Screw	2	...		139-619L1
69	NAS620C6L		Washer	2	...		139-619L1
70	A523A-A01		Electrical contact	20	.		139-619L1
71	3P5330A18951		Window panel	2	.		139-619L1
72	3P5330A19852		Window seal profile	2	.	(3)	-
73	A417AG002TB		Seal profile	2.5 m	.		139-619L1
74	3P5330A19952		Window seal wedge	4	.		139-619L1

PART II

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
75	3G2580P20011		WINDOW LINERS VAR FOR BUBBLE	REF	.		-
76	3G5310P12111		SIDE WALL WINDOW RETRO MODIFICATION	REF	..		-
77	3P5330A18951		Window Panel	2	...		139-619L2
78	999-2701-45-509		Decal	2	...		139-619L2
79	A180A005E2		Decal	2	...		139-619L2
80	A180A009E2		Decal	2	...		139-619L2
81	A181A001E1		Decal	8	...		139-619L2
82	A417AF001WB		Extrusion Rubber Filler	10 m	...		139-619L2
83	A417AG002WB		Extrusion Rubber Window Seal	5 m	...		139-619L2
84	A487A005A		Strap Assy	2	...		139-619L2
85	AN525-10R8		Screw	12	...		139-619L2
86	NAS1832-3-4M		Insert	4	...		139-619L2

PART III

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
87	3G3350A04311		HEEL LIGHTS CABIN WINDOWS VARIANT	REF	.		-
88	001755-105-02	A593A-A05	Terminal board	1	..		139-619L3
89	3G3350A00611		HEELS light assy	2	..		139-619L3
90	3G3350A01711		Power supply assy	1	..		139-619L3
91	3G3350A01811		Battery assy	1	..		139-619L3
92	3G5318A18911		HEELS HIGH VISIBILITY STRUCT PROV	REF	..		-
93	3G3350V00351		Mounting bracket	2	...		139-619L3
94	A414A02V209E1		Connector support	2	...		139-619L3
95	MS27039-1-07		Screw	4	...		139-619L3
96	MS35207-260		Screw	8	...		139-619L3
97	NAS1149D0316J		Washer	8	...		139-619L3
98	NAS1832-3-5		Insert	4	...		139-619L3
99	NAS1836C08-13M		Insert	2	...		139-619L3
100	NAS1836C3-13M		Insert	8	...		139-619L3
101	3G9B01A29802	3G9B01A29801A10R	HEEL lights cabin windows C/A (B1A298)	1	..	(2)	139-619L3
102	3G9B01B29802	4G3350A00112A1R	HEEL lights cabin windows C/A (B1B298)	1	..	(2)	139-619L3
103	3G9B01B32602		HEEL lights cabin windows C/A (B1B326)	1	..	(2)	139-619L3
104	A366A3E12C		Stud	5	..		139-619L3
105	A388A3E12C		Standoff	3	..		139-619L3
106	A522A02A		Mounting rail	1	..		139-619L3
107	AW001CB04H		Clamp	6	..		139-619L3
108	AW001CB05H		Clamp	1	..		139-619L3
109	AW001CB06H		Clamp	6	..		139-619L3
110	AW001CL000A-X3		Electrical support	16	..		139-619L3
111	AW001CL001-N6		Electrical support	3	..		139-619L3
112	AW001CL005C01-X1		Electrical support	2	..		139-619L3
113	AW001CL009-CM		Electrical support	4	..		139-619L3
114	AW001CL509-N6		Electrical support	2	..		139-619L3
115	ED300BT7		Decal	1	..		139-619L3
116	ED300DS66		Decal	1	..		139-619L3
117	ED300DS67		Decal	1	..		139-619L3
118	ED300DS68		Decal	1	..		139-619L3
119	ED300DS69		Decal	1	..		139-619L3
120	ED300DS70		Decal	1	..		139-619L3
121	ED300DS86		Decal	1	..		139-619L3
122	ED300DS87		Decal	1	..		139-619L3
123	ED300DS88		Decal	1	..		139-619L3
124	ED300DS89		Decal	1	..		139-619L3
125	ED300DS90		Decal	1	..		139-619L3
126	ED300G7		Decal	1	..		139-619L3
127	ED300J283		Decal	1	..		139-619L3
128	ED300J284		Decal	1	..		139-619L3
129	ED300S113		Decal	1	..		139-619L3
130	ED300S114		Decal	1	..		139-619L3
131	ED300TB2047		Decal	1	..		139-619L3
132	ED300TB2054		Decal	1	..		139-619L3
133	ED300TB263		Decal	1	..		139-619L3
134	M85049/95-12A-A		Flange connector	2	..		139-619L3
135	MS21043L3	MS21043-3	Nut	5	..		139-619L3
136	MS35206-241		Screw	2	..		139-619L3

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
137	MS35489-20		Grommet	1	..		139-619L3
138	NAS1149D0332J		Washer	8	..		139-619L3
139	NAS1149D0416J		Washer	8	..		139-619L3
140	NAS1149DN816J		Washer	2	..		139-619L3
141	NAS1190E3P6AK		Screw	3	..		139-619L3
142	NAS1190E3P8AK		Screw	3	..		139-619L3
143	NAS1802-04-7		Screw	8	..		139-619L3
144	NAS1802-3-18		Screw	2	..		139-619L3
145	NAS620C6L		Washer	2	..		139-619L3
146	3G2580P20011		WINDOW LINERS VAR FOR BUBBLE	REF	.		-
147	3G2580A20731		Angular Assy LH	1	..	(1) (5)	-
148	3G2580A20831		Angular Assy RH	1	..	(1) (5)	-
149	3G2580P04232		Window Liner Reworked Lower LH For ICS PN	1	..	(1) (5)	-
150	3G2580P06731		Window liner RH Lower Modification For AV900	1	..	(1) (5)	-
151	MS27980-18B	MS27980-18N	Fastener	2	...		139-619L3
152	3G2580P00912		FIBER LINERS RETROMOD FOR HEELS	REF	.		-
153	3G2580A46131		Rework Window Liner Bonded Assy LH	1	..	(1) (5)	-
154	3G2580P04132		Window Liner Upper RH Modification Hoist Breeze	1	..	(1) (5)	-

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

A.2 CONSUMABLES

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

#	SPEC./LH CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
155	Commercial	City Grey S103 DELTRON BC Col. Gray Steel N° 41 Met.(FIAT 647) (M03) " grey steel m 103	AR	(4)	I
156	199-05-002 TY II, CL 2, Code No. 900004603	Adhesive EA934NA (C057)	AR	(4)	I, II, III
157	A236A03AB	Nonmetallic channel	AR		I
158	A582A08 or EN6049-006-08-5	Tubing braided	AR	(4)	I
159	Code No. 99999999000001113	TAPE 3M 363 (C260)	AR	(4)	II, III
160	Commercial	DELTRON BC Col. Medium Grey S104	5 I	(4)	II
161	Code No. 900002700	DELTRON HS Clearcoat Col. Transparent D880	5 I	(4)	II
162	Code No. 900002701	DELTRON Hardener D841	5 I	(4) (6)	II
163	Code No. 900002702	DELTRON Thinner D807	5 I	(4) (7)	II
164	Code No. 99999999000001107	DELFLEET Primer 2K F392	5 I	(4) (8)	II

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

A.3 LOGISTIC MATRIX

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

LOGISTIC P/N	Q.TY (PER HELO)	NOTE	PART
139-619L1	1		
3G2580P02233	1	(1)	I
3G2580P02331	1	(1)	
139-619L2	1		II
139-619L3	1		
3G2580A20731	1	(1) (5)	
3G2580A20831	1	(1) (5)	
3G2580P04232	1	(1) (5)	III
3G2580P06731	1	(1) (5)	
3G2580A46131	1	(1) (5)	
3G2580P04132	1	(1) (5)	

NOTES

- (1) This P/N depends upon helicopter internal painting and may be supplied as a production P/N ending with suffix –CS01 or any combination of letters or numbers.
- (2) All C/As B1BA298, B1B298 and B1B326 dash -02 are identical to dash -01.
- (3) Window seal profile P/N 3P5330A19852 can be obtained from raw material P/N A417AG002TB.
- (4) Item to be procured as local supply.
- (5) This P/N is applicable only to helicopters NOT installing/equipped with ICS P/N 4G2350F00415.
- (6) As alternative could be procured DELTRON HS Hardener D8239 Code No. 999999999000006872 in qty. 1.
- (7) As alternative could be procured DELTRON Thinner D812 Code No. 999999999000000216 in qty. 5 l.
- (8) As alternative could be procured Speed Filler Col. Grey 873.SP77 + Hardener 874SPEED kit P/N /013I-XX_001 in qty. 1.

B. SPECIAL TOOLS

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

SPECIAL TOOLS NOTES

N.A.

C. INDUSTRY SUPPORT INFORMATION

Customization.

3. ACCOMPLISHMENT INSTRUCTIONS

GENERAL NOTES

- a) Place an identification tag on all components that are re-usable, including the attaching hardware that has been removed to gain access to the modification area and adequately protect them until their later re-use.
- b) Exercise extreme care during drilling operations to prevent instruments, cables and hoses damage.
- c) 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.
- d) Shape the cables in order to prevent interference with the structure and the other existing installations, using where necessary suitable lacing cords.
- e) During the installation of bonding braids or components requiring grounding, clean the surface structure in order to obtain a good ground contact.
- f) Protect properly all equipment not removed from area affected by the modification during installation procedure.
- g) Let adhesive cure at room temperature for at least 24 hours unless otherwise specified.
- h) All lengths are in mm.

PART I

1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 1 thru 12 and Figure 24 wiring diagram, gain access to the area affected by the installation and perform Babcock variant P/N 3G2500P01511 as described in the following procedure:
 - 2.1 With reference to Figure 1 Section A-A, remove the bubble window liner assy UPR LH P/N 3G2580L03533 on LH side.
 - 2.2 With reference to Figure 1 Section A-A, remove the bubble window liner assy UPR RH Goodrich P/N 3G2580L03634 on RH side.

- 2.3 In accordance with the applicable steps of AMP DM 39-A-56-22-01-00A-920A-K and with reference to Figure 2 Section A-A, Section B-B and View C-C, remove the bubble window P/N 3G5620L00251, the profile P/N 3G5620A00551, n°23 screws P/N AN525-10R9, n°6 special washer P/N 3G5620A01351 and n°4 screws P/N AN525-10R11 on the left side of the cabin.
- 2.4 In accordance with the applicable steps of AMP DM 39-A-56-22-02-00A-920A-K repeat step 2.3 for the right side of the cabin.
- 2.5 With reference to Figure 4 thru 12 and Figure 24 wiring diagram, perform HEEL lights cabin windows variant P/N 3G3350A04311 as described in the following procedure:
 - 2.5.1 With reference to Figures 4 and 5, perform HEELS high visibility struct prov P/N 3G5318A18911 as described in the following procedure:
 - 2.5.1.1 With reference to Figure 4 View F and Section G-G, temporarily locate the mounting bracket P/N 3G3350V00351 on the forward lower panel assy P/N 3P5331A02132 and countermark n°4 holes in accordance with the dimensioning shown.
 - 2.5.1.2 With reference to Figure 4 View F and Section G-G, drill n°4 holes $\varnothing 11.48 \div 11.61$ thru the forward lower panel assy P/N 3P5331A02132.
 - 2.5.1.3 With reference to Figure 4 Section G-G, install n°4 inserts P/N NAS1836C3-13M on the forward lower panel assy P/N 3P5331A02132 by means adhesive EA934NA (C057).

NOTE

Prepare and protect show surface for electrical bonding.

- 2.5.1.4 With reference to Figure 4 Section G-G, install the mounting bracket P/N 3G3350V00351 on the forward lower panel assy P/N 3P5331A02132 by means of n°4 screws P/N MS35207-260 and n°4 washers P/N NAS1149D0316J.
- 2.5.1.5 With reference to Figure 4 View F and Section H-H, drill n°2 holes $\varnothing 11.48 \div 11.61$ thru the forward lower panel assy P/N 3P5331A02132 in accordance with the dimensioning shown.
- 2.5.1.6 With reference to Figure 4 Section H-H, install n°2 inserts P/N NAS1836C08-13M on the forward lower panel assy P/N 3P5331A02132 by means adhesive EA934NA (C057).
- 2.5.1.7 With reference to Figure 5 Detail D and Section E-E, temporarily locate the connector support P/N A414A02V209E1 on the sidewall

- panel P/N 3P5335A00233 and countermark n°2 holes in accordance with the dimensioning shown.
- 2.5.1.8 With reference to Figure 5 Detail D and Section E-E, drill n°2 holes Ø11.48±11.61 on the sidewall panel P/N 3P5335A00233.
 - 2.5.1.9 With reference to Figure 5 Detail D and Section E-E, install n°2 inserts P/N NAS1832-3-5 on the sidewall panel P/N 3P5335A00233 by means adhesive EA934NA (C057).
 - 2.5.1.10 With reference to Figure 5 Detail D and Section E-E, install the connector support P/N A414A02V209E1 on the sidewall panel P/N 3P5335A00233 by means of n°2 screws P/N MS27039-1-07.
 - 2.5.1.11 With reference to Figure 5 Detail A and Section C-C repeat steps 2.5.1.1 thru 2.5.1.4 to install the mountain bracket P/N 3G3350V00351 on the sidewall panel P/N 3P5337A00233.
 - 2.5.1.12 With reference to Figure 5 Detail A and Section B-B repeat steps 2.5.1.7 thru 2.5.1.10 to install the connector support P/N A414A02V209E1 on the sidewall panel P/N 3P5337A00233.

NOTE

Perform steps 2.5.2 and 2.5.3 only if the helicopter is NOT equipped with kit AVCS. Otherwise, skip at step 2.5.4.

NOTE

Perform steps 2.5.2 only if the helicopter is NOT equipped with kit ICS P/N 3G2350A01014. Otherwise, skip at step 2.5.3.

- 2.5.2 With reference to Figure 7 View A, install n°3 standoffs P/N A388A3E12C on the structure (STA 3899.0) in the locations n°11 thru n°13.
- 2.5.3 With reference to Figure 7 View A, install n°3 studs P/N A366A3E12C on the structure (STA 3899.0) in the locations n°8 thru n°10.

NOTE

Perform the following step 2.5.4 only if the helicopter is equipped with kit AVCS. Otherwise, skip at step 2.5.5.

- 2.5.4 With reference to Figure 12 View A1, remove and re-install n°8 electrical supports P/N AW001CL001-N6 on the structure (STA3899.0) in the locations n°1 thru n°8.

- 2.5.5 With reference to Figure 8 View B-B, install the stud P/N A366A3E12C on the structure in the location n°2.
- 2.5.6 With reference to Figure 8 View B-B, install the electrical support P/N AW001CL005C01-X1 on the structure in the location n°1.
- 2.5.7 With reference to Figure 8 View B-B, install n°2 nonmetallic channels P/N A236A03AB on the hole edges shown on figure.
- 2.5.8 With reference to Figure 8 View D-D, install the electrical support P/N AW001CL509-N6 on the structure in the location n°7 by means of the washer P/N NAS620C6L.
- 2.5.9 With reference to Figure 8 View C-C, install the electrical support P/N AW001CL005C01-X1 on the structure in the location n°4.
- 2.5.10 With reference to Figure 8 View C-C, install the stud P/N A366A3E12C on the structure in the location n°3.
- 2.5.11 With reference to Figure 8 View C-C, install the electrical support P/N AW001CL001-N6 on the structure in the location n°5.
- 2.5.12 With reference to Figure 8 View C-C, install n°2 nonmetallic channels P/N A236A03AB on the hole edges shown on figure.
- 2.5.13 With reference to Figure 8 View D-D, install the electrical support P/N AW001CL509-N6 on the structure in the location n°6 by means of the washer P/N NAS620C6L.
- 2.5.14 With reference to Figure 9 View looking down center floor, install n°2 electrical supports P/N AW001CL001-N6 on the structure in the locations n°1 and n°2.
- 2.5.15 With reference to Figure 11 View looking LH pax door from internal side, install n°8 electrical supports P/N AW001CL000A-X3 on the internal liner in the locations n°1 thru n°8.
- 2.5.16 With reference to Figure 11 Detail F, install n°2 electrical supports P/N AW001CL009-CM on the internal liner in the locations n°9 and n°20.
- 2.5.17 With reference to Figure 10 View looking RH pax door from internal side, install n°8 electrical supports P/N AW001CL000A-X3 on the internal liner in the locations n°10 thru n°17.
- 2.5.18 With reference to Figure 10 Detail G, install n°2 electrical supports P/N AW001CL009-CM on the internal liner in the locations n°18 and n°19.

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.

- 2.5.19 With reference to Figure 6 thru 12, lay down the following cable assemblies on the existing routes unless otherwise indicated on the figures:
- 3G9B01A29802 HEEL lights cabin windows C/A (B1A298)
 - 3G9B01B29802 HEEL lights cabin windows C/A (B1B298)
 - 3G9B01B32602 HEEL lights cabin windows C/A (B1B326)
- 2.5.20 With reference to Figures 6 thru 12, secure the cable assemblies laid down at the previous step by means of existing hardware and lacing cords.
- 2.5.21 With reference to Figure 9 View looking down center floor, install the mounting rail P/N A522A02A on the structure by means of n°2 screws P/N MS35206-241 and n°2 washers P/N NAS1149DN816J.
- 2.5.22 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 9 View looking down center floor, install the decal P/N ED300TB263 next to the mounting rail P/N A522A02A.
- 2.5.23 With reference to Figure 9 View looking down center floor, install the terminal board P/N 001755-105-02 (TB263) on the mounting rail P/N A522A02A.
- 2.5.24 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 9 View looking down center floor, install the decal P/N ED300TB2047 next to the junction in-line TB2047.
- 2.5.25 With reference to Figure 9 View looking down center floor, install the power supply assy P/N 3G3350A01711 in its position on the structure.
- 2.5.26 With reference to Figure 9 View looking down center floor and Figure 24 wiring diagram, perform electrical connection of the cable on part of the power supply assy P/N 3G3350A01711 to the junction in-line

TB2047, the terminal board TB263 and n°2 splices SPG7-1 and SPG7-2.

