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AgustaWestland Products

SERVICE BULLETIN

OPTIONAL

N° 189-289

DATE: March 18, 2024

REV. : /

TITLE

ATA 52 - GABBIANO RADOME KIT INSTALLATION

REVISION LOG

First Issue

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

1. PLANNING INFORMATION

A. EFFECTIVITY

AW189 helicopters equipped with Marking Installation kit P/N 8G1100F00211.

B. COMPLIANCE

At Customer's option.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

Leonardo Helicopter issued this Service Bulletin in order to give instruction on how to install the “Gabbiano radome kit” P/N 8G5240F00211. This radome can be installed on the AW189 helicopters as alternative to the basic one in order to obtain extra space in the nose avionic bay to allow installation of the Gabbiano radar.

The Service Bulletin gives instruction on how to install of a new plate at STA280 and a new TCAS support assy via the structural provision P/N 8G5310A10011. In addition, it gives the instructions on how to remove the basic radome and how to install the Gabbiano radome P/N 8G5240A10331.

LH issued this SB for the following reason:

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

E. DESCRIPTION

This Service Bulletin is issued in order to provide the necessary instruction on how to perform the installation of “Gabbiano radome kit” P/N 8G5240F00211.

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 thirty-two (32) MMH are deemed necessary.
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

WEIGHT (kg)	4,037	
	ARM (mm)	**MOMENT (kg·mm)**
LONGITUDINAL BALANCE	544,6	2198.7
LATERAL BALANCE	-1.11	-4.6

I. REFERENCES

I.1 PUBLICATIONS

Following Data Modules refer to AMP:

DATA MODULE		**DESCRIPTION**	**PART**
DM01	89-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance.	-
DM02	89-A-52-41-01-00A-520A-A	Nose door - Remove procedure	-
DM03	89-A-52-41-01-00A-720A-A	Nose door - Install procedure	-

Following Data Modules refer to CSPP:

DATA MODULE		**DESCRIPTION**	**PART**
DM04	CSPP-A-20-10-12-00A-250A-D	Ground connections - Clean and apply surface protection	-

I.2 ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
CSPP	Common Standard Practices Publication

DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
IPD	Illustrated Parts Data
LH	Leonardo Helicopters
MMH	Maintenance Man Hours
P/N	Part Number
S/N	Serial Number

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

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	**8G5240F00211**		**KIT GABBIANO RADOME**	**REF**	**.**		
2	**8G5310A10011**		**GABBIANO RADOME STRUCTURAL PROVISION**	**REF**	**..**		
3	8G3441A04331	8G3441A07731B or 8G3441A07731A	FWD bracket assy	1	...		189-289L1
4	8G3441A07731		BL.0 angle assy	1	...		189-289L1
5	8G3441A08331		Upper brkt LHS assy	1	...		189-289L1
6	8G3441A07531		STA 280 aft plt assy	1	...		189-289L1
7	8G3441A07351		STA 280 seal	1	...		189-289L1
8	8G3441A06651		STA 280 FWD plate	1	...		189-289L1
9	8G3450A17531	8G3450A17531A	TCAS support assy	1	...		189-289L1
10	8G3450A11931		Stowage plate assy	1	...		189-289L1
11	8G3450L00151		TCAS support seal	1	.		189-289L1
12	8G3441A08131	8G3441A08131A	Upper plate assy	1	...		189-289L1
13	NAS1720H5L2A		Rivet	21	...		189-289L1
14	NAS1720H5L3A		Rivet	1	...		189-289L1
15	MS27039-1-06		Screw machine	4	...		189-289L1
16	MS27039-1-07		Screw machine	31	...		189-289L1
17	NAS1149C0316R		Washer	31	...		189-289L1
18	NAS1149D0316K		Washer	4	...		189-289L1
19	MS21069L3		Anchor nut	6	.		189-289L1
20	MS21071L3		Anchor nut	4	.		189-289L1
21	MS20426E3-4		Rivet	0.2kg	.		189-289L1
22	**8G5240A11711**		**GABBIANO NOSE RADOME INSTALLATION**	**REF**	**..**		
23	8G5240A10331		Nose radome assy	1	...		189-289L1
24	8G5331A06831		Bracket assy	2			189-289L1
25	8G5240A01451		Shock strut lever	2			189-289L1
26	8G5240A01151		Hinge lever	2			189-289L1
27	MS17825-3		Nut	2			189-289L1
28	AN3C23		Bolt	2			189-289L1
29	MS24665-151		Pin	4			189-289L1
30	MS20392-2R19		Pin	4			189-289L1
31	MS24665-155		Pin	2			189-289L1
32	MS27039-1-09		Screw machine	6			189-289L1
33	NAS1149C0332R		Washer	14			189-289L1
34	NAS1149D0332K		Washer	6			189-289L1

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

A.2 CONSUMABLES

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

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
35	Code no. 999999999000005965	MC-780 B2 Sealant (C465)	AR		-
36	P/N C.A.NG. Cod. 22,0002 Code No. 999999999000005331	Soliani conductive adhesive	AR		-

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
37	Code No. 999999999000002681	Bonderite 1200 chemical conversion coating	AR		-
38	P/N RMTL423419 or Code No. 999999999000008841	Conductive adhesive PR1764M B-2	AR		-
39	Code No. 999999999000002691	Corrosion inhibitor AV25 (C272)	AR		-

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

A.3 LOGISTIC MATRIX

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

LOGISTIC P/N	Q.TY (PER HELO)	NOTE	PART
189-289L1	1	-	-

NOTES

(1) Item to be procured as local supply.

B. SPECIAL TOOLS

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

#	P/N	DESCRIPTION	Q.TY	NOTE	PART
40	8G5310A10011A005B	Drill jig	1	(B1)	-
41	8G5310A10011A003A	Drill jig	1	(B1)	-
42	8G5310A10011A003B	Drill jig	1	(B1)	-

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

SPECIAL TOOLS NOTES

(B1) Please contact Leonardo Helicopters Division order administration to request the tools supply on loan. As soon as the present Service Bulletin is implemented the tools supplied on loan shall be promptly returned to Leonardo Helicopters Division.

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

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

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

g) All lengths are in mm.

1. In accordance with 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. With reference to Figure 1 and in accordance with AMP DM 89-A-52-41-01-00A-520A-A, remove the nose door 111A from the helicopter.
3. With reference to Figure 2 View A (WAS), remove the existing TCAS support assy P/N 8G5315A09731 from the helicopter.
4. In accordance with the applicable DMs, remove the avionic equipment from the work area in the nose bay.
5. With reference to Figure 2 View B (WAS), remove the existing profile P/N 8G5315A10131 by drilling out the attaching rivets. Remove the upper brackets LH and RH P/N 4F5331A29232 and P/N 4F5331A29332 by drilling out the attaching rivets.

