Leonardo S.p.A.
Via Giovanni Agusta, 520
21017 Cascina Costa di Samarate (VA) Italy
Tel.: +39 0331 229111 - Fax: +39 0331 229605/222595

AgustaWestland Products

SERVICE BULLETIN

N° 189-273

DATE: July 14, 2021

REV. : /

TITLE

ATA 71 - ENGINE HEATED INTAKE INSTALLATION, FLANGE SEALING

REVISION LOG

First Issue

1. PLANNING INFORMATION

A. EFFECTIVITY

AW189 helicopters S/N 49023, S/N 49045, S/N 49050, S/N 49051, S/N 49053, from S/N 49055 to S/N 49061 and from S/N 89007 to S/N 89012.

B. COMPLIANCE

Within 1 year after the issue of this Service Bulletin.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin is issued in order to provide the necessary instruction on how to improve the engine air intake installation.

E. DESCRIPTION

Leonardo Helicopters identified a batch of AW189 helicopters on which the correct sealing procedure between the engine air intake installation and the forward firewalls has not been applied.

This Service Bulletin gives instructions to modify the existing helicopters adding conductive sealant at the interface between the “V flange” P/N 8G7160A02951, the “half ring upper” P/N 8G7160A10551, the “half ring lower” P/N 8G7160A10651 and the forward firewalls.

In addition, for helicopter S/N 49023 only which is equipped with IBF kit P/N 8G7160F00611, a re-positioning of two cable supports on the IBF is required to avoid a possible interference between the cable and the air intake.

F. APPROVAL

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

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

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

the aircraft, for any adaptation necessary before incorporation of the present Service Bulletin.

G. MANPOWER

To comply with this Service Bulletin sixteen (16) MMH are deemed necessary.

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

H. WEIGHT AND BALANCE

N.A.

I. REFERENCES

1) PUBLICATIONS

DATA MODULE		DESCRIPTION	PART
DM01	89-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance.	-
DM02	89-A-06-41-00-00A-010A-A	Access doors and panels - General data	-
DM03	89-A-20-10-01-00A-259A-A	Ground connections - Other procedures to protect surfaces	-
DM04	89-A-71-11-08-00A-520A-A	Left outboard air intake - Remove procedure	-
DM05	89-A-71-11-08-00A-720A-A	Left outboard air intake - Install procedure	-
DM06	89-A-71-11-09-00A-520A-A	Right outboard air intake - Remove procedure	-
DM07	89-A-71-11-09-00A-720A-A	Right outboard air intake - Install procedure	-
DM08	89-A-71-11-10-00A-520A-A	Left inboard air intake - Remove procedure	-
DM09	89-A-71-11-10-00A-720A-A	Left inboard air intake - Install procedure	-
DM10	89-A-71-11-11-00A-520A-A	Right inboard air intake - Remove procedure	-
DM11	89-A-71-11-11-00A-720A-A	Right inboard air intake - Install procedure	-

2) ACRONYMS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
AR	As Required
CSRP	Common Structural Repair Publication

DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
IBF	Inlet Barrier Filter
IPD	Illustrated Parts Data
ITEP	Illustrated Tool and Equipment Publication
LHD	Leonardo Helicopters Division
MMH	Maintenance-Man-Hours

3) ANNEX

N.A.

J. PUBLICATIONS AFFECTED

N.A.

K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

1) PARTS

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	AW001CL001-N6		Support	4	.	(1)	-

2) CONSUMABLES

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

#	Spec./LHD code number	DESCRIPTION	Q.TY	NOTE	PART
2	AMS 3266 Class B Code No. 999999999000008841	Conductive sealant PR1764M B-2 (C170)	AR	(2)	-
3	Commercial	Adhesive CB200-40 (C356)	AR	(2)	-

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

3) LOGISTIC MATRIX

N.A.

NOTE

(1) Item required only for helicopter S/N 49023.

(2) Item to be procured as local supply.

B. SPECIAL TOOLS

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

C. INDUSTRY SUPPORT INFORMATION

N.A.

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

c) Exposed thread surface and nut must be protect using a layer of Tectyl according to MIL-C-16173 grade I.

d) All lengths are in mm.