- 2.5.27 With reference to Figure 9 View looking down center floor, remove existing screws and install n°2 clamps P/N AW001CB04H on C/A B1B298 and C/A B1B326 by means of n°2 screws P/N NAS1802-3-18.
- 2.5.28 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 9 View looking down center floor, install the decal P/N ED300G7 next to the power supply assy P/N 3G3350A01711.

NOTE

Perform the following step 2.5.29 only if the helicopter is NOT equipped with kit ICS P/N 3G2350A01014. Otherwise, skip at step 2.5.30.

- 2.5.29 With reference to Figure 7 View A, install n°3 clamps P/N AW001CB04H on C/A B1A298 by means of n°3 screws P/N NAS1190E3P6AK and n°3 washers P/N NAS1149D0332J.

NOTE

Perform the following step 2.5.30 only if the helicopter is equipped with kit ICS P/N 3G2350A01014. Otherwise, skip at step 2.5.31.

- 2.5.30 With reference to Figure 7 View E-E, remove existing screws and install n°3 clamps P/N AW001CB06H on C/A B1A298 and C/A B2A204 by means of n°3 screws P/N NAS1190E3P8AK.
- 2.5.31 With reference to Figure 7 View A, install n°3 clamps P/N AW001CB06H on C/A B1B298 and C/A B1B326 by means of n°3 nuts P/N MS21043L3 and n°3 washers P/N NAS1149D0332J.
- 2.5.32 With reference to Figure 8 View B-B, install the flange connector P/N M85049/95-12A-A on the support by means of n°4 screws P/N NAS1802-04-7 and n°4 washers P/N NAS1149D0416J.
- 2.5.33 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 8 View B-B, install the decal P/N ED300J283 next to the connector J283.
- 2.5.34 With reference to Figure 8 View B-B, install the clamp P/N AW001CB04H on the C/A B1A298 by means of the nut P/N MS21043L3 and the washer P/N NAS1149D0332J.
- 2.5.35 With reference to Figure 8 View C-C, repeat step 2.5.32.

- 2.5.36 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 8 View C-C, install the decal P/N ED300J284 next to the connector J284.
- 2.5.37 With reference to Figure 8 View C-C, install the clamp P/N AW001CB05H on the C/A B1B298 and C/A B1B326 by means of the nut P/N MS21043L3 and the washer P/N NAS1149D0332J.
- 2.5.38 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 8 View C-C, install the decal P/N ED300TB2054 next to the junction in-line TB2054.
- 2.5.39 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 8 View C-C, install the battery assy P/N 3G3350A01811 on the mounting bracket previously installed and install the relevant decal P/N ED300BT7.
- 2.5.40 With reference to Figure 8 View C-C and Figure 24 wiring diagram, perform electrical connection of the cable on part of the battery assy P/N 3G3350A01811 to the junction in-line TB2054.
- 2.5.41 In accordance with AMP DM 39-C-33-52-12-00A-921A-K and with reference to Figure 10 View looking RH pax door from internal side and Figure 24 wiring diagram, install the HEELS light assy P/N 3G3350A00611 on the RH pax door. Perform electrical connection to connector P284.
- 2.5.42 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 10 View looking RH pax door from internal side, install the decal P/N ED300DS86, P/N ED300DS87, P/N ED300DS88, P/N ED300DS89 and P/N ED300DS90 next to the relevant light.
- 2.5.43 In accordance with AMP DM 39-C-33-52-11-00A-921A-K and with reference to Figure 11 view looking LH pax door from internal side and Figure 24 wiring diagram, install the HEELS light assy P/N 3G3350A00611 on the LH pax door. Perform electrical connection to connector P283.
- 2.5.44 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 11 view looking LH pax door from internal side, install the decal P/N ED300DS66, P/N ED300DS67, P/N ED300DS68, P/N ED300DS69 and P/N ED300DS70 next to the relevant light.
- 2.5.45 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 10 Detail G and Figure 11 Detail F, install the decal

- P/N ED300S114 next to the water sensor S114 and the decal ED300S113 next to the water sensor S113.
- 2.5.46 With reference to Figure 24 wiring diagram, perform electrical connection of C/A B1A298 to the terminal board TB263. Use n°10 electrical contacts P/N A523A-A01 (TB263 side).
 - 2.5.47 With reference to Figure 8 View B-B and Figure 11 View looking LH pax door from internal side, connect the connector J283 to the connector P283.
 - 2.5.48 With reference to Figure 24 wiring diagram, perform electrical connection of C/A B1B298 to the terminal board TB263 and to the splices SPG7-1 and SPG7-2. Use n°10 electrical contacts P/N A523A-A01 (TB263 side).
 - 2.5.49 With reference to Figure 8 View C-C and Figure 10 View looking RH pax door from internal side, connect the connector J284 to the connector P284.
 - 2.5.50 Perform a pin-to-pin continuity check of all the electrical connections made.
- 2.6 In accordance with the applicable steps of AMP DM 39-A-56-21-01-00A-920A-A and with reference to Figure 2 View looking inboard left side, install the window panel P/N 3P5330A18951, the window seal profile P/N 3P5330A19852 and n°2 window seal wedges P/N 3P5330A19952 on the left side of the cabin.
 - 2.7 In accordance with the applicable steps of AMP DM 39-A-56-21-02-00A-920A-A and with reference to Figure 2 View looking inboard left side, repeat step 2.6 for the right side of the cabin.
 - 2.8 With reference to Figure 1, perform the liner retromod P/N 3G2580P22211 as described in the following procedure:
 - 2.8.1 With reference to Figure 1 Section A-A and Section B-B, install the window liner UPR LH mod ICS with HEELS P/N 3G2580P02331 by means of the strap assembly P/N A487A003A and the fastener P/N MS27980-18B.
 - 2.8.2 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 1 Section A-A, install the decal P/N A180A009E2, the decal P/N A180A005E2 and the decal P/N 999-2701-45-509 on the window liner UPR LH mod ICS with HEELS P/N 3G2580P02331.
 - 2.8.3 With reference to Figure 1 Section A-A and Section B-B repeat steps 2.8.1 and 2.8.2 for the window liner UPR RH mod hoist Breeze/HEELS P/N 3G2580P02233.

- 2.8.4 With reference to Figure 3 View looking inboard left side and Bottom view, perform the exterior paint scheme retromod P/N 3G1110P00111 painting with commercial paint as shown on Figure and table.
3. In accordance with the applicable step of AMP DM 39-C-33-52-00-00A-340A-K perform the function test of the emergency exit lighting system.
 4. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
 5. Return the helicopter to flight configuration and record for compliance with Part I of this Service Bulletin on the helicopter logbook.
 6. Gain access to My Communications section on Leonardo WebPortal and compile the "Service Bulletin Application Communication".

As an alternative, send the attached compliance form to the following mail box:

engineering.support.lhd@leonardo.com

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

AWPC.Engineering.Support@leonardocompany.us

PART II

1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 13, gain access to the area affected by removal.
3. With reference to Figure 16 View B-B, remove the LH louver P/N 3G2580A10152 and the related hardware. Retain for later re-use.
4. With reference to Figure 17 View D-D, remove the screw P/N AN525-10R9.
5. With reference to Figure 17 View D-D, remove the plate assy P/N 999-0500-85-127. Retain for later re-use.
6. With reference to Figure 16 View B-B, remove the bubble window liner lower LH P/N 3G2580P07731 and the related hardware. Retain fixing hardware for later re-use.
7. With reference to Figure 16 View B-B, remove the angular assy LH P/N 3G2580A20732 and the related hardware. Retain fixing hardware for later re-use.
8. With reference to Figure 16 View B-B, remove the window liner upper LH for bubble window P/N 3G2580P07431 and the related hardware. Retain fixing hardware for later re-use.
9. With reference to Figure 14 View A-A, remove the RH louver P/N 3G2580A10252 and the related hardware. Retain for later re-use.
10. With reference to Figure 15 View C-C, remove the screw P/N AN525-10R9.
11. With reference to Figure 15 View C-C, remove the lower cover assy P/N 3G2580A19231. Retain for later re-use.
12. With reference to Figure 14 View A-A, remove the bubble window liner lower RH P/N 3G2580P07831 and the related hardware. Retain fixing hardware for later re-use.
13. With reference to Figure 14 View A-A and Figure 15 Section E-E, remove n°2 pendant closures P/N 3G5316A40851 and the related hardware. Retain for later re-use.
14. With reference to Figure 14 View A-A, remove the angular assy RH P/N 3G2580A20832 and the related hardware. Retain fixing hardware for later re-use.
15. With reference to Figure 14 View A-A, remove the bubble window liner upper RH P/N 3G2580P07631 and the related hardware. Retain fixing hardware for later re-use.
16. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 18 thru 20, gain access to the area affected by the side wall window retro modification P/N 3G5310P12111 as described in the following procedure:
 - 16.1 With reference to Figure 18 Top View, remove and discard the bubble window P/N 3G5620L00251 on the left side of the helicopter.
 - 16.2 With reference to Figure 18 Top View, remove and discard the gasket

- P/N A115A1340AB2131 on the left side of the helicopter.
- 16.3 With reference to Figure 20 Detail C, remove and discard the profile P/N 3G5620A00551, n°6 special washer P/N 3G5620A01351 and n°6 screws P/N AN525-10R9 on the left side of the helicopter.
 - 16.4 With reference to Figure 19 Detail E, drill n°2 hole $\varnothing 14.25 \div 14.38$ in the indicated positions on the left side of the helicopter.
 - 16.5 In accordance with CSRP DM CSRP-A-51-42-00-00A-720A-D and with reference to Figure 19 Detail E, install n°2 inserts P/N NAS1832-3-4M by means of adhesive EA934NA (C057) on the left side of the helicopter.
 - 16.6 With reference to Figure 19 Detail E, fill n°2 existing inserts by means of adhesive EA934NA (C057) on the left side of the helicopter.
 - 16.7 With reference to Figure 19 Detail E, remove adhesive flange remained until sidewall panel skin ensuring no damage skin on the left side of the helicopter.
 - 16.8 With reference to Figure 19 Detail E and Section F-F, mill n°3 existing inserts until sidewall panel skin ensuring no damage skin. Fill n°3 milled inserts by means of adhesive EA934NA (C057) on the left side of the helicopter.
 - 16.9 With reference to Figure 20 Detail D, fill n°18 existing inserts by means of adhesive EA934NA (C057) on the left side of the helicopter.
 - 16.10 Repeat steps 16.1 thru 16.9 for the right side of the helicopter.
 - 16.11 In accordance with the applicable steps of AMP DM 39-A-56-21-01-00A-920A-A and with reference to Figure 19 Section B-B, install the window panel P/N 3P5330A18951, the extrusion rubber window seal P/N A417AG002WB, n°2 extrusion rubber filler P/N A417AF001WB on the left side of the helicopter.
 - 16.12 In accordance with the applicable steps of AMP DM 39-A-56-21-01-00A-920A-A and with reference to Figure 20 Detail C, install the strap assembly P/N A487A005A in the indicated position on the left side of the helicopter.
 - 16.13 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 20 Detail C, install the decal P/N A180A005E2 in the indicated position on the left side of the helicopter.
 - 16.14 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 20 Detail C, install n°4 decals P/N A181A001E1 in the indicated positions on the left side of the helicopter.
 - 16.15 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 20 Detail C, install the decal P/N 999-2701-45-509 in the indicated position on the external left side of the helicopter.
 - 16.16 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 20 Detail C, install the decal P/N A180A009E2 in the indicated position on

the left side of the helicopter.

- 16.17 In accordance with the applicable steps of AMP DM 39-A-56-21-02-00A-920A-A and with reference to Figure 19 Section B-B and Figure 20 Detail C, repeat steps 16.11 thru 16.16 for the right side of the cabin.

NOTE

The following step 17 is applicable to S/N 31772, 31773 and 31775.

17. In accordance with the applicable steps of AMP DM 39-A-51-10-01-00A-257A-A and with reference to Figure 21, introduce the painting strip around the installed standard windows as shown on Figure and Table. Use commercial painting.

NOTE

The following step 18 is applicable to S/N 31763, 31765 and 31770.

18. In accordance with the applicable steps of AMP DM 39-A-51-10-01-00A-257A-A and with reference to Figure 22, introduce the painting strip around the installed standard windows as shown on Figure and Table. Use commercial painting.

NOTE

The following step 19 is applicable to S/N 31863.

19. In accordance with the applicable steps of AMP DM 39-A-51-10-01-00A-257A-A and with reference to Figure 23, introduce the painting strip around the installed standard windows as shown on Figure and Table. Use the consumables listed below:

- paint col. medium grey S104;
- hardener D841;
- thinner D807;
- polyurethane coat col. transparent D880;

In case of defects, eliminate using primer DELFLEET 2K F392.

20. In accordance with AMP DM 39-A-06-41-00-00A-010A-A, re-install all external panels, internal panels and internal liners previously removed.
21. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
22. Return the helicopter to flight configuration and record for compliance with Part II of this Service Bulletin on the helicopter logbook.

23. 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 III

1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 6, gain access to the area affected by removal.
3. With reference to Figure 4 thru 12 and Figure 24 wiring diagram, perform HEEL lights cabin windows variant P/N 3G3350A04311 as described in the following procedure:
 - 3.1 With reference to Figures 4 and 5, perform HEELS high visibility structural provision P/N 3G5318A18911 as described in the following procedure:
 - 3.1.1 With reference to Figure 4 View F and Section G-G, temporarily locate the mounting bracket P/N 3G3350V00351 on the forward lower panel assy P/N 3P5331A02132 and countermark n°4 holes in accordance with the dimensioning shown.
 - 3.1.2 With reference to Figure 4 View F and Section G-G, drill n°4 holes Ø11.48÷11.61 thru the forward lower panel assy P/N 3P5331A02132.
 - 3.1.3 In accordance with CSRP DM CSRP-A-51-42-00-00A-720A-D and with reference to Figure 4 Section G-G, install n°4 inserts P/N NAS1836C3-13M on the forward lower panel assy P/N 3P5331A02132 by means adhesive EA934NA (C057).

NOTE

Prepare and protect show surface for electrical bonding.

- 3.1.4 With reference to Figure 4 Section G-G, install the mounting bracket P/N 3G3350V00351 on the forward lower panel assy P/N 3P5331A02132 by means of n°4 screws P/N MS35207-260 and n°4 washers P/N NAS1149D0316J.
- 3.1.5 With reference to Figure 4 View F and Section H-H, drill n°2 holes Ø11.48÷11.61 thru the forward lower panel assy P/N 3P5331A02132 in accordance with the dimensioning shown.
- 3.1.6 In accordance with CSRP DM CSRP-A-51-42-00-00A-720A-D and with reference to Figure 4 Section H-H, install n°2 inserts P/N NAS1836C08-13M on the forward lower panel assy P/N 3P5331A02132 by means adhesive EA934NA (C057).
- 3.1.7 With reference to Figure 5 Detail D and Section E-E, temporarily locate the connector support P/N A414A02V209E1 on the sidewall panel

P/N 3P5335A00233 and countermark n°2 holes in accordance with the dimensioning shown.

- 3.1.8 With reference to Figure 5 Detail D and Section E-E, drill n°2 holes $\varnothing 11.48 \div 11.61$ on the sidewall panel P/N 3P5335A00233.
- 3.1.9 In accordance with CSRP DM CSRP-A-51-42-00-00A-720A-D and with reference to Figure 5 Detail D and Section E-E, install n°2 inserts P/N NAS1832-3-5 on the sidewall panel P/N 3P5335A00233 by means adhesive EA934NA (C057).
- 3.1.10 With reference to Figure 5 Detail D and Section E-E, install the connector support P/N A414A02V209E1 on the sidewall panel P/N 3P5335A00233 by means of n°2 screws P/N MS27039-1-07.
- 3.1.11 With reference to Figure 5 Detail A and Section C-C repeat steps 3.1.1 thru 3.1.4 to install the mountain bracket P/N 3G3350V00351 on the sidewall panel P/N 3P5337A00233.
- 3.1.12 With reference to Figure 5 Detail A and Section B-B repeat steps 3.1.7 thru 3.1.10 to install the connector support P/N A414A02V209E1 on the side wall panel P/N 3P5337A00233.

NOTE

Perform steps 3.2 and 3.3 only if the helicopter is NOT equipped with kit AVCS. Otherwise, skip at step 3.4

NOTE

Perform steps 3.2 only if the helicopter is NOT equipped with kit ICS P/N 3G2350A01014. Otherwise, skip at step 3.3.

- 3.2 With reference to Figure 7 View A, install n°3 standoffs P/N A388A3E12C on the structure (STA 3899.0) in the locations n°11 thru n°13.
- 3.3 With reference to Figure 7 View A, install n°3 studs P/N A366A3E12C on the structure (STA 3899.0) in the locations n°8 thru n°10.

NOTE

Perform the following step 3.4 only if the helicopter is equipped with kit AVCS. Otherwise, skip at step 3.5.

- 3.4 With reference to Figure 12 View A1, remove and re-install n°8 electrical supports P/N AW001CL001-N6 on the structure (STA3899.0) in the locations n°1 thru n°8.
- 3.5 With reference to Figure 8 View B-B, install the stud P/N A366A3E12C on the structure in the location n°2.
- 3.6 With reference to Figure 8 View B-B, install the electrical support

- P/N AW001CL005C01-X1 on the structure in the location n°1.
- 3.7 With reference to Figure 8 View B-B, install n°2 nonmetallic channels P/N A236A03AB on the hole edges shown on figure.
 - 3.8 With reference to Figure 8 View D-D, install the electrical support P/N AW001CL509-N6 on the structure in the location n°7 by means of the washer P/N NAS620C6L.
 - 3.9 With reference to Figure 8 View C-C, install the electrical support P/N AW001CL005C01-X1 on the structure in the location n°4.
 - 3.10 With reference to Figure 8 View C-C, install the stud P/N A366A3E12C on the structure in the location n°3.
 - 3.11 With reference to Figure 8 View C-C, install the electrical support P/N AW001CL001-N6 on the structure in the location n°5.
 - 3.12 With reference to Figure 8 View C-C, install n°2 nonmetallic channels P/N A236A03AB on the hole edges shown on figure.
 - 3.13 With reference to Figure 8 View D-D, install the electrical support P/N AW001CL509-N6 on the structure in the location n°6 by means of the washer P/N NAS620C6L.
 - 3.14 With reference to Figure 9 View looking down center floor, install n°2 electrical supports P/N AW001CL001-N6 on the structure in the locations n°1 and n°2.
 - 3.15 With reference to Figure 11 View looking LH pax door from internal side, install n°8 electrical supports P/N AW001CL000A-X3 on the internal liner in the locations n°1 thru n°8.