6. With reference to Figure 3 View C, put the drill jig P/N 8G5310A10011A005B in position and fix it on the helicopter. Perform n°16 holes Ø 2.5 mm in the STA280 panel. Remove the drill jig.
7. With reference to Figure 3 View C, enlarge the n°16 holes in the STA 280 panel to Ø 5.326 - 5.446 mm.
8. With reference to Figure 4 View C1, install STA280 FWD plate P/N 8G3441A06651 and STA280 aft plate P/N 8G3441A07531 by means of n°16 screws P/N MS27039-1-07 and n°16 washers P/N NAS1149C0316R.
9. With reference to Figure 5 View D, put the drill jig P/N 8G5310A10011A003A in position and fix it on the helicopter. Temporary install in its position the BL0 angle assy P/N 8G3441A07731B using the drill jig P/N 8G5310A10011A003A. Drill n°22 Ø 4.089 - 4.191 mm holes in the BL0 angle assy.
10. With reference to Figure 5 View D, enlarge the n°8 shown holes to Ø 4.521 - 4.648 mm. Mark on the BL0 panel the BL0 angle assy profile. Remove the drill jig and the BL0 assy from the helicopter.
11. In accordance with applicable steps of DM CSPP-A-20-10-12-00A-250A-D and with reference to Figure 3 View C, prepare the area shown removing the surface protection in order to ensure the correct grounding.
12. With reference to Figure 5 View D1, install the BL0 angle assy P/N 8G3441A07731B by means of n°17 P/N NAS1720H5L2A rivets and n°1 P/N NAS1720H5L3A rivet.
13. With reference to Figure 3 View A (Becomes), temporary install the upper plate assy P/N 8G3441A08131A by means of n°2 screws P/N MS27039-1-07 and n°2 washers P/N NAS1149C0316R.
14. With reference to Figure 4 View A1, install the drill jig P/N 8G5310A10011A003B in position and fix it on the helicopter. Drill n°10 holes Ø 5.2mm. Remove the drill jig.
15. With reference to Figure 5 View D1, enlarge n°4 anchor nut holes to Ø 5.326 - 5.446. Drill n°8 anchor nut installation holes Ø 2.5mm. Install n°2 anchor nuts P/N MS21069L3 and n°2 anchor nuts P/N MS21071L3 by means of n°8 rivets P/N MS20426E3-4.
16. With reference to Figure 6 View F, enlarge n°2 anchor nut holes to Ø 5.326 - 5.446. Drill n°4 anchor nut installation holes Ø 2.5mm. Install n°2 anchor nuts P/N MS21071L3 by means of n°4 rivets P/N MS20426E3-4.
17. With reference to Figure 6 View F, enlarge n°4 anchor nut holes to Ø 5.326 - 5.446. Install n°4 anchor nuts P/N MS21069L3 by means of n°8 rivets P/N MS20426E3-4.
18. With reference to Figure 3 View A (Becomes), install n°3 screw P/N MS27039-1-07 and n°3 washers P/N NAS1149C0316R.

19. In accordance with the applicable steps of DM CSPP-A-20-10-12-00A-250A-D and with reference to Figure 3 View A (Becomes), prepare the matching surface of the STA 280 FWD Plate P/N 8G3441A06651 and the STA280 aft plate P/N 8G3441A07531 for the installation of STA 280 Seal P/N 8G3441A07351 removing the surface protection in order to ensure the correct grounding. Bond the STA 280 Seal P/N 8G3441A07351 using conductive adhesive Soliani. Seal the edges of the STA 280 Seal P/N 8G3441A07351 using sealant MC-780 B2 (C465).
20. In accordance with applicable steps of DM CSPP-A-20-10-12-00A-250A-D and with reference to Figure 6 View F, prepare the area of TCAS support assy P/N 8G3450A17531A for bonding. Install the TCAS support seal P/N 8G3450L00151 by means of conductive adhesive PR1764M B-2. Seal the edges of the TCAS support seal using sealant MC-780 B2 (C465).
21. With reference to Figure 6 View F, temporary locate the TCAS support assy P/N 8G3450A17531A in its position on the structure and countermark position of n°6 holes.
22. With reference to Figure 6 View F, drill n°10 holes Ø 5.156 - 5.283 on the TCAS support assy P/N 8G3450A17531A.
23. With reference to Figure 6 View F, install the TCAS support assy P/N 8G3450A17531A by means of n°4 screws MS27039-1-06, n°4 washers NAS1149D0316K, n°10 screws P/N MS27039-1-07 and n°10 washers NAS1149C0316R.
24. With reference to Figure 6 View F, wet install n°16 rivets P/N NAS1720H5L1A with sealant MC780 C2.
25. In accordance with the applicable DMs, re-install the avionic equipment previously removed from the nose bay.
26. With reference to Figure 7 Detail A, remove the existing n°2 bracket assemblies P/N 4F5331A58232.
27. With reference to Figure 7 Detail A, install n°2 bracket assemblies P/N 8G5331A06831 by means of n°6 screws P/N MS27039-1-09 and n°6 washers P/N NAS1149D0332K.
28. With reference to Figure 8 Detail B, install n°2 shock strut levers P/N 8G5240A01451 to the Gabbiano nose radome assy P/N 8G5240A10331 by means of n°2 pins P/N MS20392-2R19, n°4 washers P/N NAS1149C0332R and n°2 cotter pins P/N MS24665-151.
29. With reference to Figure 8 Detail B, install n°2 hinge levers P/N 8G5240A01151 by means of n°2 pins P/N MS20392-2R19, n°4 washers P/N NAS1149C0332R and n°2 cotter pins P/N MS24665-151.

NOTE

Align and fix pin assy P/N A400A23A3-04 (part of nose radome assy P/N 8G5240A10331) during installation in accordance with the AMP DM procedure.

It is permitted to use one additional washer P/N NAS1149C0316R, or to replace one washer P/N NAS1149C0332R, under the nut P/N MS17825-3 if necessary to achieve correct installation.

30. With reference to Figure 8 and in accordance with the applicable steps of AMP DM 89-A-52-41-01-00A-720A-A, install the nose radome assy P/N 8G5240A10331 to the lower hinges by means of n°2 bolts P/N AN3C23, n°2 washers P/N NAS1149C0332R under bolts head, n°4 washers P/N NAS1149C0332R, n°2 nuts P/N MS17825-3. Safety the nuts by means of n°2 cotter pins P/N MS24665-155. Insert the quick release pin in the upper hinge lever.
31. With reference to Figure 8, apply corrosion inhibitor AV25 (C272) to the shown areas.
32. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
33. Return the helicopter to flight configuration and record for compliance with this Service Bulletin on the helicopter logbook.
34. 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