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, open access doors 451A and 461A.
3. In accordance with AMP DM 89-A-71-11-08-00A-520A-A and with reference to Figure 1, remove the LH outboard air intake from the helicopter.
4. In accordance with AMP DM 89-A-71-11-10-00A-520A-A and with reference to Figure 1, remove the LH inboard air intake from the helicopter.
5. For helicopter S/N 49023 equipped with IBF kit P/N 8G7160F00611, perform the following procedure:
   - 5.1 With reference to Figure 4, temporarily remove the V flange P/N 8G7160A02951 from forward firewall. Retain existing hardware for later reuse.
   - 5.2 In accordance with AMP DM 89-A-20-10-01-00A-259A-A and with reference to Figure 4, prepare for bonding the surfaces in the working area by removing soluble or non-soluble treatments or cleaning alocromed surfaces.

NOTE

Spread the sealant squeezed out along the flanges external perimeter in order to create a sealant fillet.

5.3 With reference to Figure 4 Detail E, apply conductive sealant PR1764M B-2 (C170) between the V flange P/N 8G7160A02951 and forward firewall. Install the V flange by means of n°2 screws P/N NAS1802-3-7 and n°2 washers P/N NAS1149G0332P.

5.4 In accordance with AMP DM 89-A-71-11-10-00A-720A-A or DM 89-A-71-11-11-00A-720A-A and with reference to Figure 1, re-install the LH or RH inboard air intake on the helicopter.

NOTE

Spread the sealant squeezed out along the flanges external perimeter in order to create a sealant fillet.

5.5 With reference to Figure 4 Detail E and in accordance with applicable steps of AMP DM 89-A-71-11-08-00A-720A-A, apply conductive sealant PR1764M B-2 (C170) between the V flange P/N 8G7160A02951 and forward firewall. Install the V flange by means of n°2 screws P/N NAS1802-3-7 and n°2 washers P/N NAS1149G0332P.

5.6 With reference to Figure 5 Detail F, remove n°2 existing cable supports from the LH IBF. Refer to Figure 6 Detail G for RH IBF.

5.7 With reference to Figure 5 Detail F, install n°2 cable supports P/N AW001CL001-N6 by means of adhesive CB200-40 (C356) on the LH outboard air intake. Refer to Figure 6 Detail G for RH IBF.

5.8 Touch up finish surface and paint in the area of the removed supports in accordance with the existing layout.

6. For helicopters equipped with basic engine air intake installation and for helicopters equipped with IBF kit P/N 8G7160F00611 except S/N 49023, perform the following procedure:

6.1 With reference to Figure 2, temporarily remove the half ring lower P/N 8G7160A10651 from forward firewall. Retain existing hardware for later reuse.

6.2 With reference to Figure 2, temporarily remove the V flange P/N 8G7160A02951 from forward firewall. Retain existing hardware for later reuse.

6.3 In accordance with AMP DM 89-A-20-10-01-00A-259A-A and with reference to Figure 2, prepare for bonding the surfaces in the working area by removing soluble or non-soluble treatments or cleaning alocromed surfaces.

NOTE

Spread the sealant squeezed out along the flanges external perimeter in order to create a sealant fillet. (Refer to Steps 6.4 and 6.5).

6.4 With reference to Figure 3 Detail B, apply conductive sealant PR1764M B-2 (C170) between the V flange P/N 8G7160A02951 and forward firewall. Install the V flange by means of n°4 screws P/N NAS1802-3-7 and n°4 washers P/N NAS1149G0332P.

6.5 With reference to Figure 3 Detail B, apply conductive sealant PR1764M B-2 (C170) between the half ring lower P/N 8G7160A10651 and forward firewall. Install the half ring lower by means of n°2 screws P/N NAS1802-3-7 and n°2 washers P/N NAS1149G0332P.

6.6 In accordance with AMP DM 89-A-71-11-10-00A-720A-A or DM 89-A-71-11-11-00A-720A-A and with reference to Figure 1, re-install the LH or RH inboard air intake on the helicopter.

NOTE

Spread the sealant squeezed out along the flanges external perimeter in order to create a sealant fillet.

6.7 With reference to Figure 3 View C and in accordance with applicable steps of AMP DM 89-A-71-11-08-00A-720A-A, apply conductive sealant PR1764M B-2 (C170) between the half ring upper P/N 8G7160A10551 and forward firewall. Install the half ring upper by means of n°2 screws P/N NAS1802-3-7 and n°2 washers P/N NAS1149G0332P.