NOTE

If necessary, it is allowed to locally rework liners to perform required water sensors test holes and prevent interference.

- 3.16 With reference to Figure 11 Detail F, install n°2 electrical supports P/N AW001CL009-CM on the internal liner in the locations n°9 and n°20.
- 3.17 With reference to Figure 10 View looking RH pax door from internal side, install n°8 electrical supports P/N AW001CL000A-X3 on the internal liner in the locations n°10 thru n°17.
- 3.18 With reference to Figure 10 Detail G, install n°2 electrical supports P/N AW001CL009-CM on the internal liner in the locations n°18 and n°19.

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.

- 3.19 With reference to Figure 6 thru 12, lay down the following cable assemblies on the existing routes unless otherwise indicated on the figures:
 - 3G9B01A29802 HEEL lights cabin windows C/A (B1A298)
 - 3G9B01B29802 HEEL lights cabin windows C/A (B1B298)
 - 3G9B01B32602 HEEL lights cabin windows C/A (B1B326)
- 3.20 With reference to Figures 6 thru 12, secure the cable assemblies laid down at the previous step by means of existing hardware and lacing cords.
- 3.21 With reference to Figure 9 View looking down center floor, install the mounting rail P/N A522A02A on the structure by means of n°2 screws P/N MS35206-241 and n°2 washers P/N NAS1149DN816J.
- 3.22 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 9 View looking down center floor, install the decal P/N ED300TB263 next to the mounting rail P/N A522A02A.
- 3.23 With reference to Figure 9 View looking down center floor, install the terminal board P/N 001755-105-02 (TB263) on the mounting rail P/N A522A02A.
- 3.24 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 9 View looking down center floor, install the decal P/N ED300TB2047 next to the junction in-line TB2047.
- 3.25 With reference to Figure 9 View looking down center floor, install the power supply assy P/N 3G3350A01711 in its position on the structure.
- 3.26 With reference to Figure 9 View looking down center floor and Figure 24 wiring diagram, perform electrical connection of the cable on part of the power supply assy P/N 3G3350A01711 to the junction in-line TB2047, the terminal board TB263 and n°2 splices SPG7-1 and SPG7-2.
- 3.27 With reference to Figure 9 View looking down center floor, remove existing screws and install n°2 clamps P/N AW001CB04H on C/A B1B298 and C/A B1B326 by means of n°2 screws P/N NAS1802-3-18.

- 3.28 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 9 View looking down center floor, install the decal P/N ED300G7 next to the power supply assy P/N 3G3350A01711.

NOTE

Perform the following step 3.29 only if the helicopter is NOT equipped with kit ICS P/N 3G2350A01014. Otherwise, skip at step 3.30.

- 3.29 With reference to Figure 7 View A, install n°3 clamps P/N AW001CB04H on C/A B1A298 by means of n°3 screws P/N NAS1190E3P6AK and n°3 washers P/N NAS1149D0332J.

NOTE

Perform the following step 3.30 only if the helicopter is equipped with kit ICS P/N 3G2350A01014. Otherwise, skip at step 3.31.

- 3.30 With reference to Figure 7 View E-E, remove existing screws and install n°3 clamps P/N AW001CB06H on C/A B1A298 and C/A B2A204 by means of n°3 screws P/N NAS1190E3P8AK.
- 3.31 With reference to Figure 7 View A, install n°3 clamps P/N AW001CB06H on C/A B1B298 and C/A B1B326 by means of n°3 nuts P/N MS21043L3 and n°3 washers P/N NAS1149D0332J.
- 3.32 With reference to Figure 8 View B-B, install the flange connector P/N M85049/95-12A-A on the support by means of n°4 screws P/N NAS1802-04-7 and n°4 washers P/N NAS1149D0416J.
- 3.33 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 8 View B-B, install the decal P/N ED300J283 next to the connector J283.
- 3.34 With reference to Figure 8 View B-B, install the clamp P/N AW001CB04H on the C/A B1A298 by means of the nut P/N MS21043L3 and the washer P/N NAS1149D0332J.
- 3.35 With reference to Figure 8 View C-C, repeat step 3.32.
- 3.36 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 8 View C-C, install the decal P/N ED300J284 next to the connector J284.
- 3.37 With reference to Figure 8 View C-C, install the clamp P/N AW001CB05H on the C/A B1B298 and C/A B1B326 by means of the nut P/N MS21043L3 and the washer P/N NAS1149D0332J.
- 3.38 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 8 View C-C, install the decal P/N ED300TB2054 next to the junction in-line

TB2054.

- 3.39 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 8 View C-C, install the battery assy P/N 3G3350A01811 on the mounting bracket previously installed and install the relevant decal P/N ED300BT7.
- 3.40 With reference to Figure 8 View C-C and Figure 24 wiring diagram, perform electrical connection of the cable on part of the battery assy P/N 3G3350A01811 to the junction in-line TB2054.
- 3.41 In accordance with AMP DM 39-C-33-52-12-00A-921A-K and with reference to Figure 10 View looking RH pax door from internal side and Figure 24 wiring diagram, install the HEELS light assy P/N 3G3350A00611 on the RH pax door. Perform electrical connection to connector P284.
- 3.42 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 10 View looking RH pax door from internal side, install the decal P/N ED300DS86, P/N ED300DS87, P/N ED300DS88, P/N ED300DS89 and P/N ED300DS90 next to the relevant light.
- 3.43 In accordance with AMP DM 39-C-33-52-11-00A-921A-K and with reference to Figure 11 view looking LH pax door from internal side and Figure 24 wiring diagram, install the HEELS light assy P/N 3G3350A00611 on the LH pax door. Perform electrical connection to connector P283.
- 3.44 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 11 view looking LH pax door from internal side, install the decal P/N ED300DS66, P/N ED300DS67, P/N ED300DS68, P/N ED300DS69 and P/N ED300DS70 next to the relevant light.

NOTE

If necessary, it is allowed to locally rework liners to perform required water sensors test holes and prevent interference.

- 3.45 Reference to Figure 10 Detail G and Figure 11 Detail F, install the water sensor S114 and the water sensor S113 on the window liners.
- 3.46 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 10 Detail G and Figure 11 Detail F, install the decal P/N ED300S114 next to the water sensor S114 and the decal ED300S113 next to the water sensor S113.
- 3.47 With reference to Figure 24 wiring diagram, perform electrical connection of C/A B1A298 to the terminal board TB263. Use n°10 electrical contacts P/N A523A-A01 (TB263 side).
- 3.48 With reference to Figure 8 View B-B and Figure 11 View looking LH pax door from

internal side, connect the connector J283 to the connector P283.

- 3.49 With reference to Figure 24 wiring diagram, perform electrical connection of C/A B1B298 to the terminal board TB263 and to the splices SPG7-1 and SPG7-2. Use n°10 electrical contacts P/N A523A-A01 (TB263 side).
- 3.50 With reference to Figure 8 View C-C and Figure 10 View looking RH pax door from internal side, connect the connector J284 to the connector P284.
- 3.51 Perform a pin-to-pin continuity check of all the electrical connections made.

NOTE

The following Steps 4 to 9 are applicable to helicopters
NOT installing/equipped with ICS P/N 4G2350F00415.

4. With reference to Figure 17 Section F-F, temporarily locate the angular assy LH P/N 3G2580A20731 and the rework window liner bonded assy LH P/N 3G2580A46131 and drill n°4 screw holes $\varnothing 4.90 \div 5.03$ according to n°4 inserts on the structure.
5. With reference to Figure 16 View B-B, install the rework window liner bonded assy LH P/N 3G2580A46131 by means of the previously removed hardware (Ref. Part II step 8).
6. With reference to Figure 16 View B-B, install the angular assy LH P/N 3G2580A20731 by means of the previously removed hardware (Ref. Part II step 7).
7. With reference to Figure 16 View B-B, install the window liner rework lower LH P/N 3G2580P04232 by means of the previously removed hardware (Ref. Part II step 6).
8. With reference to Figure 16 View B-B, re-install the LH louver P/N 3G2580A10152 by means of the previously removed hardware (Ref. Part II step 3).
9. With reference to Figure 17 View D-D, re-install the plate assy P/N 999-0500-85-127 (Ref. Part II step 5).

NOTE

The following Steps 10 to 14 are applicable to
helicopters NOT installing/equipped with ICS
P/N 4G2350F00415.

10. With reference to Figure 17 View D-D, install the fastener snap P/N MS27980-18B.
11. With reference to Figure 17 Section F-F, temporarily locate the angular assy RH P/N 3G2580A20831 and the window liner upper RH modification P/N 3G2580P04132 and drill n°4 screw holes $\varnothing 4.90 \div 5.03$ according to n°4 inserts on the structure.
12. With reference to Figure 15 View A-A, install the window liner upper RH modification P/N 3G2580P04132 by means of the previously removed hardware (Ref. Part II step 15).
13. With reference to Figure 15 View A-A, install the angular assy LH P/N 3G2580A20831 by means of the previously removed hardware (Ref. Part II step 14).
14. With reference to Figure 15 View A-A, install the window liner lower RH modification

- P/N 3G2580P06731 by means of the previously removed hardware (Ref. Part II step 12).
15. With reference to Figure 15 View A-A, re-install the RH louver P/N 3G2580A10252 by means of the previously removed hardware (Ref. Part II step 9).
 16. With reference to Figure 14 View A-A and Figure 16 Section E-E, re-install n°2 pendant closures P/N 3G5316A40851 by means of the previously removed hardware (Ref. Part II step 13).
 17. With reference to Figure 15 View C-C, re-install the lower cover assy P/N 3G2580A19231 (Ref. Part II step 11).
 18. With reference to Figure 15 View C-C, install the fastener snap P/N MS27980-18B.
 19. In accordance with AMP DM 39-A-06-41-00-00A-010A-A, re-install all external panels, internal panels and internal liners previously removed.
 20. In accordance with the applicable step of AMP DM 39-C-33-52-00-00A-340A-K perform the function test of the emergency exit lighting system
 21. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
 22. Return the helicopter to flight configuration and record for compliance with Part III of this Service Bulletin on the helicopter logbook.
 23. 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