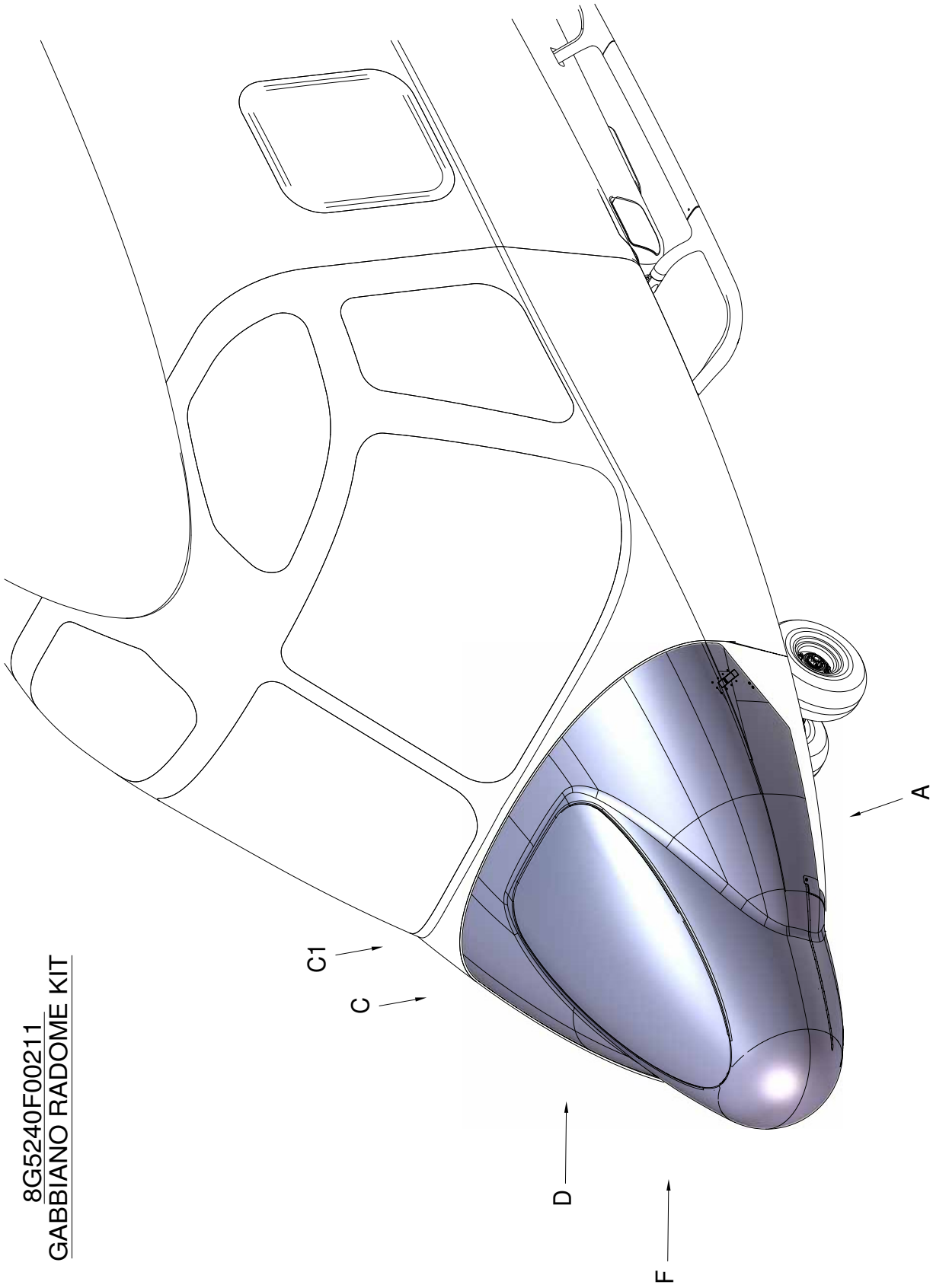
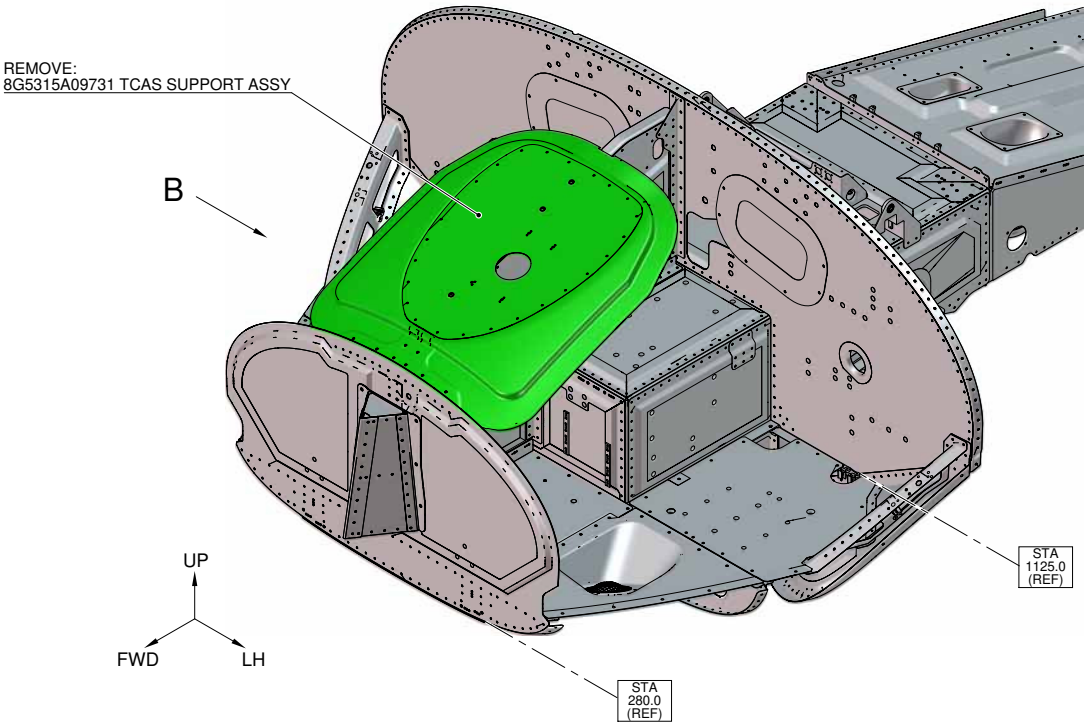