7. In accordance with AMP DM 89-A-71-11-08-00A-720A-A and with reference to Figure 1, re-install the LH outboard air intake on the helicopter.
8. In accordance with AMP DM 89-A-06-41-00-00A-010A-A, close access doors 461A.
9. In accordance with AMP DM 89-A-06-41-00-00A-010A-A, open access doors 463A.
10. In accordance with AMP DM 89-A-71-11-09-00A-520A-A and with reference to Figure 1, remove the RH outboard air intake from the helicopter.
11. In accordance with AMP DM 89-A-71-11-11-00A-520A-A and with reference to Figure 1, remove the RH inboard air intake from the helicopter.
12. Repeat step 5 or 6 for RH side.
13. In accordance with AMP DM 89-A-71-11-09-00A-720A-A and with reference to Figure 1, re-install the RH outboard air intake on the helicopter.
14. In accordance with AMP DM 89-A-06-41-00-00A-010A-A, close access doors 451A, 463A.

15. Return the helicopter to flight configuration and record for compliance with this Service Bulletin on the helicopter logbook.
16. Send the attached compliance form to the following mail box:

    engineering.support.lhd@leonardocompany.com

    As an alternative, gain access to My Communications section on Leonardo WebPortal and compile the “Service Bulletin Application Communication”.