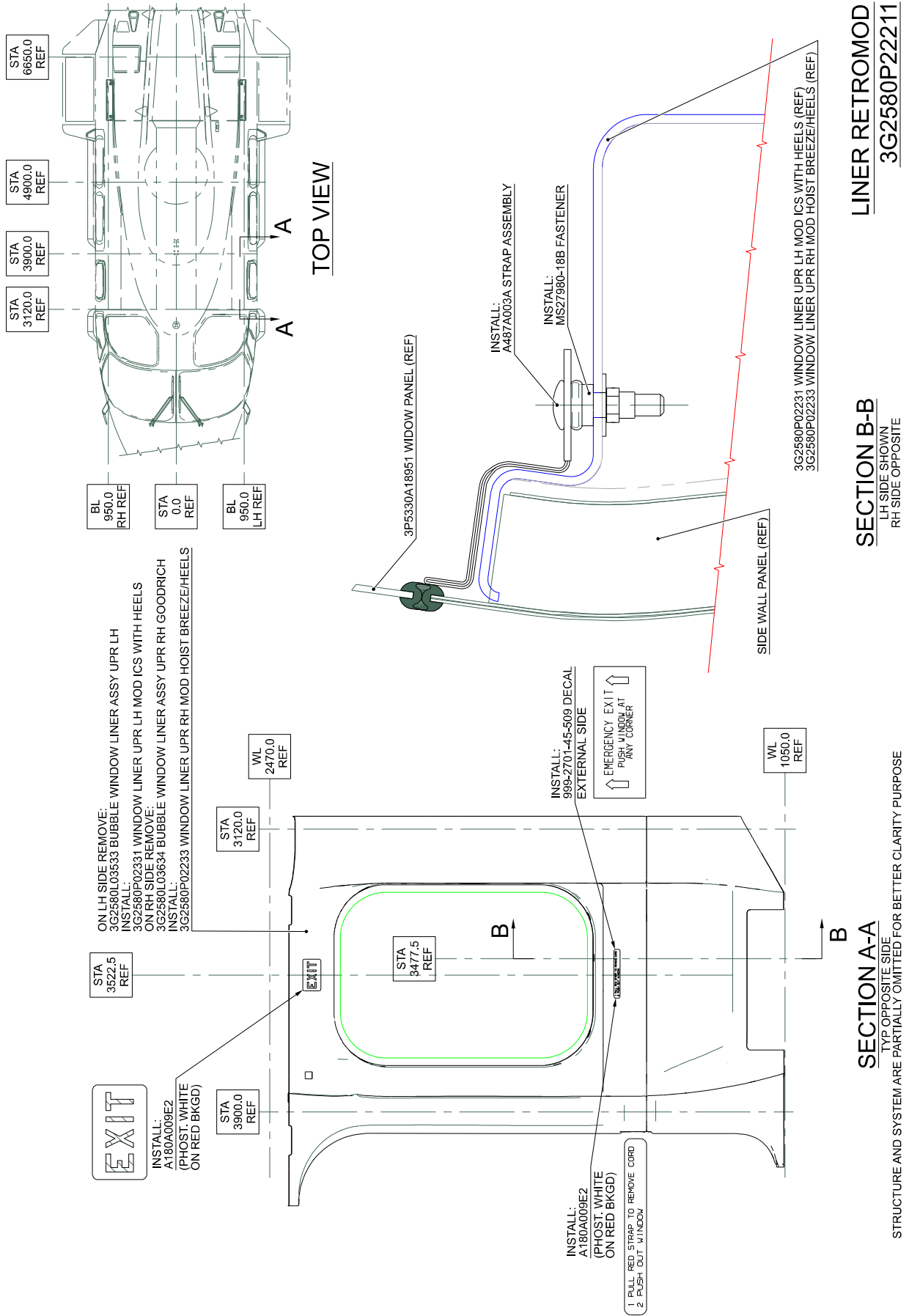


Figure 1

S.B. N°139-619 OPTIONAL
DATE: February 18, 2021
REVISION: C - January 26, 2024

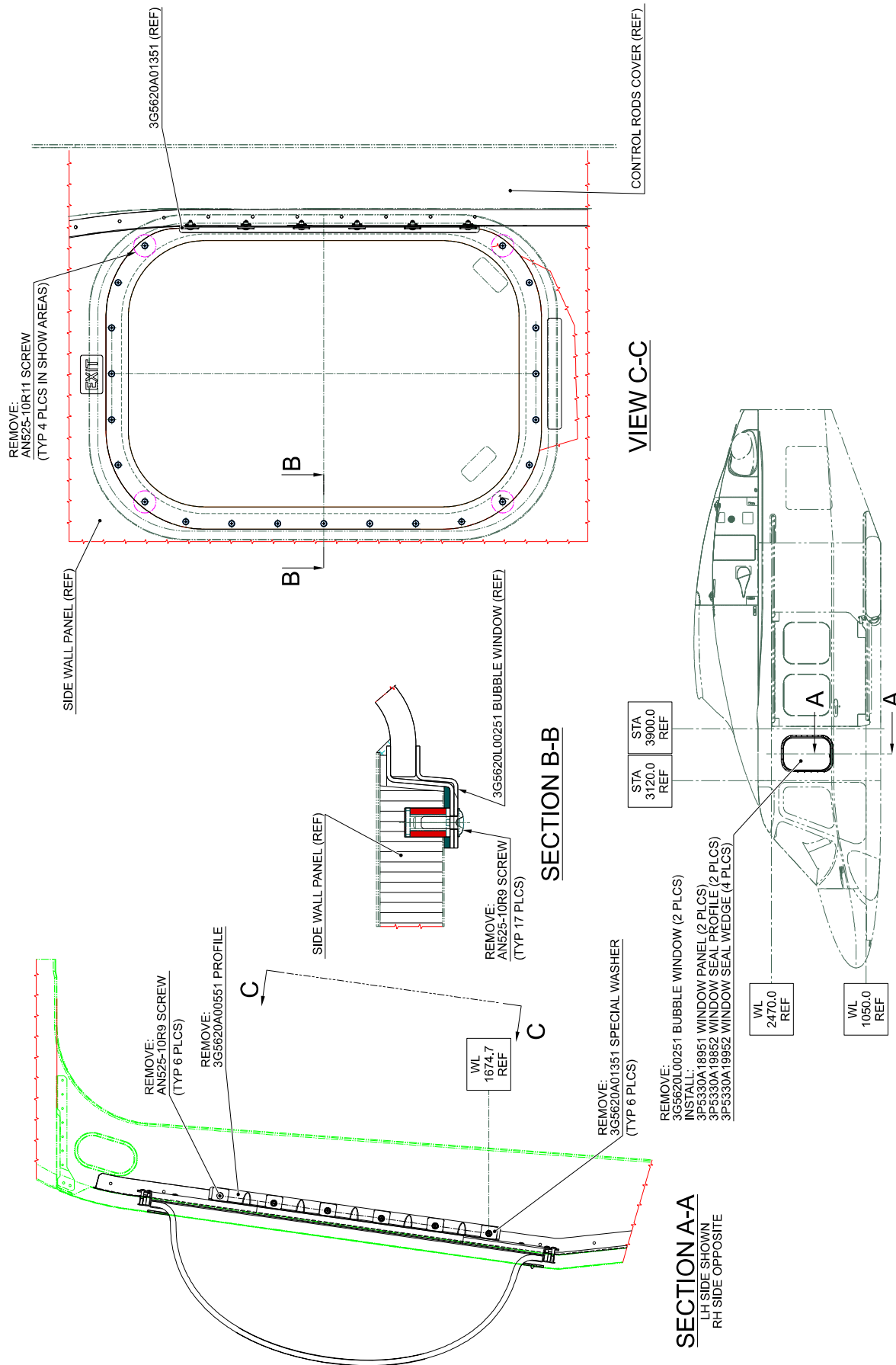
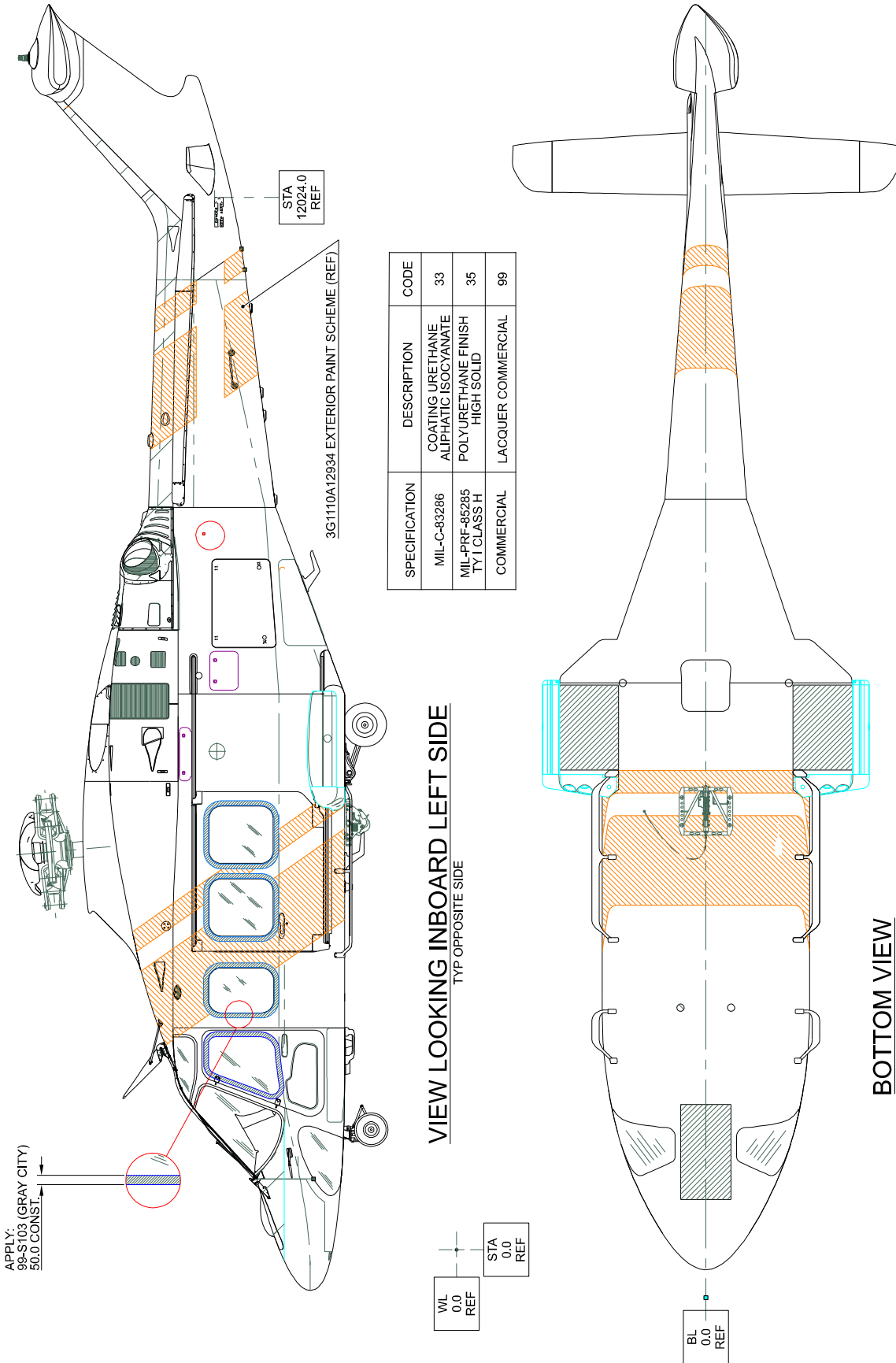


Figure 2



EXTERIOR PAINT SCHEME RETROMOD
3G1110P00111

Figure 3

S.B. N°139-619 OPTIONAL
DATE: February 18, 2021
REVISION: C - January 26, 2024

HEELS HIGH VISIBILITY STRUCT PROV
3G5318A18911

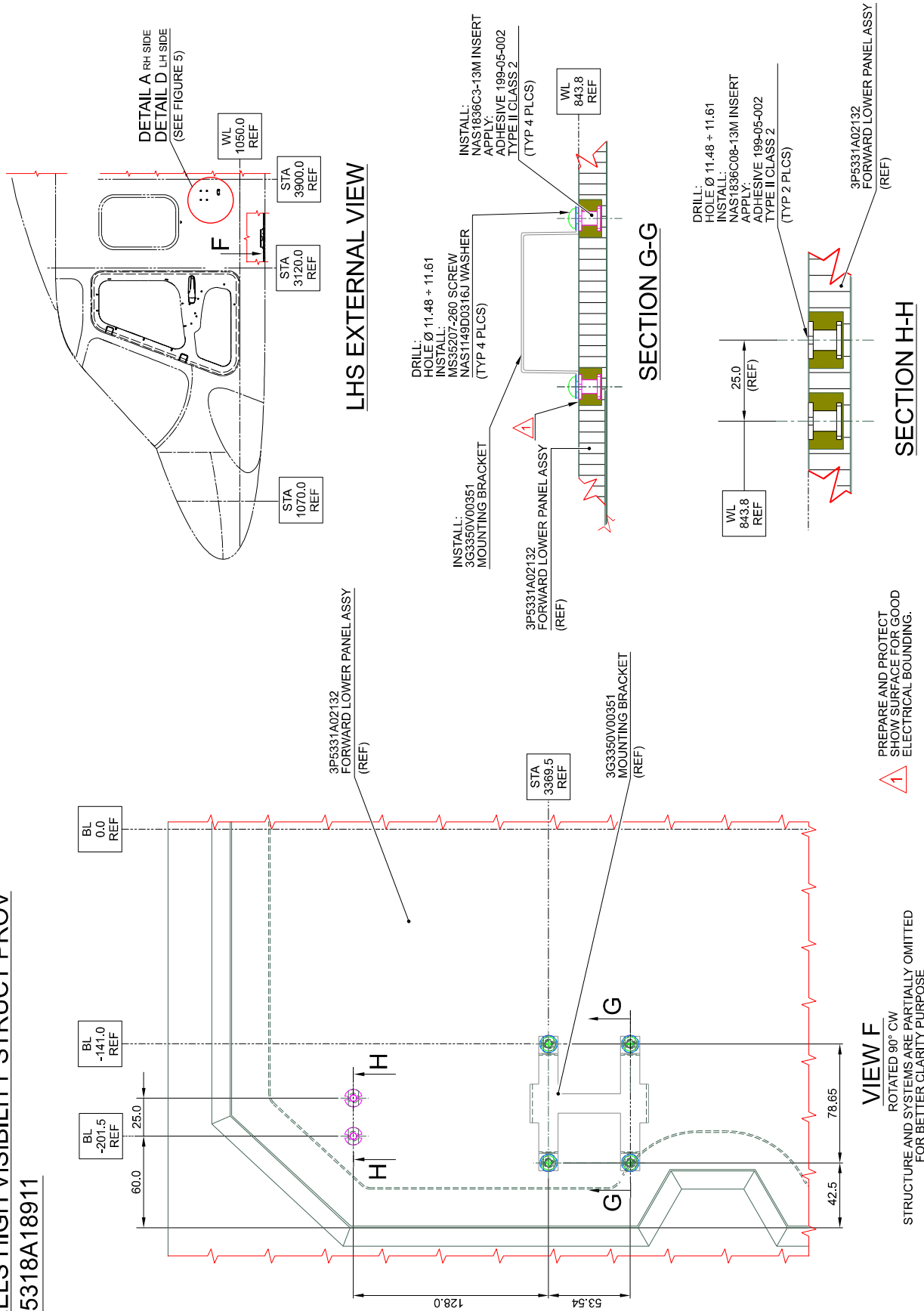


Figure 4

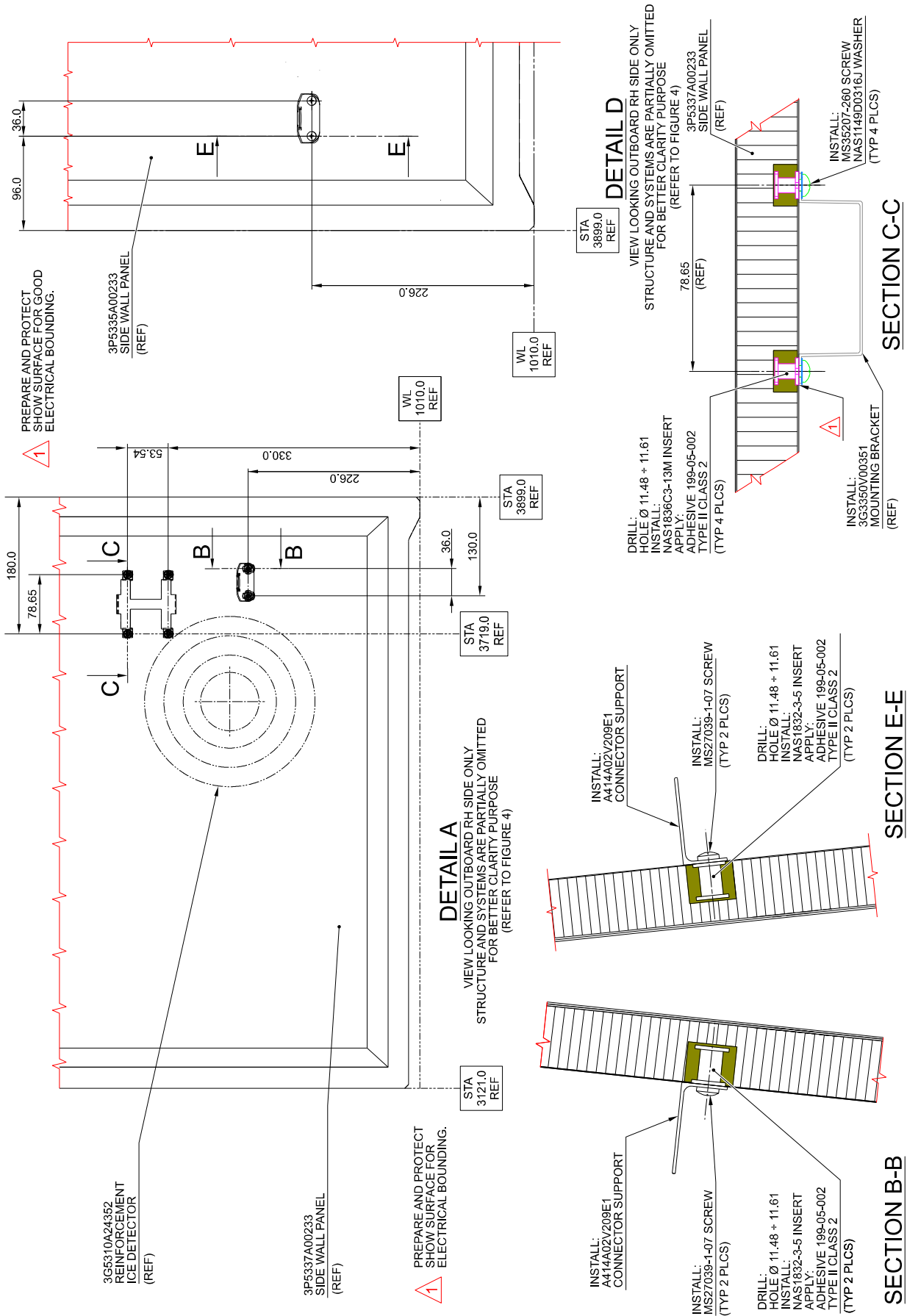


Figure 5

S.B. N°139-619 OPTIONAL
DATE: February 18, 2021
REVISION: C - January 26, 2024

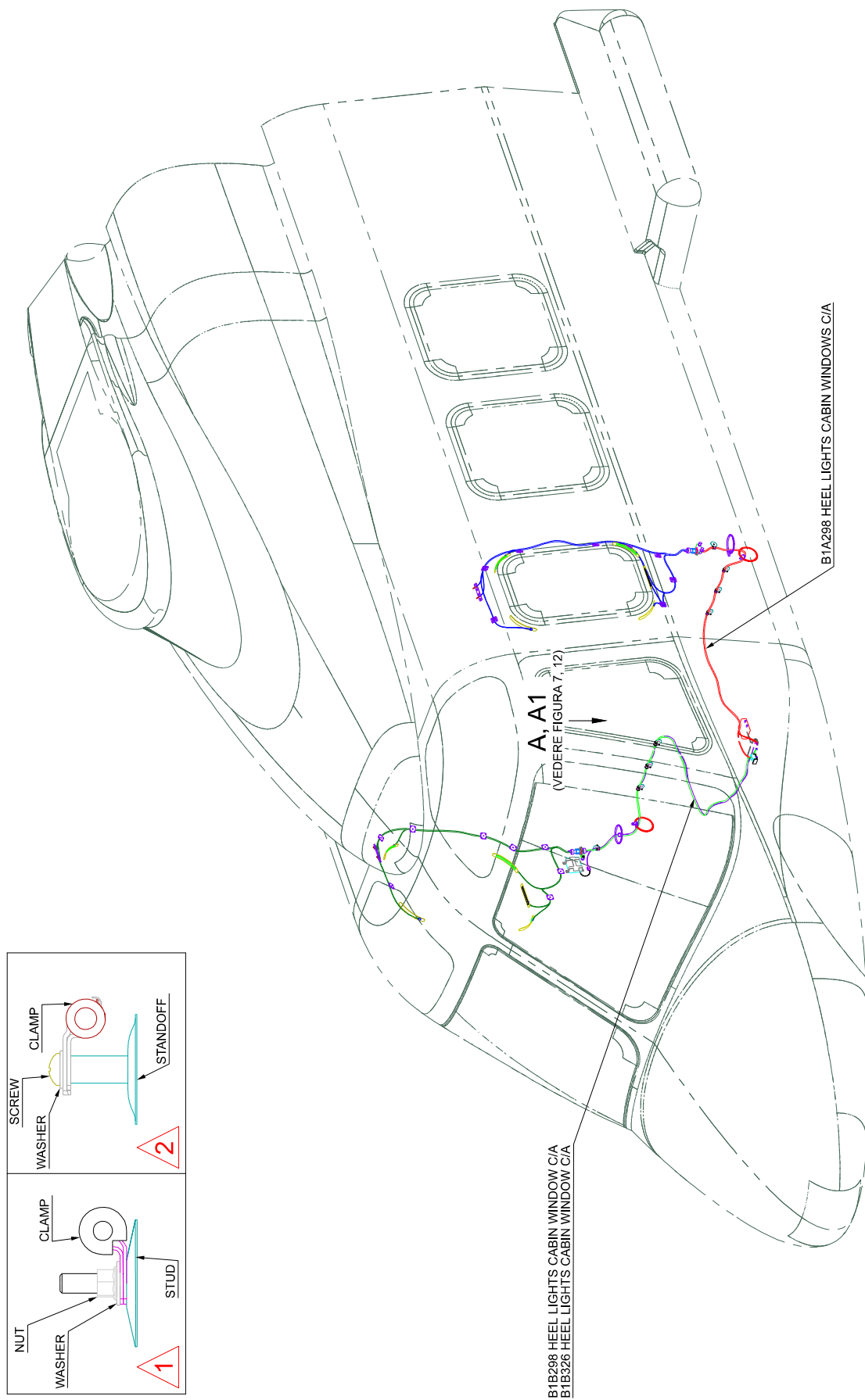
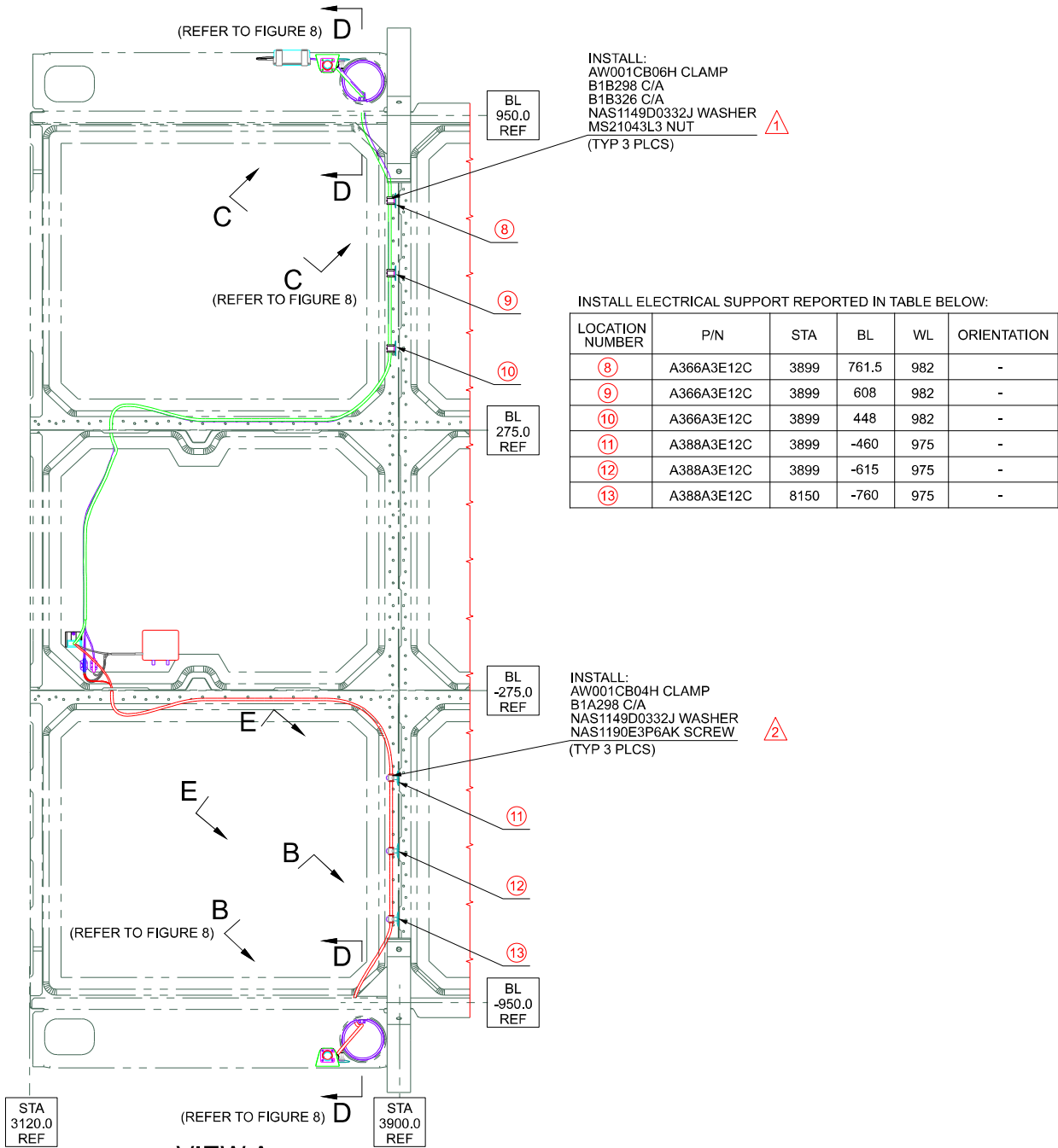