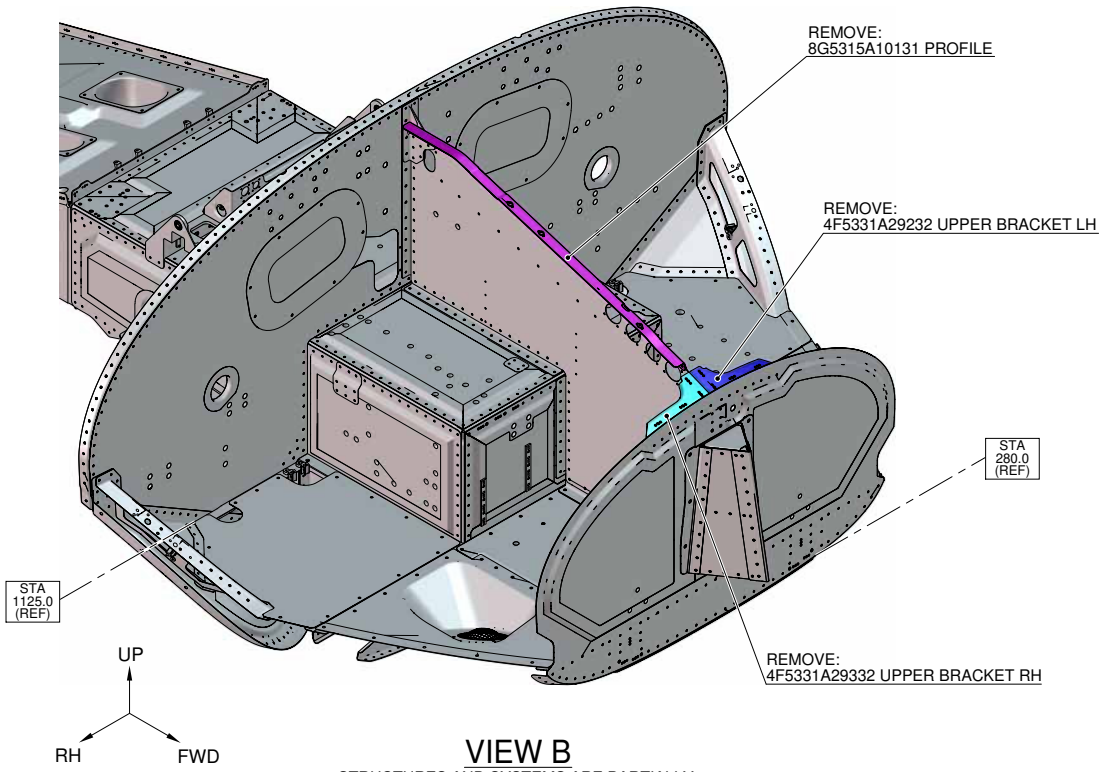
Figure 1

WAS



VIEW A
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

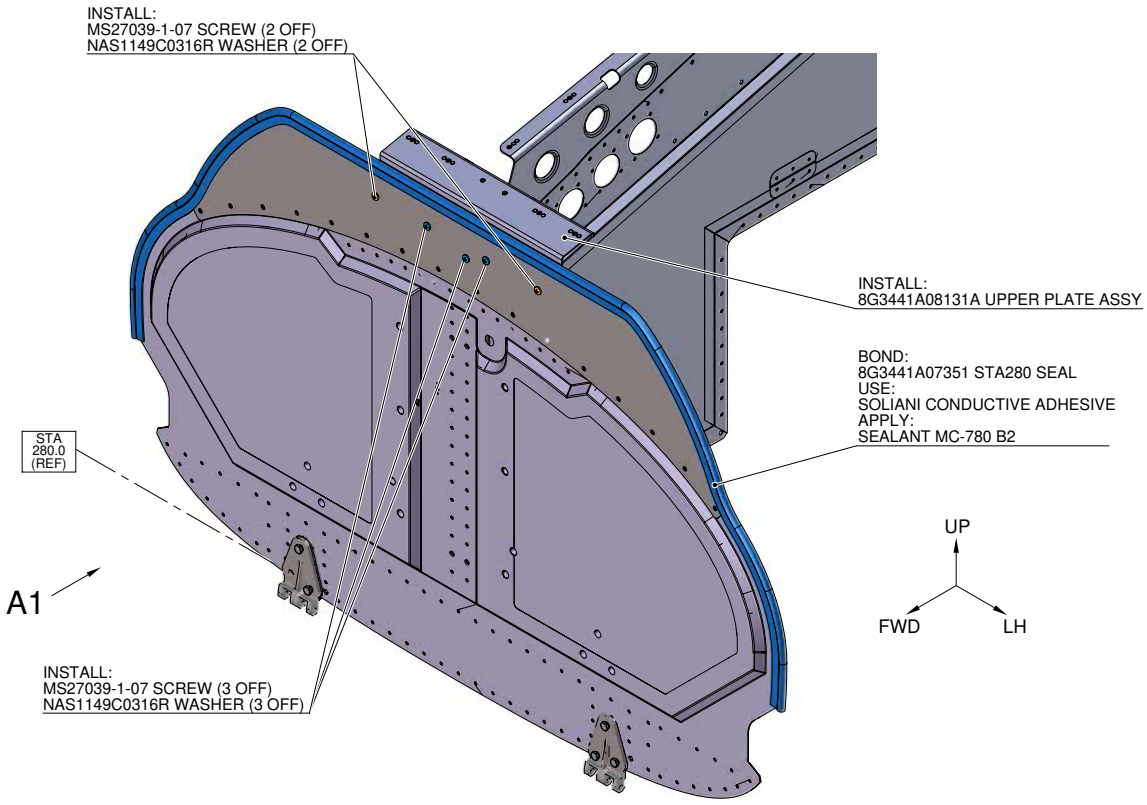
WAS



VIEW B
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 2

BECOMES



VIEW A
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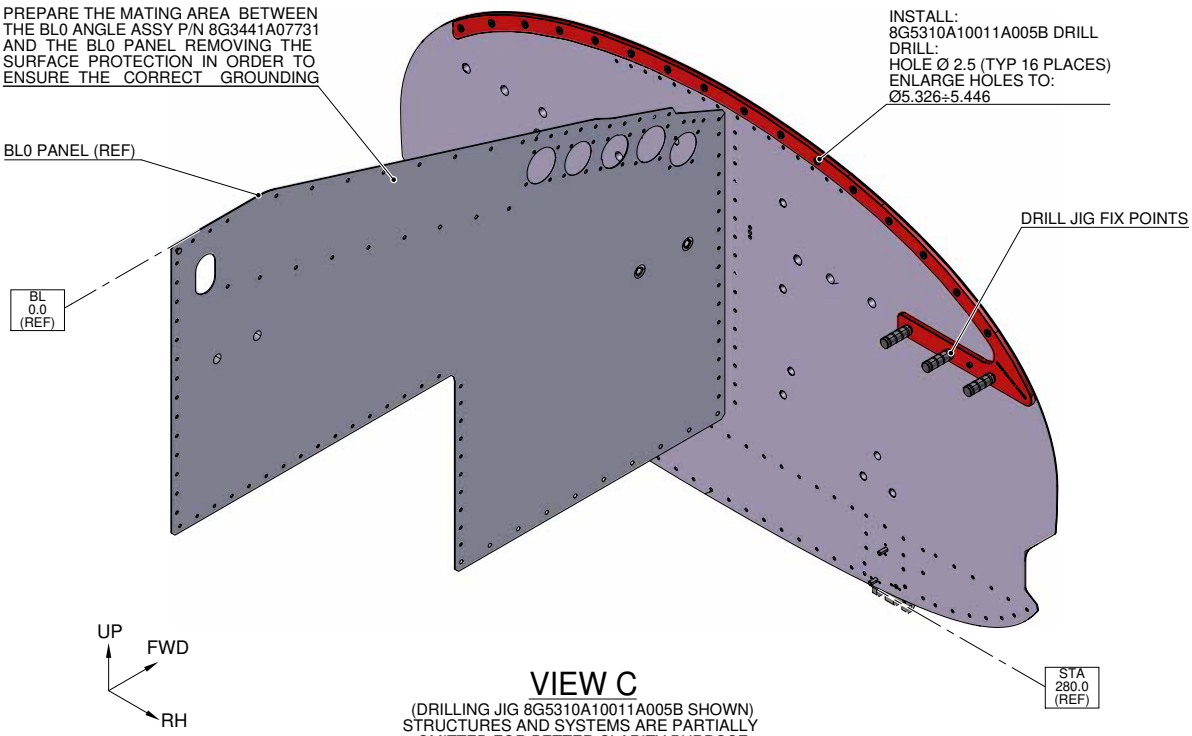
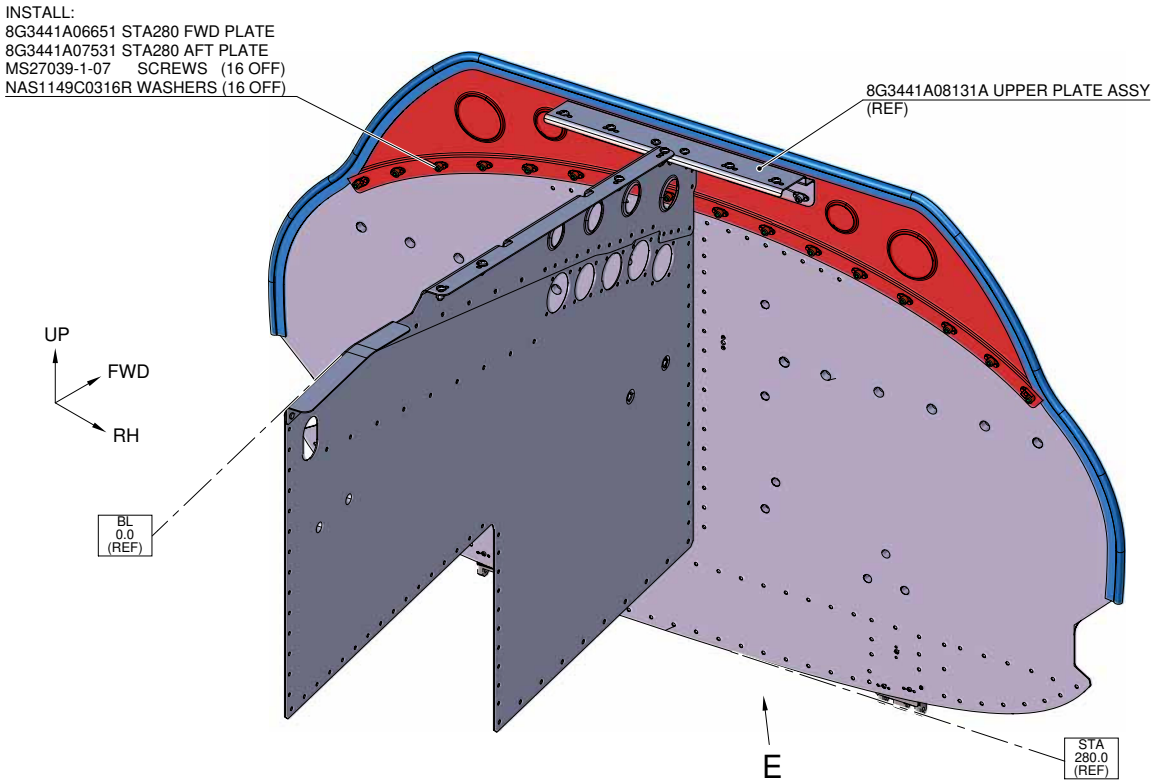