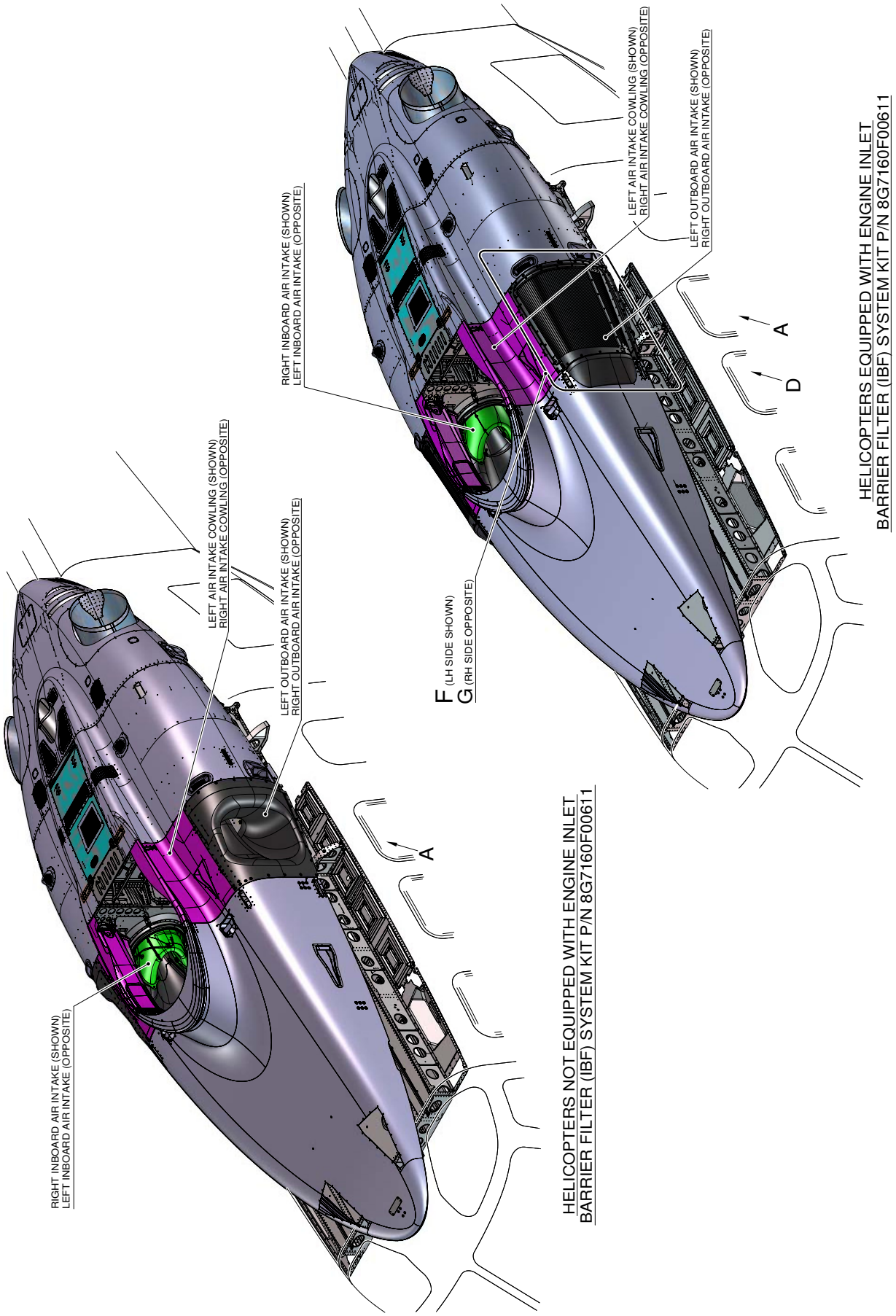

RIGHT INBOARD AIR INTAKE (SHOWN)
LEFT INBOARD AIR INTAKE (OPPOSITE)
LEFT AIR INTAKE COWLING (SHOWN)
RIGHT AIR INTAKE COWLING (OPPOSITE)
LEFT OUTBOARD AIR INTAKE (SHOWN)
RIGHT OUTBOARD AIR INTAKE (OPPOSITE)
A
HELICOPTERS NOT EQUIPPED WITH ENGINE INLET
BARRIER FILTER (IBF) SYSTEM KIT P/N 8G7160F00611
RIGHT INBOARD AIR INTAKE (SHOWN)
LEFT INBOARD AIR INTAKE (OPPOSITE)
LEFT AIR INTAKE COWLING (SHOWN)
RIGHT AIR INTAKE COWLING (OPPOSITE)
LEFT OUTBOARD AIR INTAKE (SHOWN)
RIGHT OUTBOARD AIR INTAKE (OPPOSITE)
A
D
F (LH SIDE SHOWN)
G (RH SIDE OPPOSITE)
HELICOPTERS EQUIPPED WITH ENGINE INLET
BARRIER FILTER (IBF) SYSTEM KIT P/N 8G7160F00611