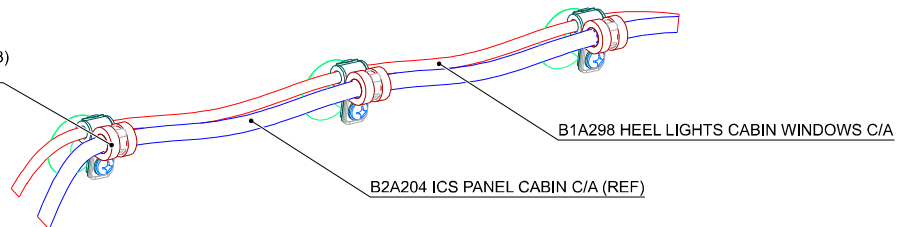
Figure 6



VIEW A

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE (REFER TO FIGURE 6)

REMOVE EXISTING SCREW
INSTALL:
NAS1190E3P6AK SCREW (QT.À 3)
AW001CB06H CLAMP (QT.À 3)
(TYP 3 PLCS)



VIEW E-E

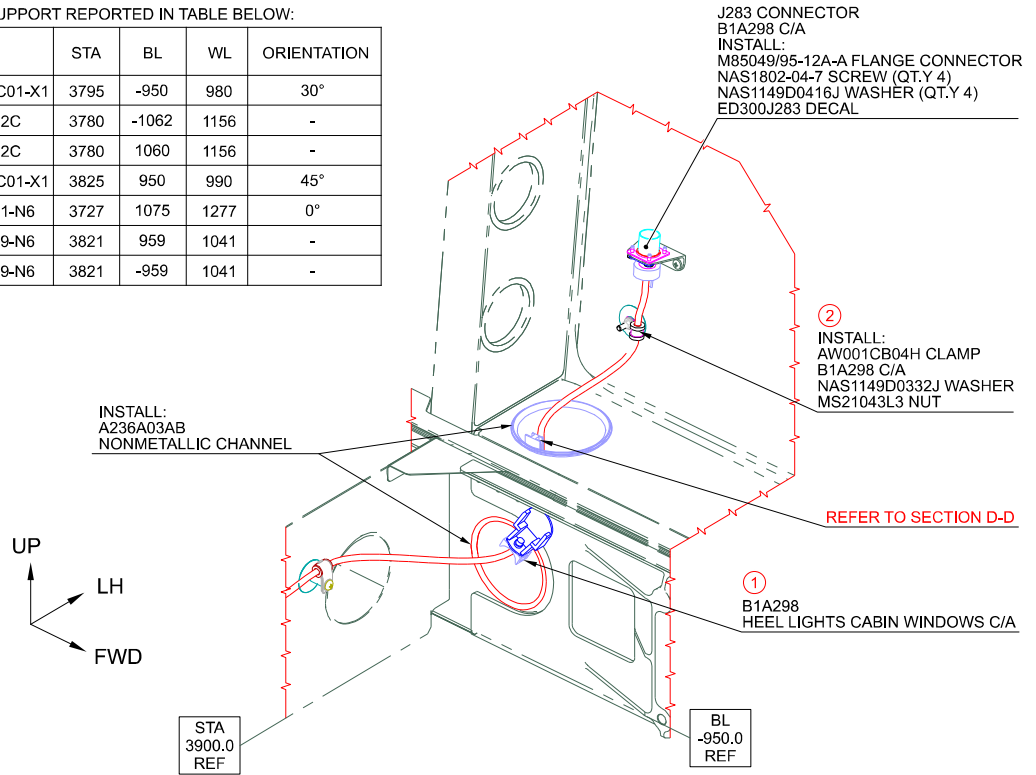
APPLICABLE IF KIT ICS P/N 3G2350A01014 INSTALLED

Figure 7

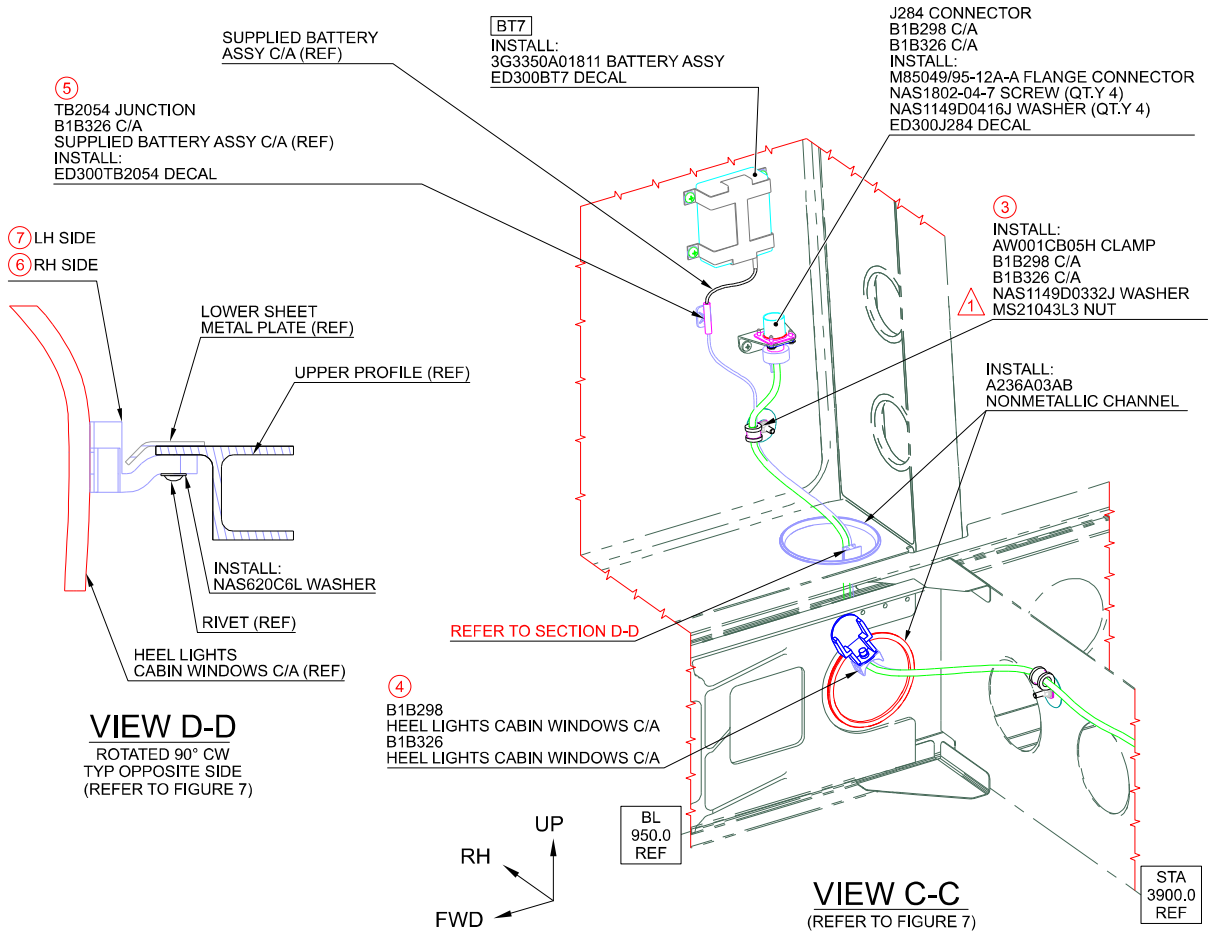
S.B. N°139-619 OPTIONAL
DATE: February 18, 2021
REVISION: C - January 26, 2024

INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:

LOCATION NUMBER	P/N	STA	BL	WL	ORIENTATION
①	AW001CL005C01-X1	3795	-950	980	30°
②	A366A3E12C	3780	-1062	1156	-
③	A366A3E12C	3780	1060	1156	-
④	AW001CL005C01-X1	3825	950	990	45°
⑤	AW001CL001-N6	3727	1075	1277	0°
⑥	AW001CL509-N6	3821	959	1041	-
⑦	AW001CL509-N6	3821	-959	1041	-

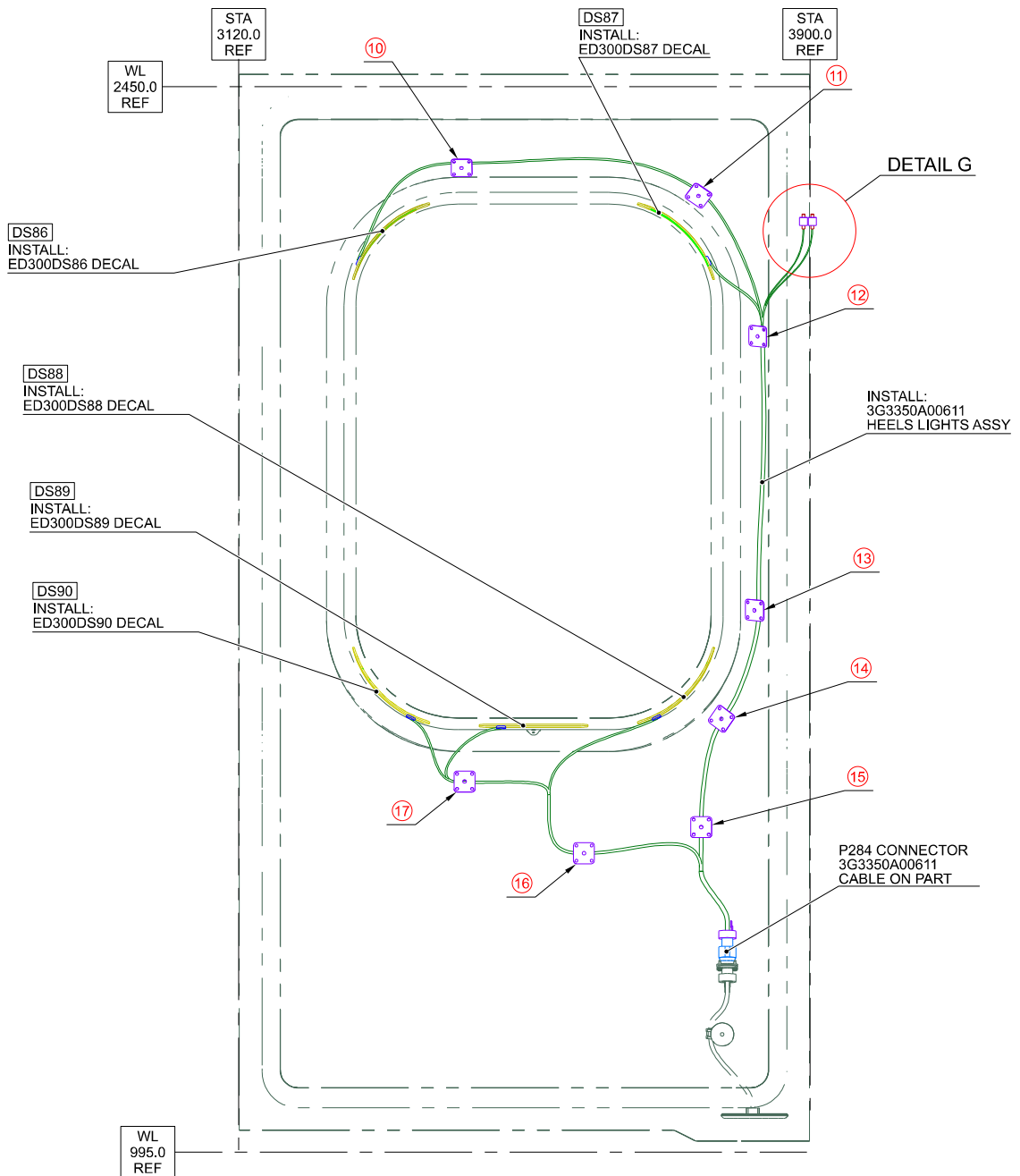


VIEW B-B
(REFER TO FIGURE 7)



VIEW D-D
ROTATED 90° CW
TYP OPPOSITE SIDE
(REFER TO FIGURE 7)

Figure 8



VIEW LOOKING RH PAX DOOR FROM INTERNAL SIDE

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:

LOCATION NUMBER	P/N	STA	BL	WL	ORIENTATION
10	AW001CL000A-X3	3424	930	2339	0°
11	AW001CL000A-X3	3748	941	2301	45°
12	AW001CL000A-X3	3828	939	2109	0°
13	AW001CL000A-X3	3824	1017	1735	0°
14	AW001CL000A-X3	3779	1051	1587	45°
15	AW001CL000A-X3	3751	1020	1439	0°
16	AW001CL000A-X3	3591	1019	1403	0°
17	AW001CL000A-X3	3428	1023	1501	45°
18	AW001CL009-CM	3891	907	2266	0°
19	AW001CL009-CM	3891	907	2266	0°

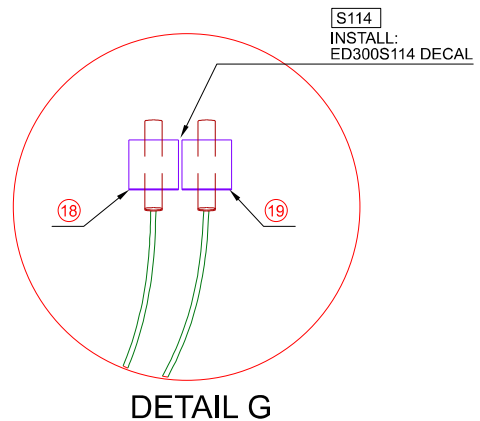
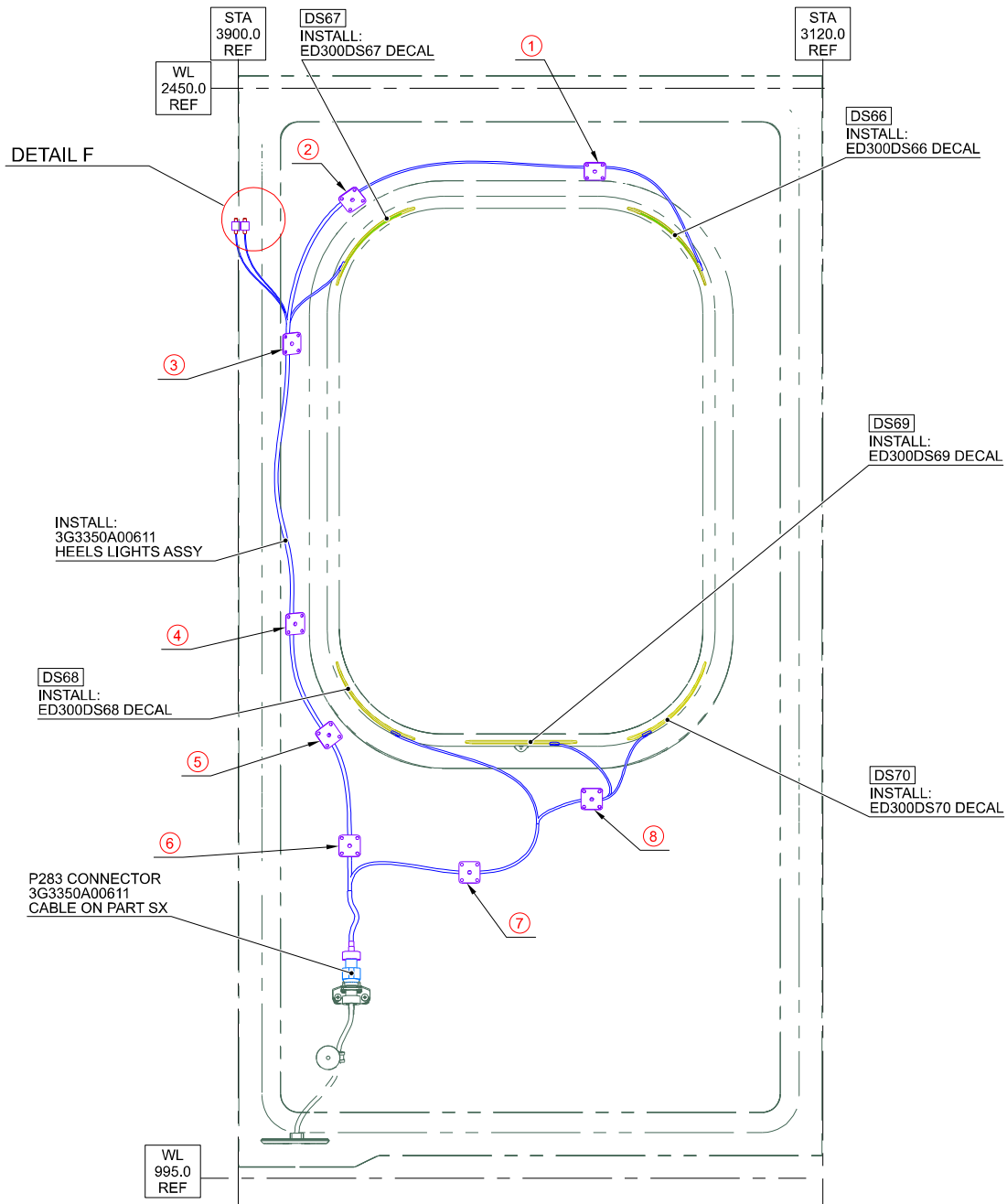