VIEW C
(DRILLING JIG 8G5310A10011A005B SHOWN)
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 3



VIEW C1
STRUCTURES AND SYSTEMS ARE PARTIALLY
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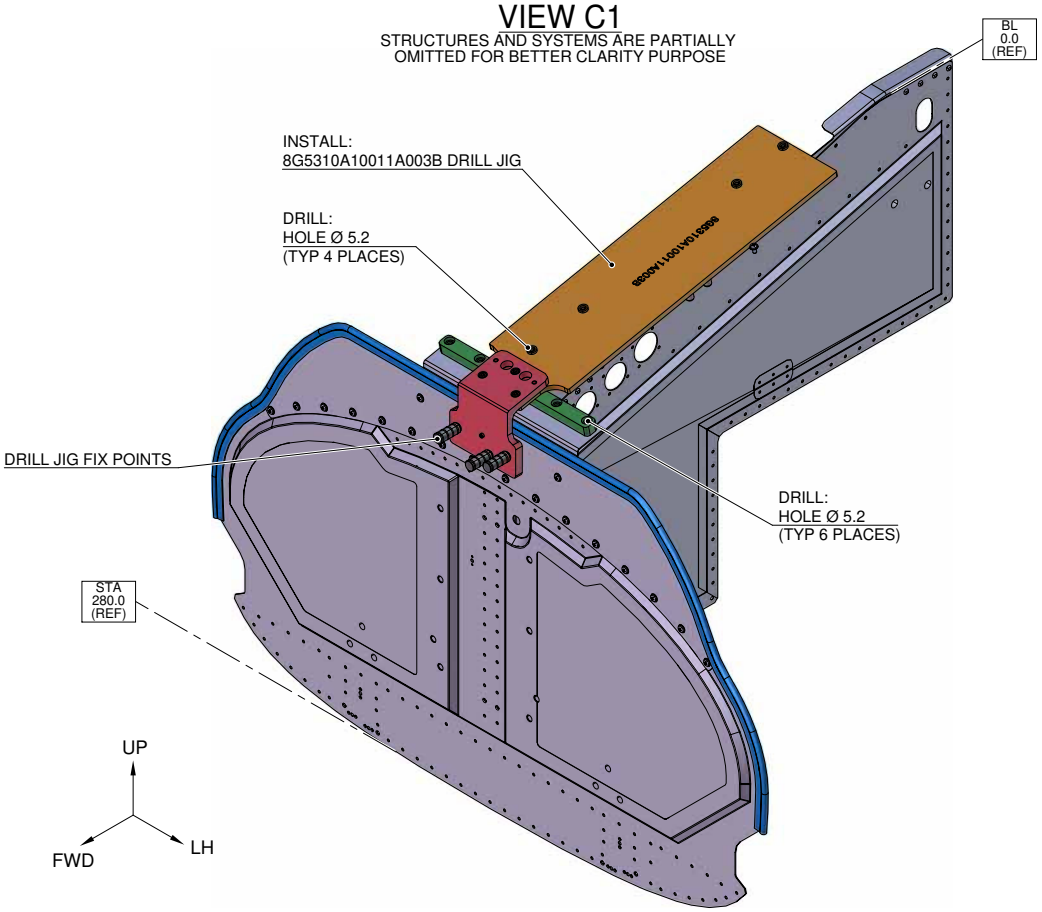
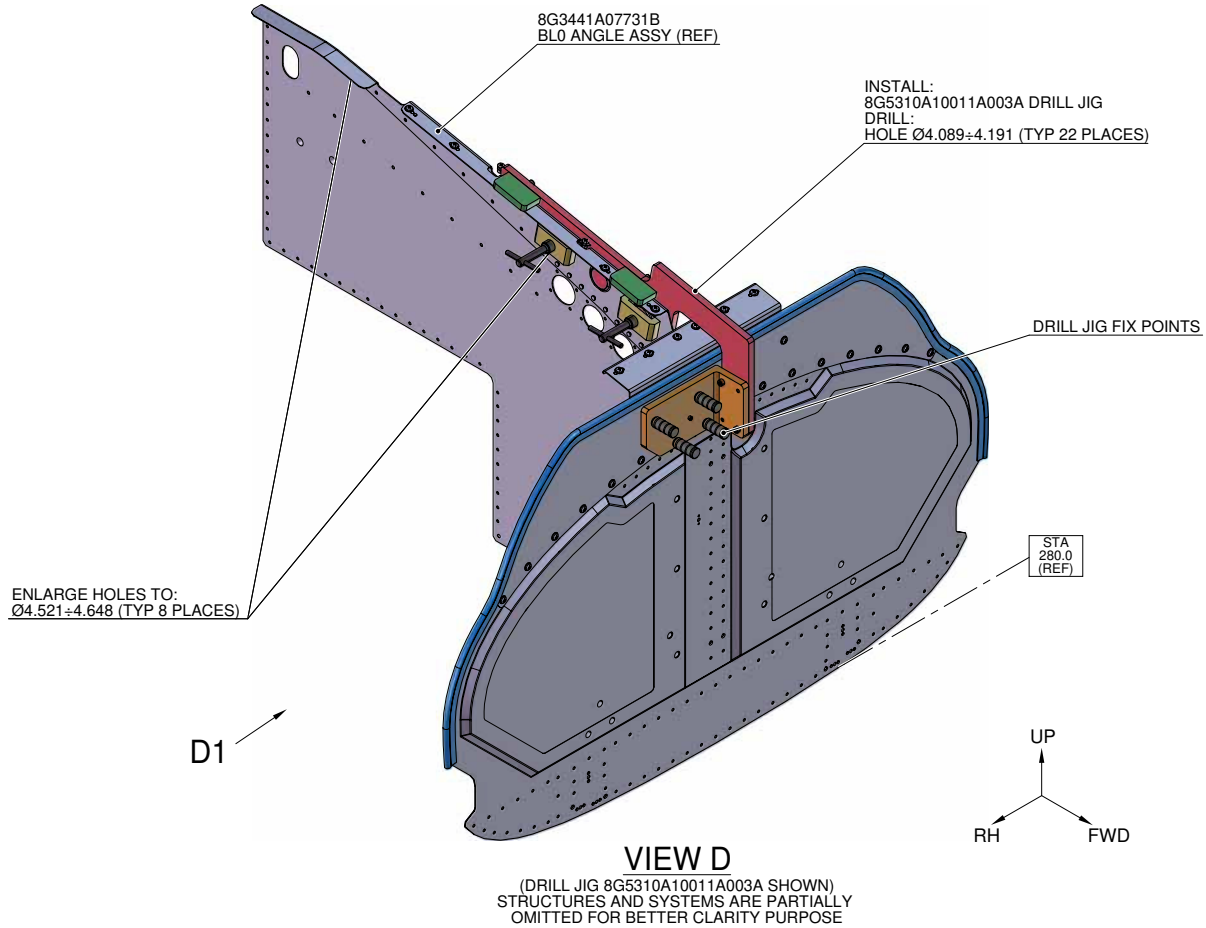