Figure 10



VIEW LOOKING LH PAX DOOR FROM INTERNAL SIDE

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:

LOCATION NUMBER	P/N	STA	BL	WL	ORIENTATION
①	AW001CL000A-X3	3424	-930	2339	0°
②	AW001CL000A-X3	3748	-941	2301	45°
③	AW001CL000A-X3	3828	-939	2109	0°
④	AW001CL000A-X3	3824	-1017	1735	0°
⑤	AW001CL000A-X3	3779	-1051	1587	45°
⑥	AW001CL000A-X3	3751	-1020	1439	0°
⑦	AW001CL000A-X3	3591	-1019	1403	0°
⑧	AW001CL000A-X3	3428	-1023	1501	45°
⑨	AW001CL009-CM	3891	-907	2266	0°
⑳	AW001CL009-CM	3903	-907	2266	0°

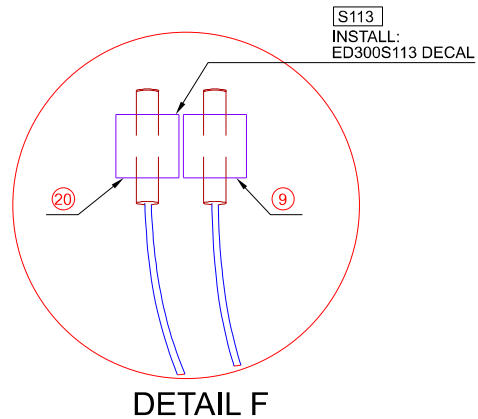
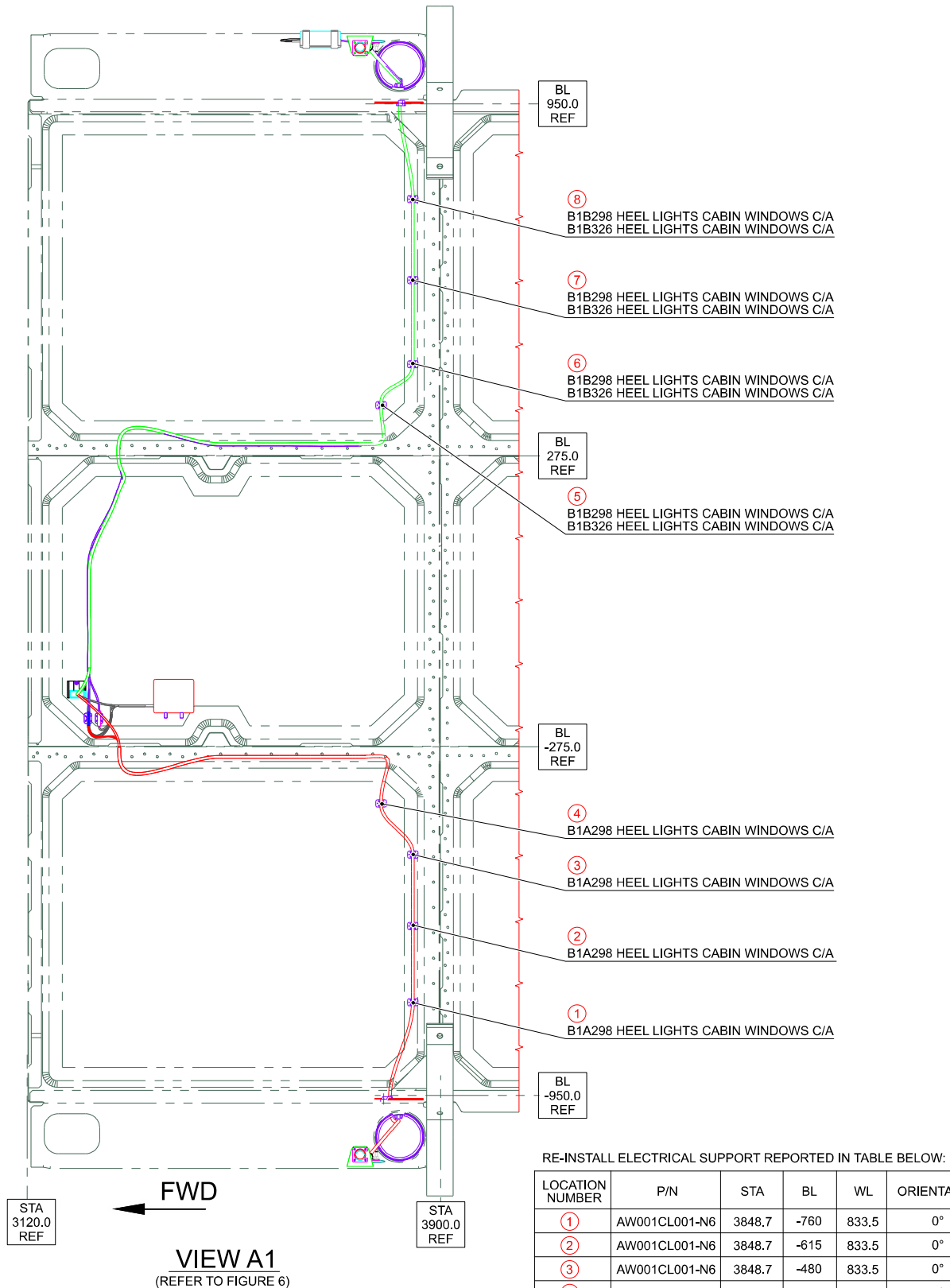


Figure 11

S.B. N°139-619 OPTIONAL
DATE: February 18, 2021
REVISION: C - January 26, 2024



LOCATION NUMBER	P/N	STA	BL	WL	ORIENTATION
①	AW001CL001-N6	3848.7	-760	833.5	0°
②	AW001CL001-N6	3848.7	-615	833.5	0°
③	AW001CL001-N6	3848.7	-480	833.5	0°
④	AW001CL001-N6	3788.7	-383	833.5	0°
⑤	AW001CL001-N6	3788.7	371	833.5	0°
⑥	AW001CL001-N6	3848.7	448	833.5	0°
⑦	AW001CL001-N6	3848.7	608	833.5	0°
⑧	AW001CL001-N6	3848.7	761	833.5	0°

Figure 12

3G2580P20011
WINDOW LINERS VARIANT FOR BUBBLE

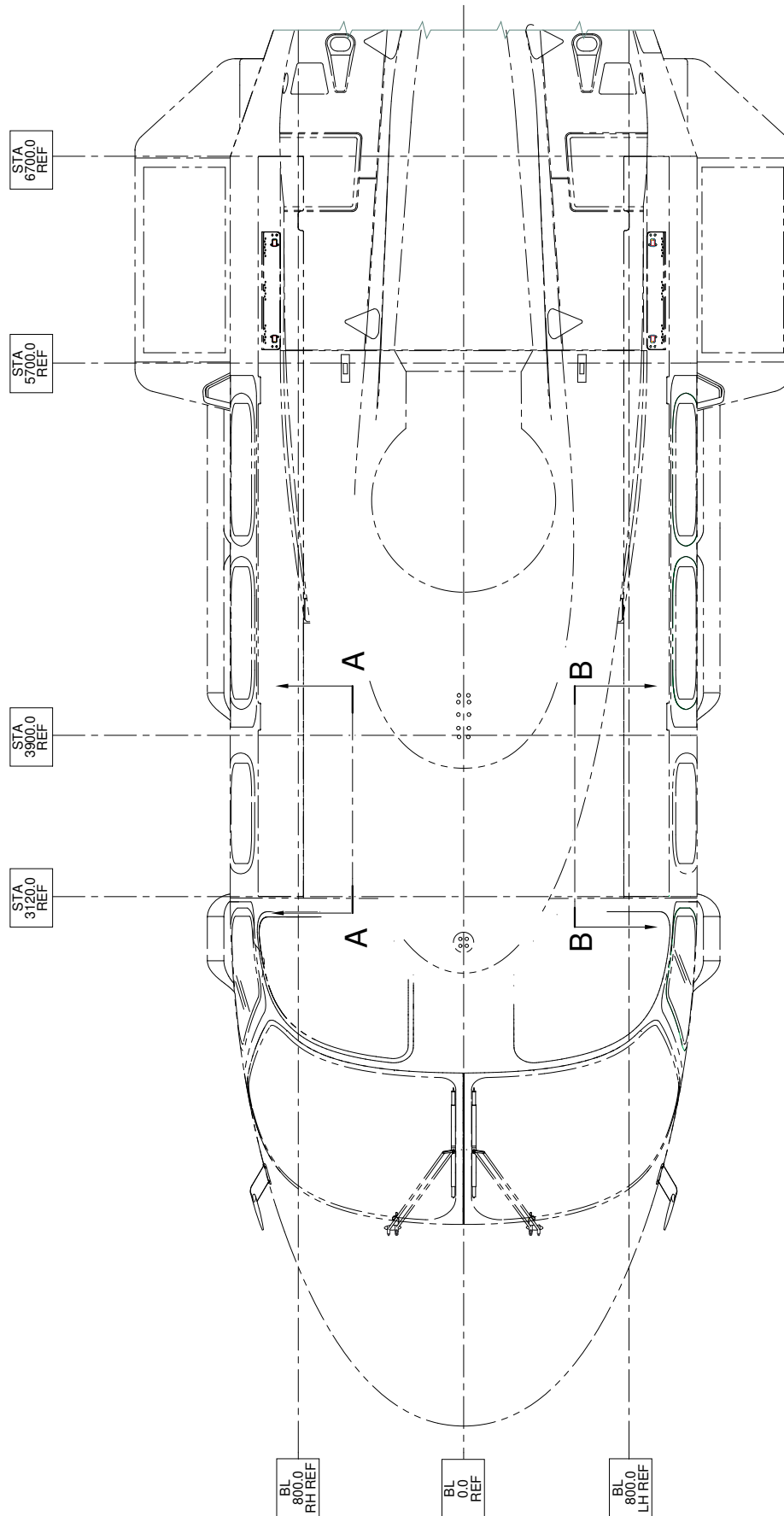


Figure 13

S.B. N°139-619 OPTIONAL
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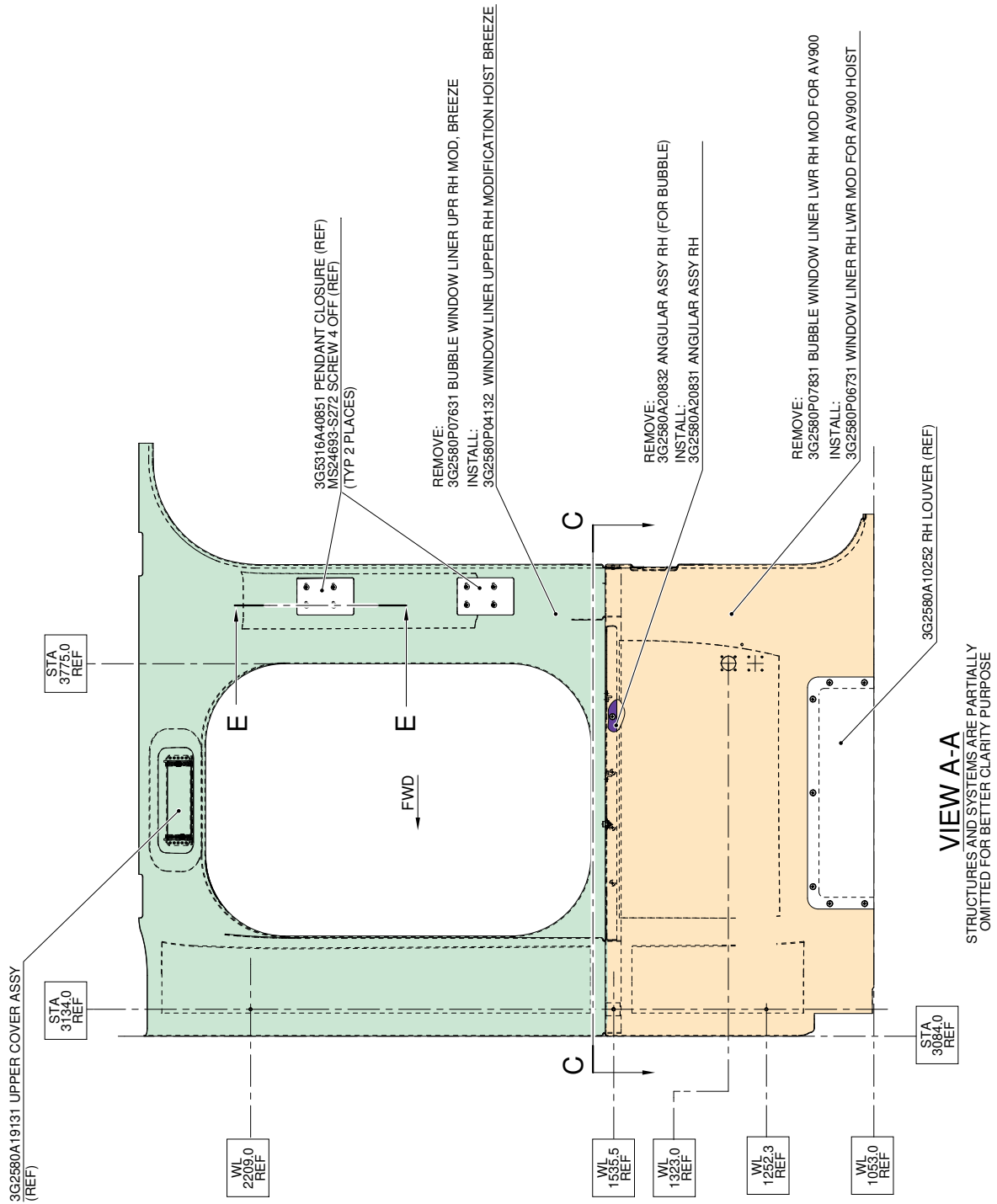
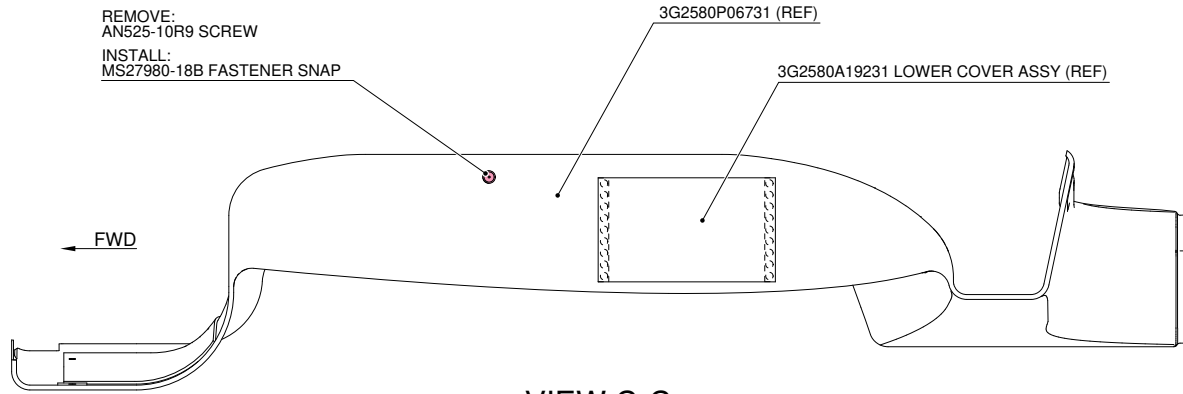
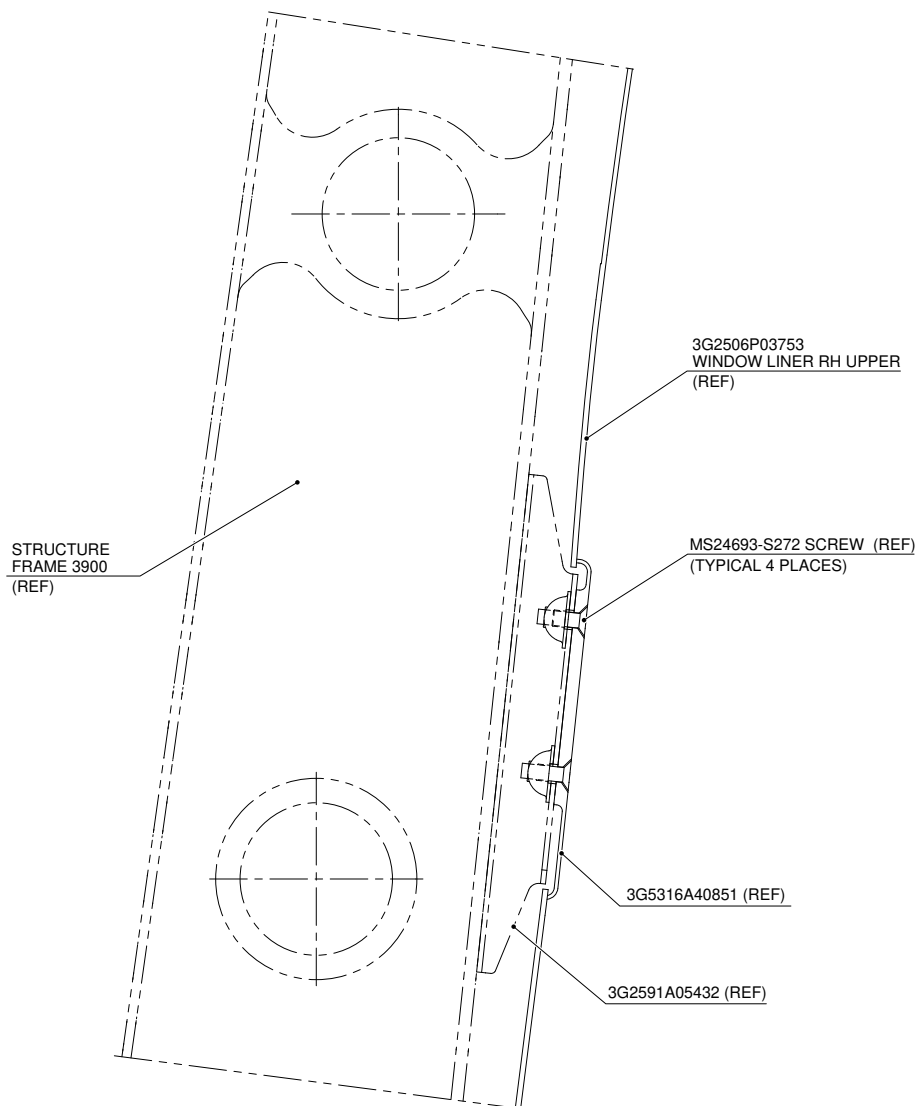