VIEW A1
(DRILLING JIG 8G5310A10011A003B SHOWN)
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 4



VIEW D

(DRILL JIG 8G5310A10011A003A SHOWN)
STRUCTURES AND SYSTEMS ARE PARTIALLY
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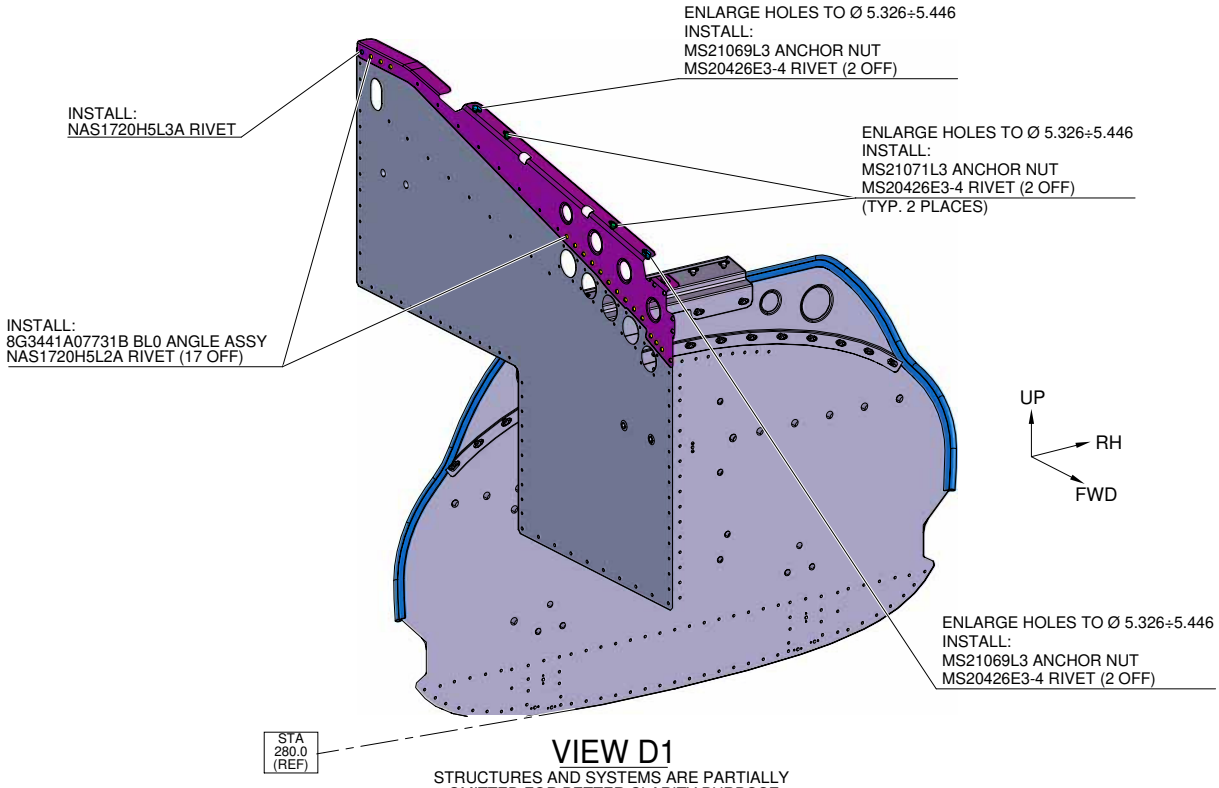

VIEW D1

STRUCTURES AND SYSTEMS ARE PARTIALLY
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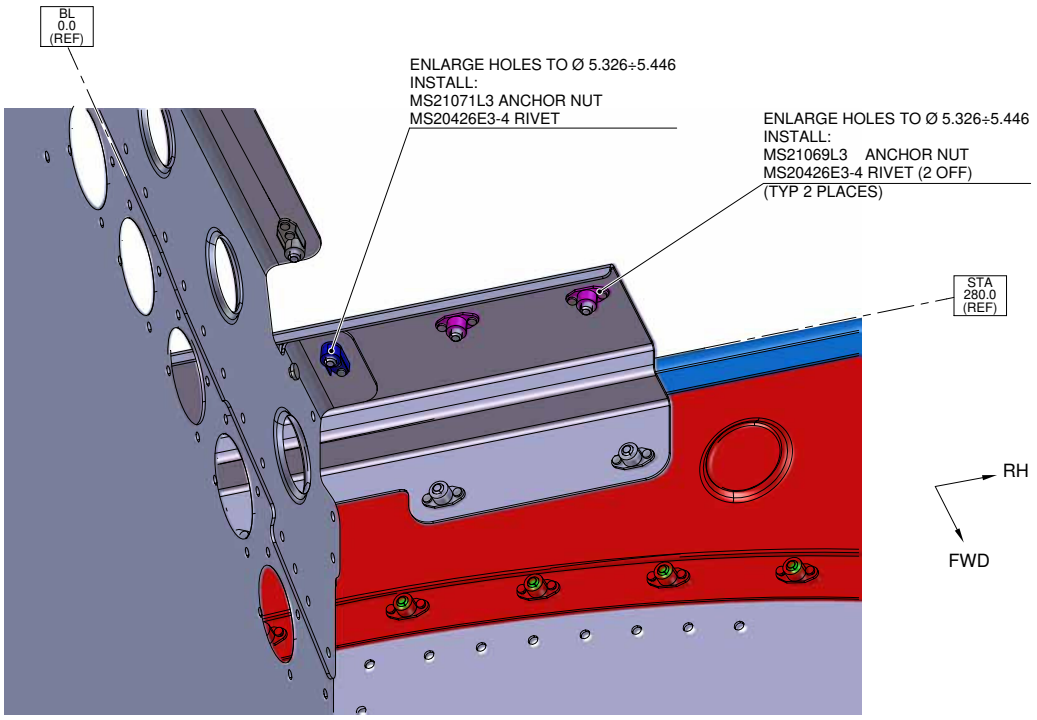
Figure 5