Figure 14



VIEW C-C

STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



SECTION E-E

(TYP 2 PLACES)
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 15

S.B. N°139-619 OPTIONAL
DATE: February 18, 2021
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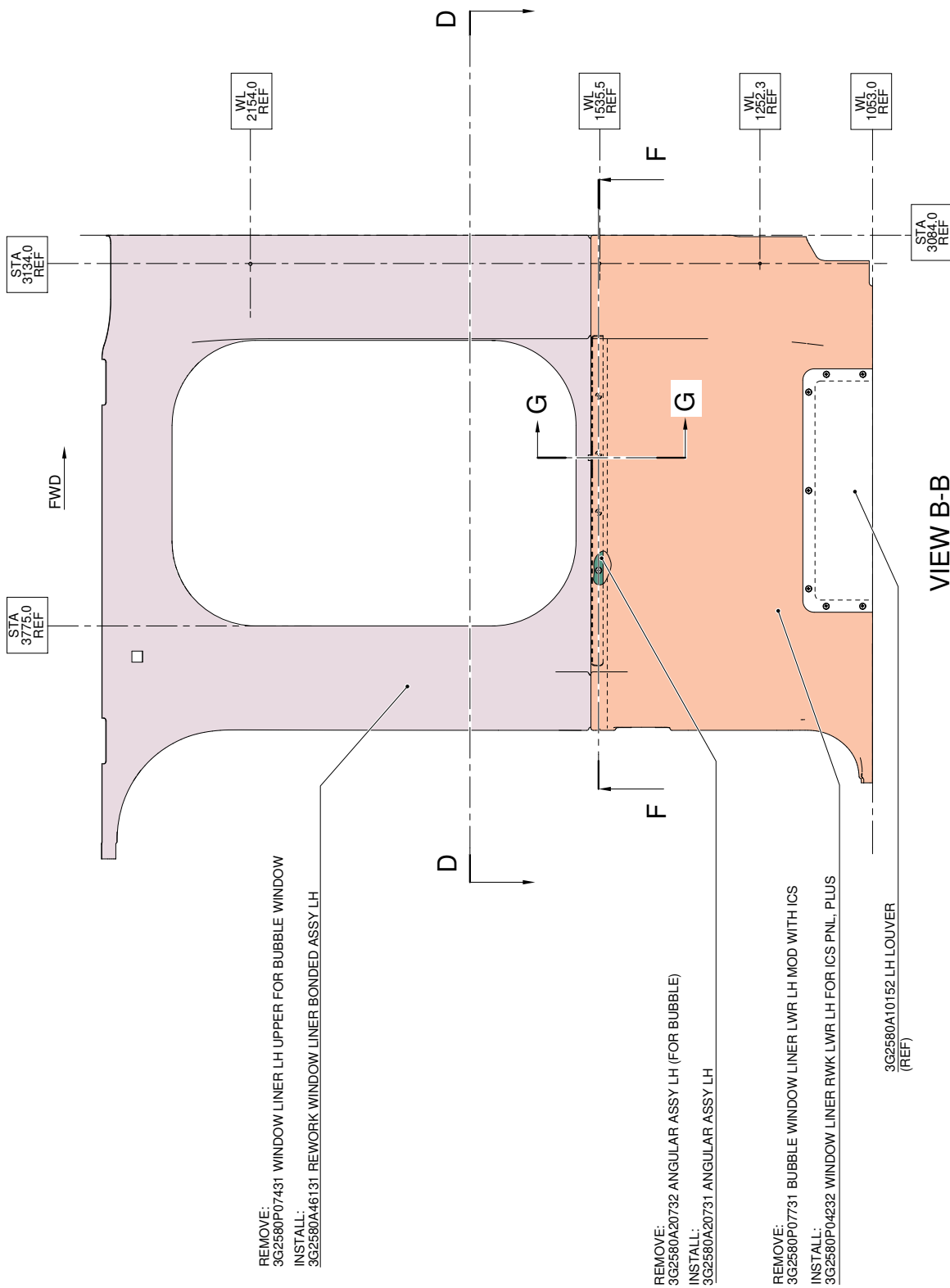


Figure 16

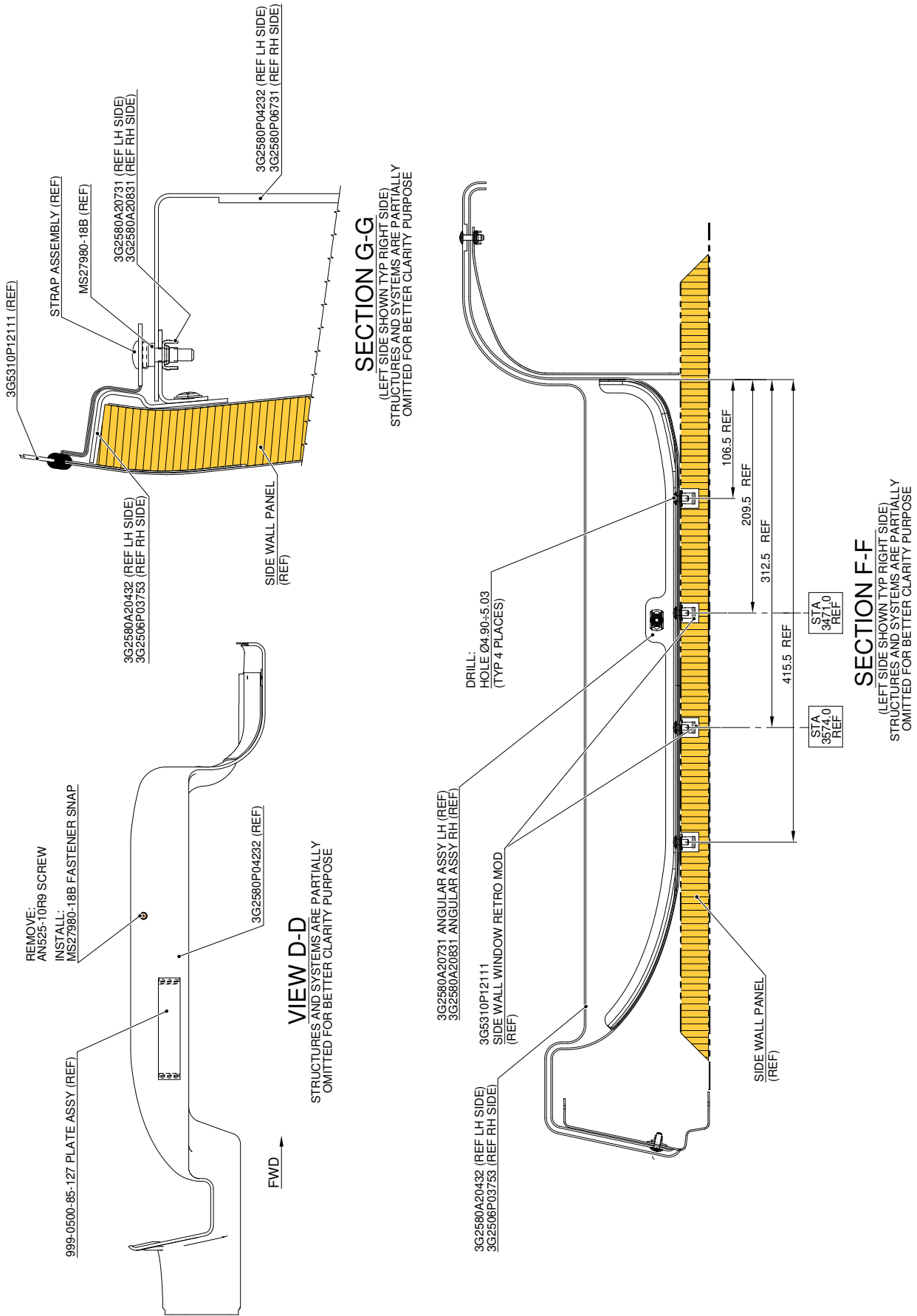


Figure 17

S.B. N°139-619 OPTIONAL
DATE: February 18, 2021
REVISION: C - January 26, 2024

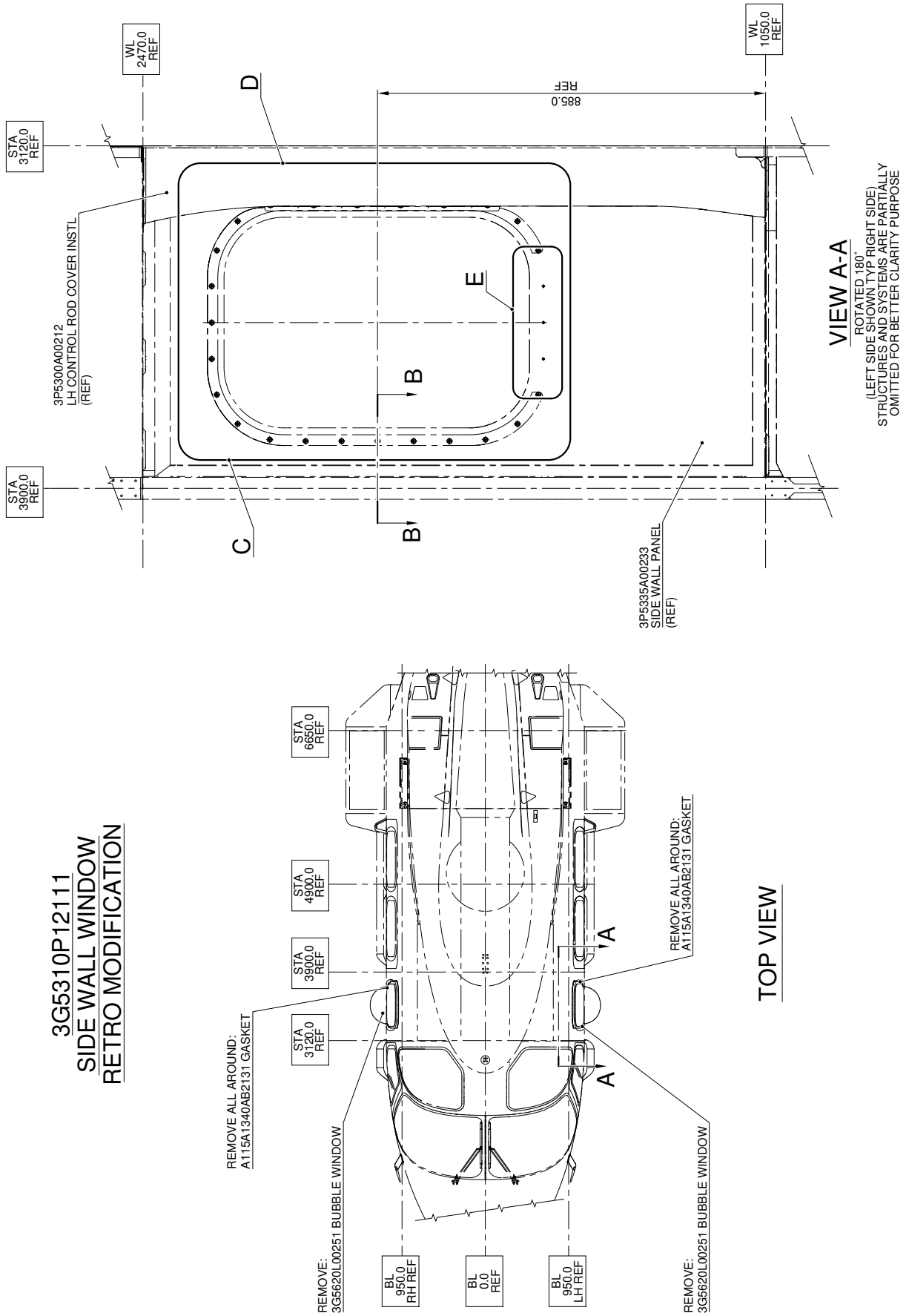
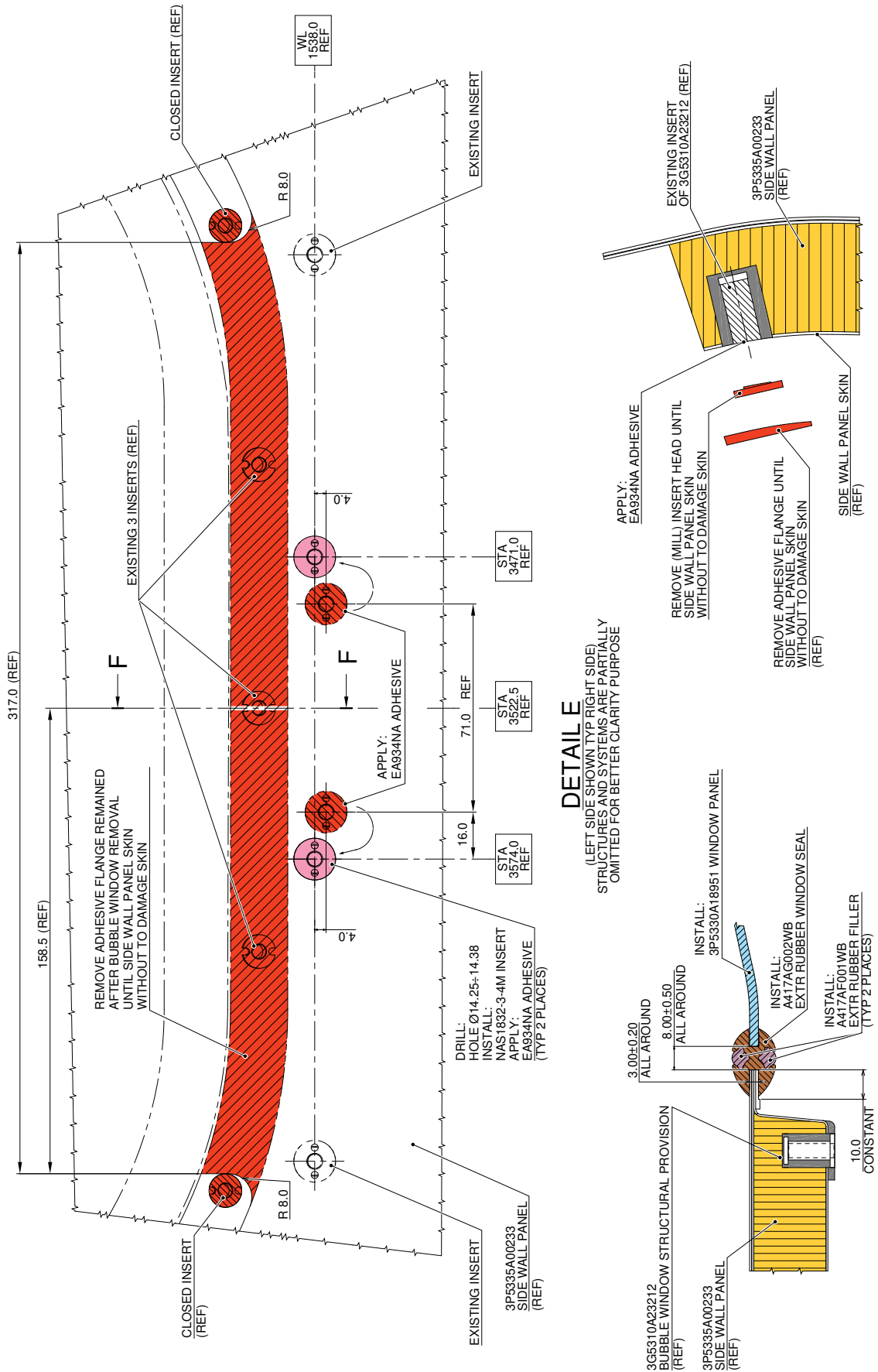


Figure 18

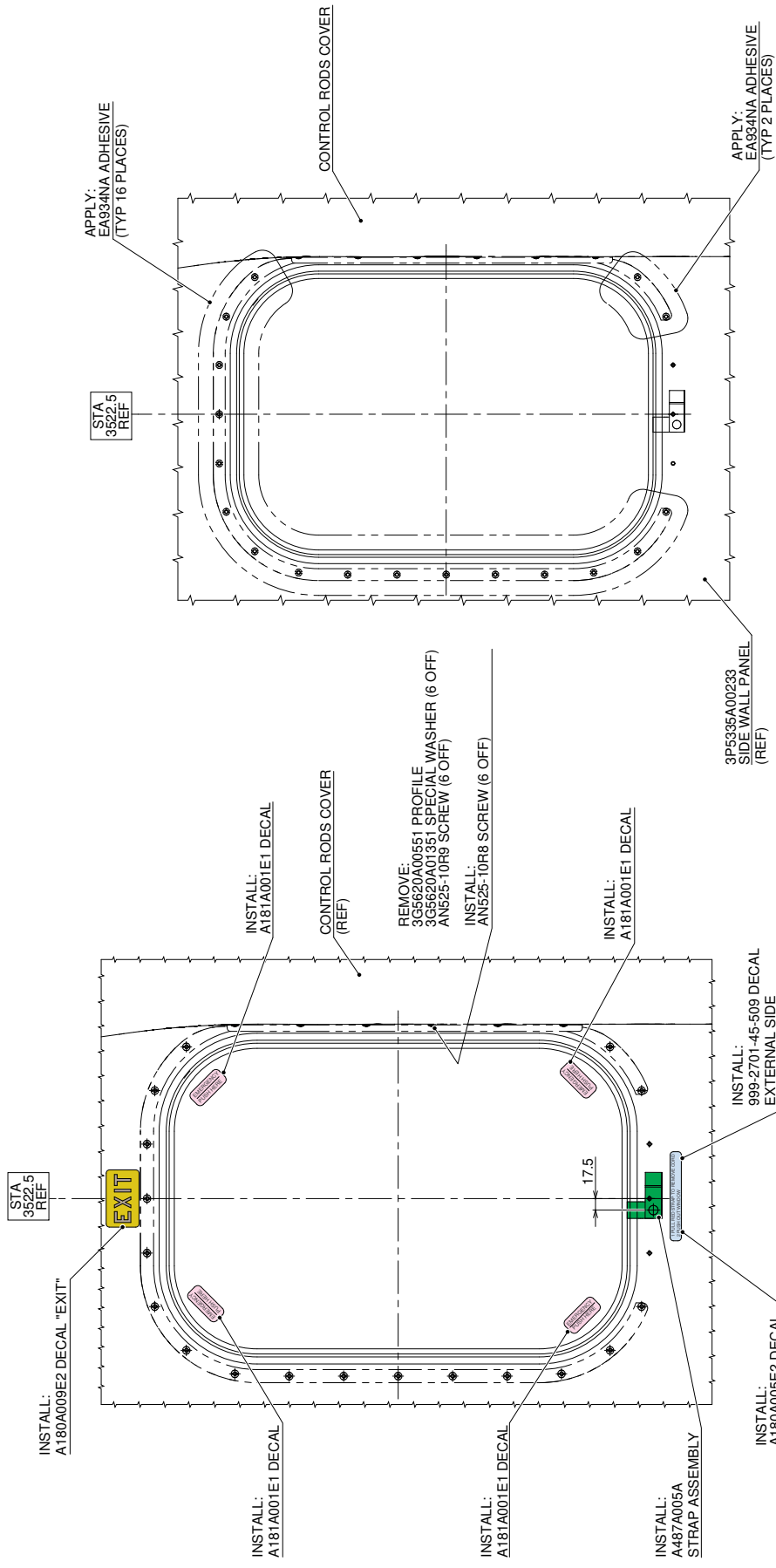


SCHEMATIC SECTION F-F
(TYP 3 PLACES)
(LEFT SIDE SHOWN TYP RIGHT SIDE)
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

DETAIL E
(LEFT SIDE SHOWN TYP RIGHT SIDE)
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

SECTION B-B
(LEFT SIDE SHOWN TYP RIGHT SIDE)
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 19



DETAIL D
(LEFT SIDE SHOWN TYP RIGHT SIDE)
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

DETAIL C
(LEFT SIDE SHOWN TYP RIGHT SIDE)
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 20

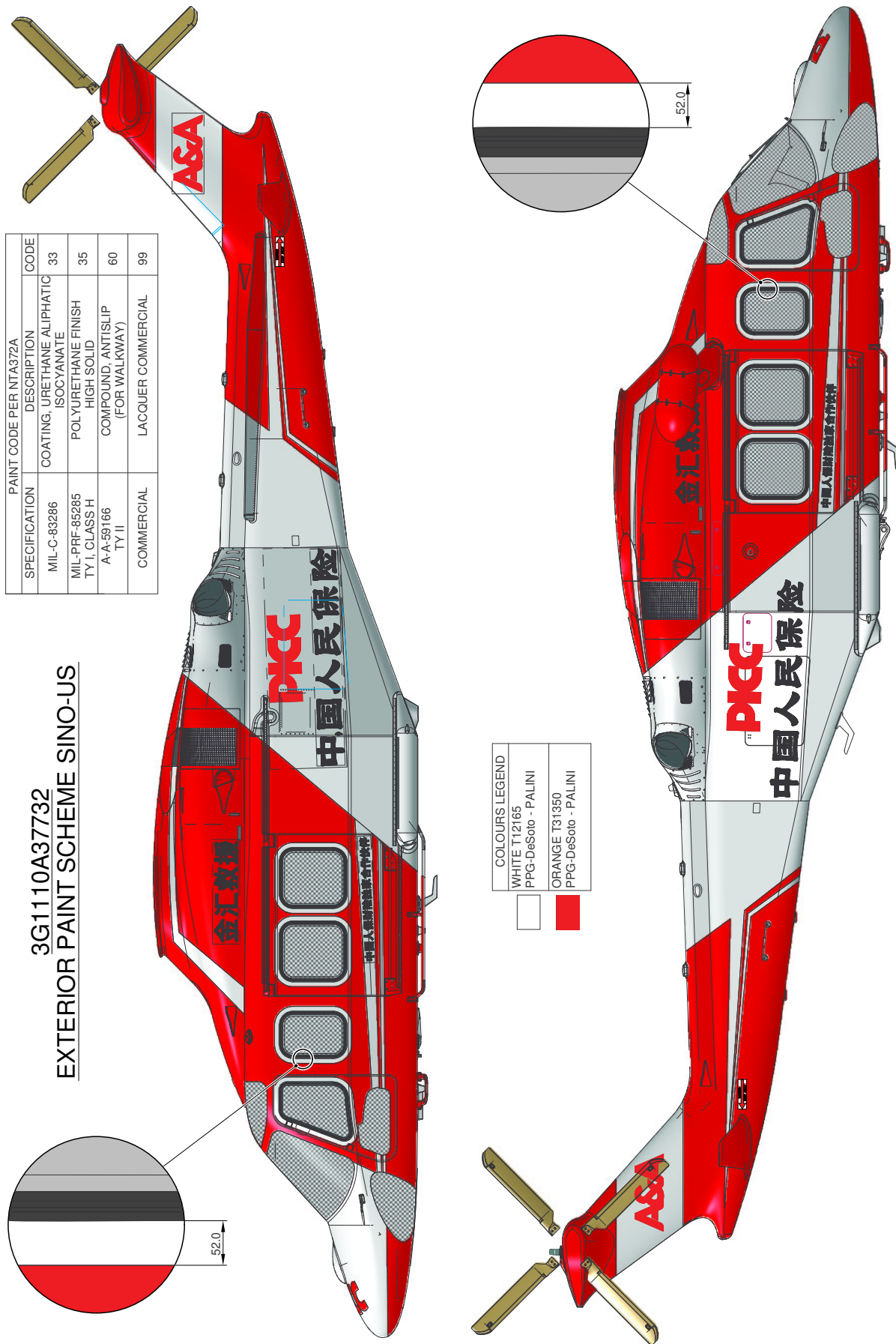


Figure 21

S.B. N°139-619 OPTIONAL
DATE: February 18, 2021
REVISION: C - January 26, 2024

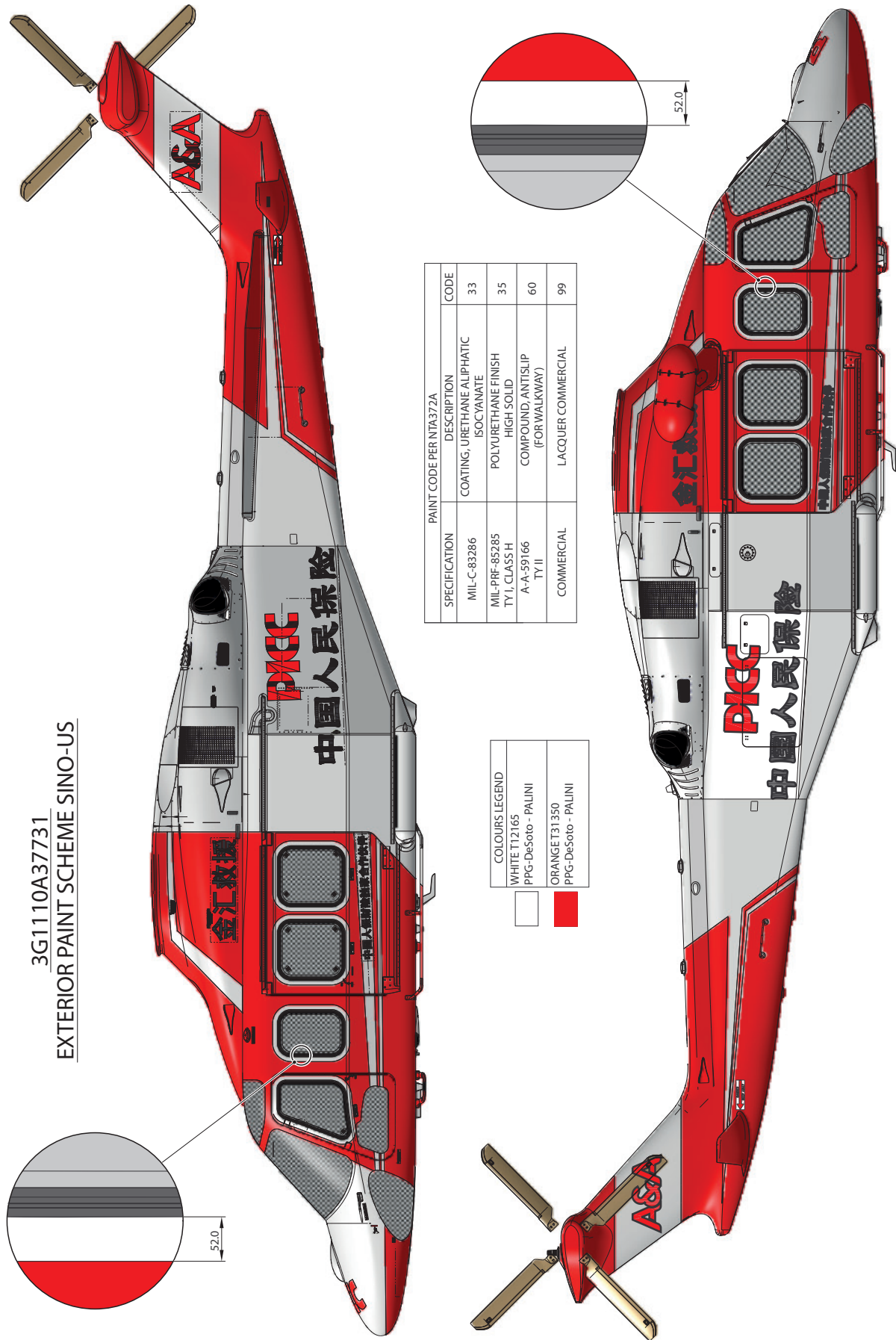


Figure 22

EMERGENCY EXITS PAINTING
3G1110P00211

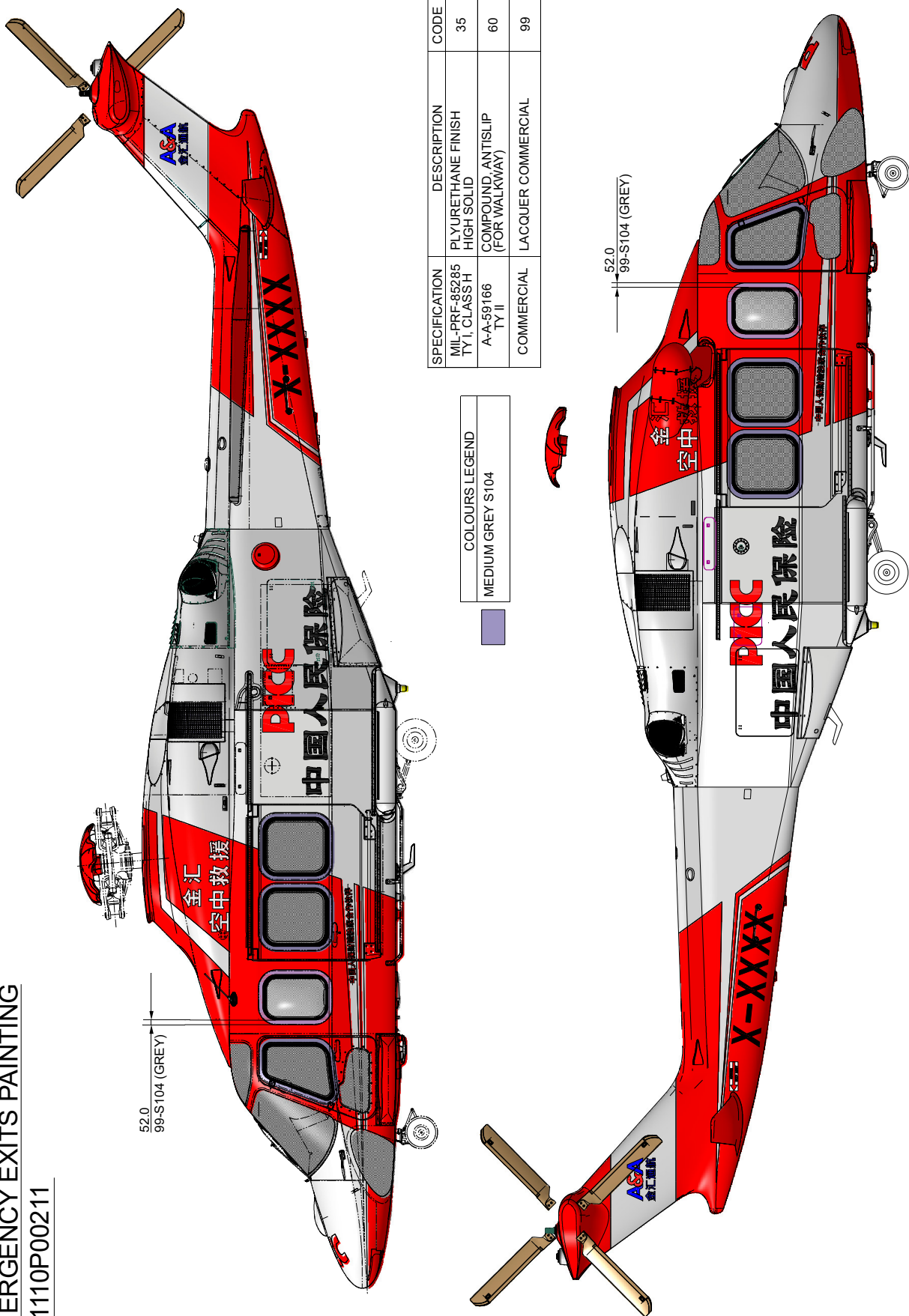


Figure 23

S.B. N°139-619 OPTIONAL
DATE: February 18, 2021
REVISION: C - January 26, 2024

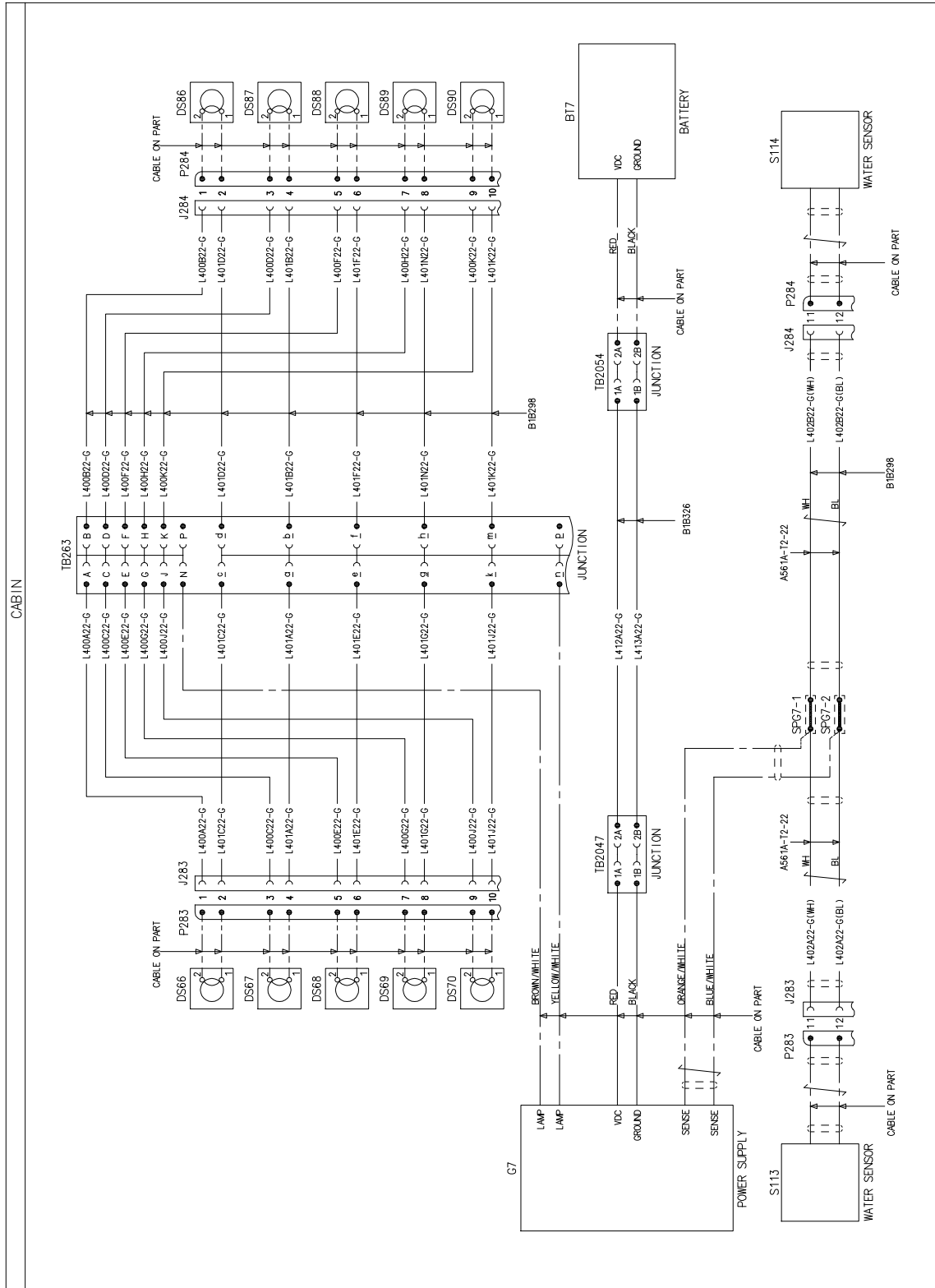


Figure 24

S.B. N°139-619 OPTIONAL
DATE: February 18, 2021
REVISION: C - January 26, 2024

FUNCTIONAL NOTES

ALL CABLES ARE IN LOW B14298, UNLESS SPECIFIED.
ALL CABLES ARE OF TYPE A569A-T22, UNLESS SPECIFIED.