VIEW F
(TYPICAL OTHER SIDE)
STRUCTURES AND SYSTEMS ARE PARTIALLY
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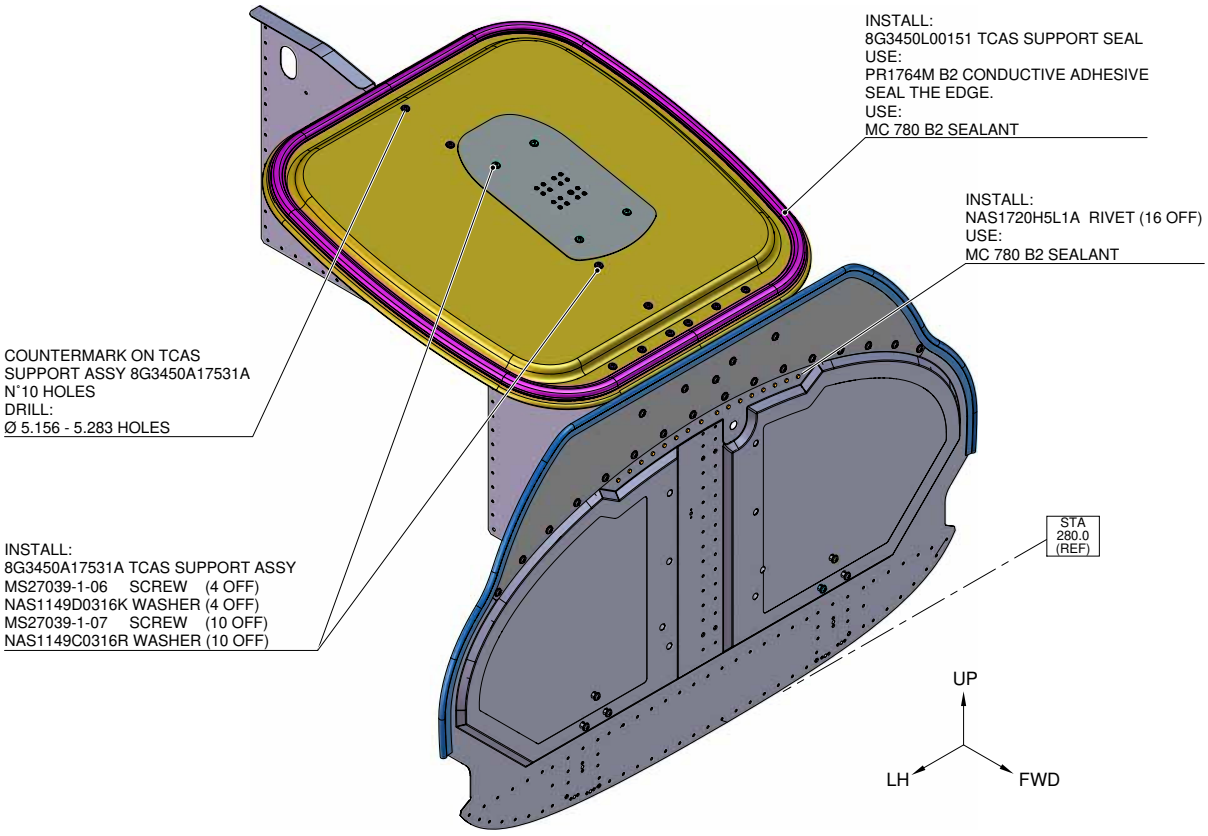

VIEW F
STRUCTURES AND SYSTEMS ARE PARTIALLY
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Figure 6

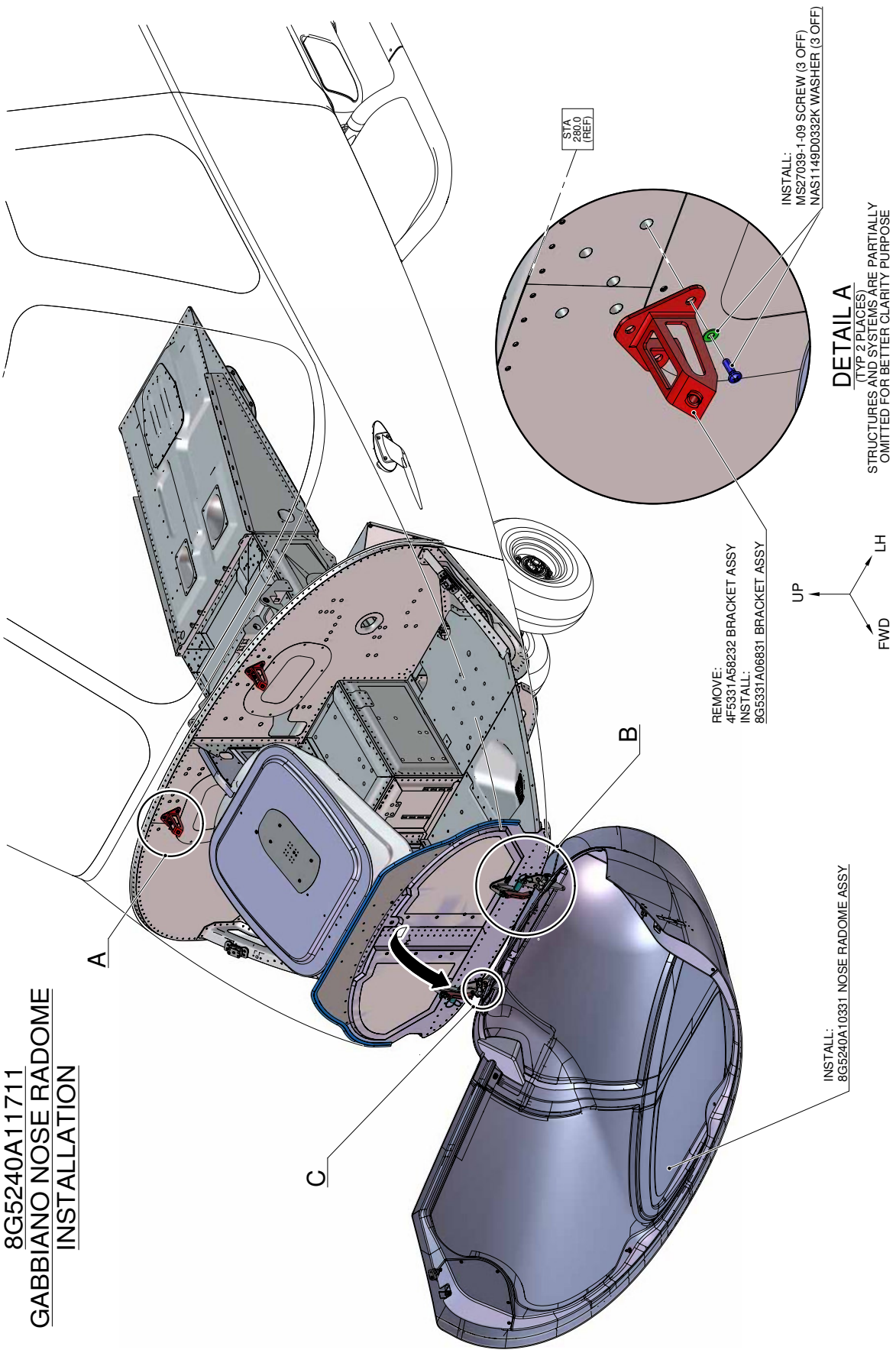
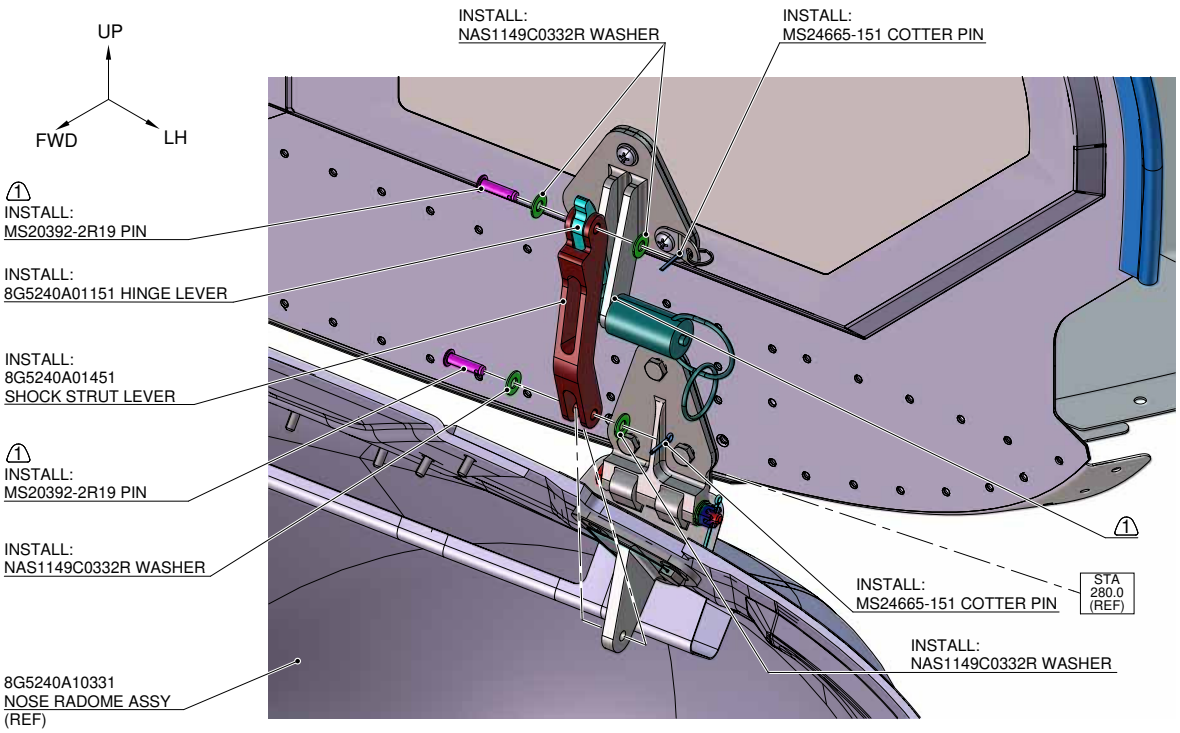

8G5240A11711
GABBIANO NOSE RADOME
INSTALLATION
STA 280.0 (REF)
INSTALL:
MS27039-1-09 SCREW (3 OFF)
NAS1149D0332K WASHER (3 OFF)
DETAIL A
(TYP 2 PLACES)
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
REMOVE:
4F5331A58232 BRACKET ASSY
INSTALL:
8G5331A06831 BRACKET ASSY
UP
LH
FWD
A
B
C
INSTALL:
8G5240A10331 NOSE RADOME ASSY

Figure 7



DETAIL B
STRUCTURES AND SYSTEMS ARE PARTIALLY
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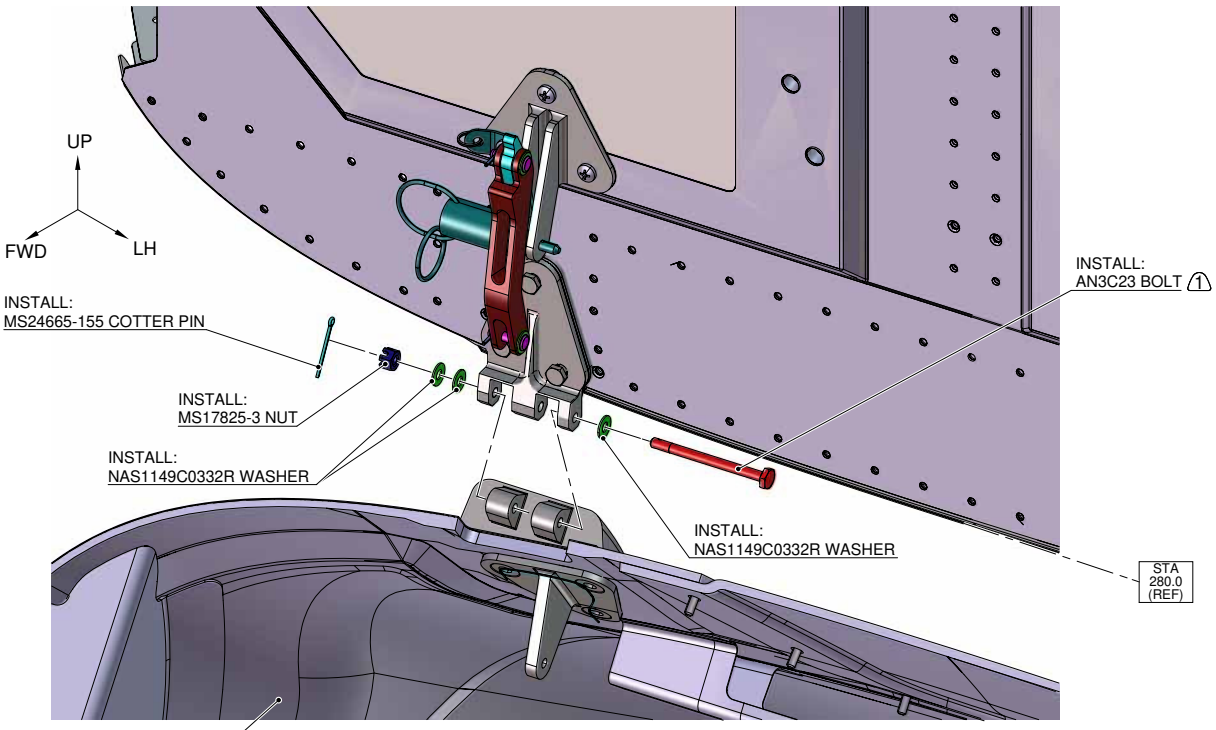
NOTE:

1 APPLY AV25 CORROSION INHIBITOR



DETAIL C
STRUCTURES AND SYSTEMS ARE PARTIALLY
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Figure 8

LEONARDO
HELICOPTERS

AgustaWestland Products

Please send to the following address: **LEONARDO S.p.A.** **CUSTOMER SUPPORT & SERVICES - ITALY** **PRODUCT SUPPORT ENGINEERING & LICENSES DEPT.** Via Giovanni Agusta, 520 21017 Cascina Costa di Samarate (VA) - ITALY Tel.: +39 0331 225036 Fax: +39 0331 225988	**SERVICE BULLETIN COMPLIANCE FORM**	Date:
	Number:	
	Revision:	

Customer Name and Address:	Telephone:
	Fax:
	B.T. Compliance Date:

Helicopter Model	S/N	Total Number	Total Hours	T.S.O.

Remarks:

Information:

We request your cooperation in filling this form, in order to keep out statistical data relevant to aircraft configuration up-to-date. The form should be filled in all its parts and sent to the above address or you can communicate the application also via Technical Bulletin Application Communication Section placed in Leonardo AW Customer Portal - MyCommunications Area. We thank you beforehand for the information given.