Figure 1

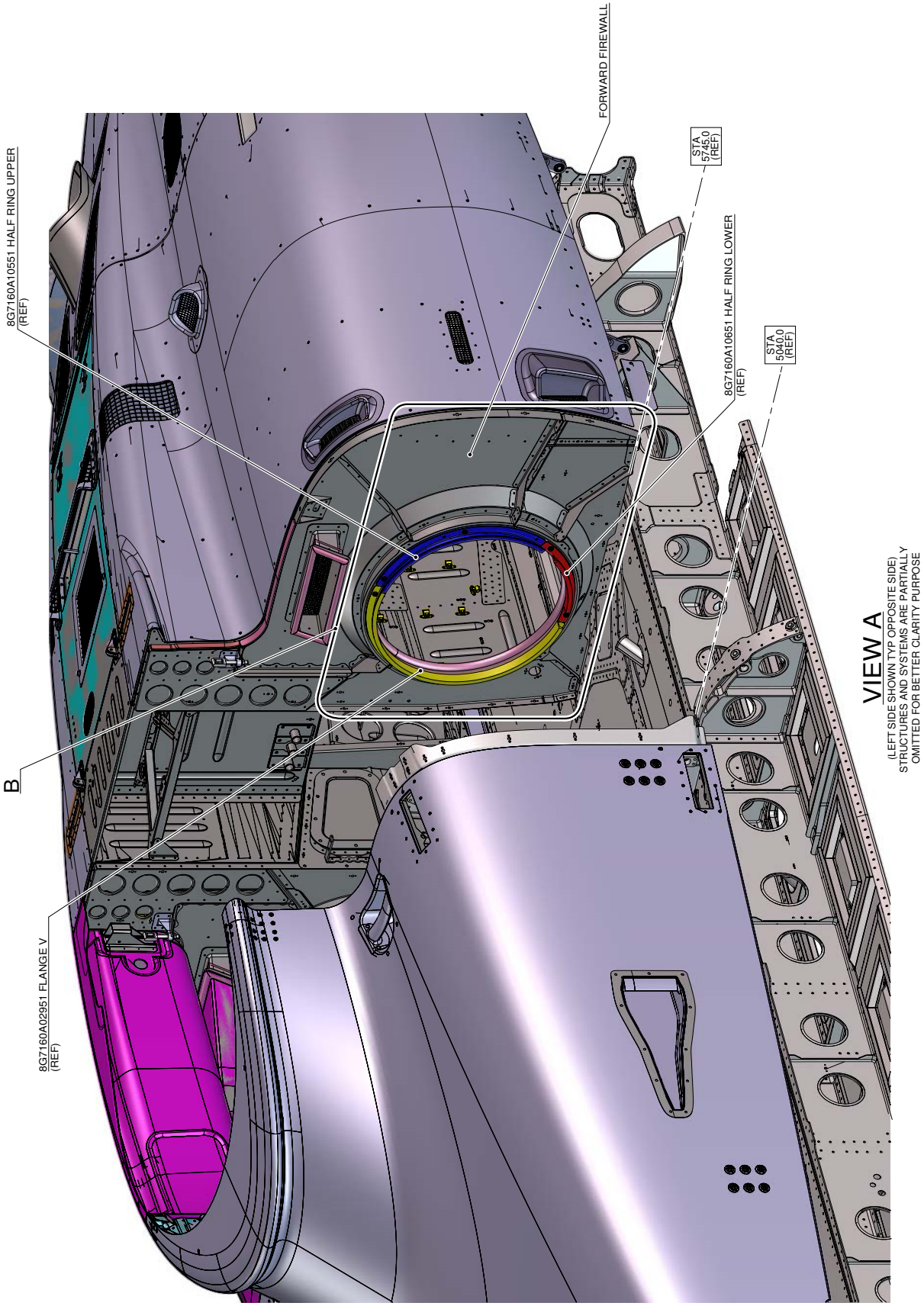
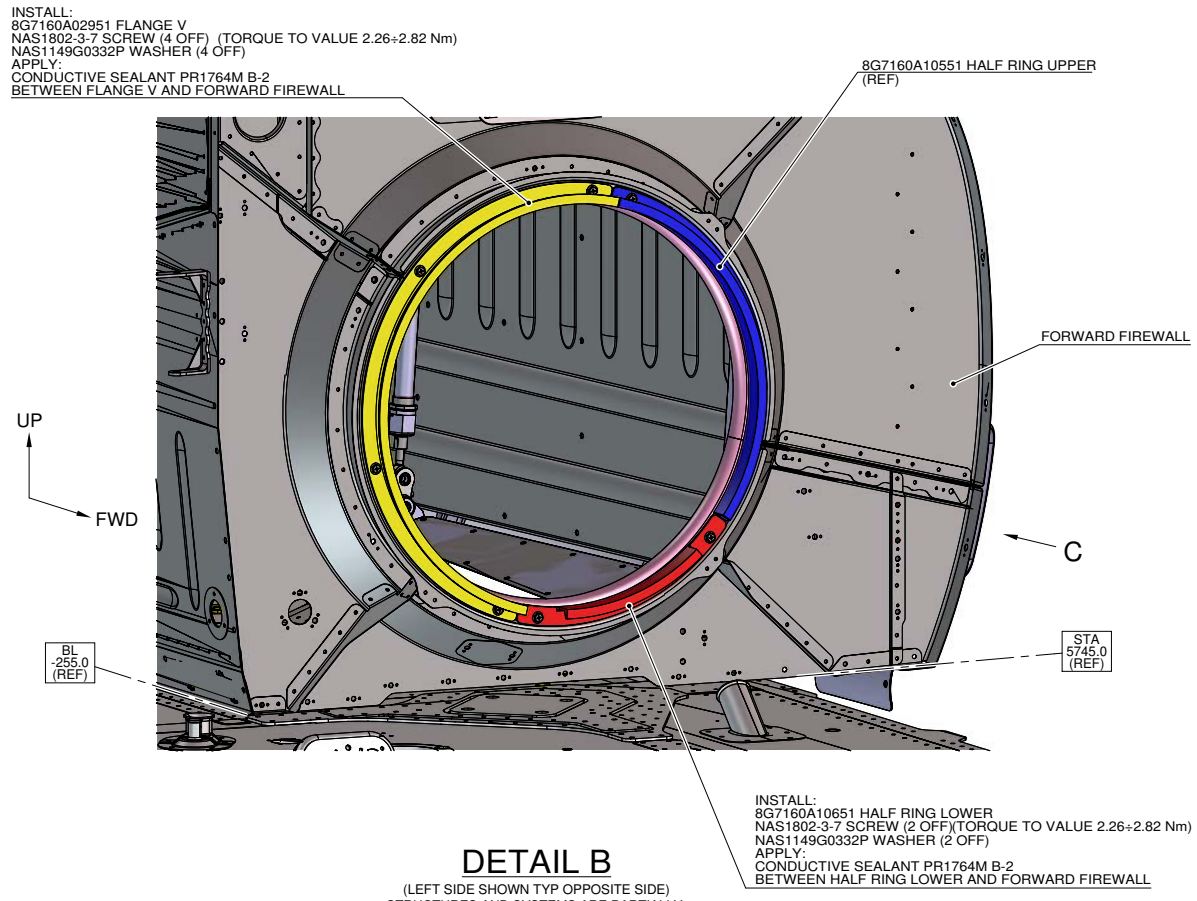
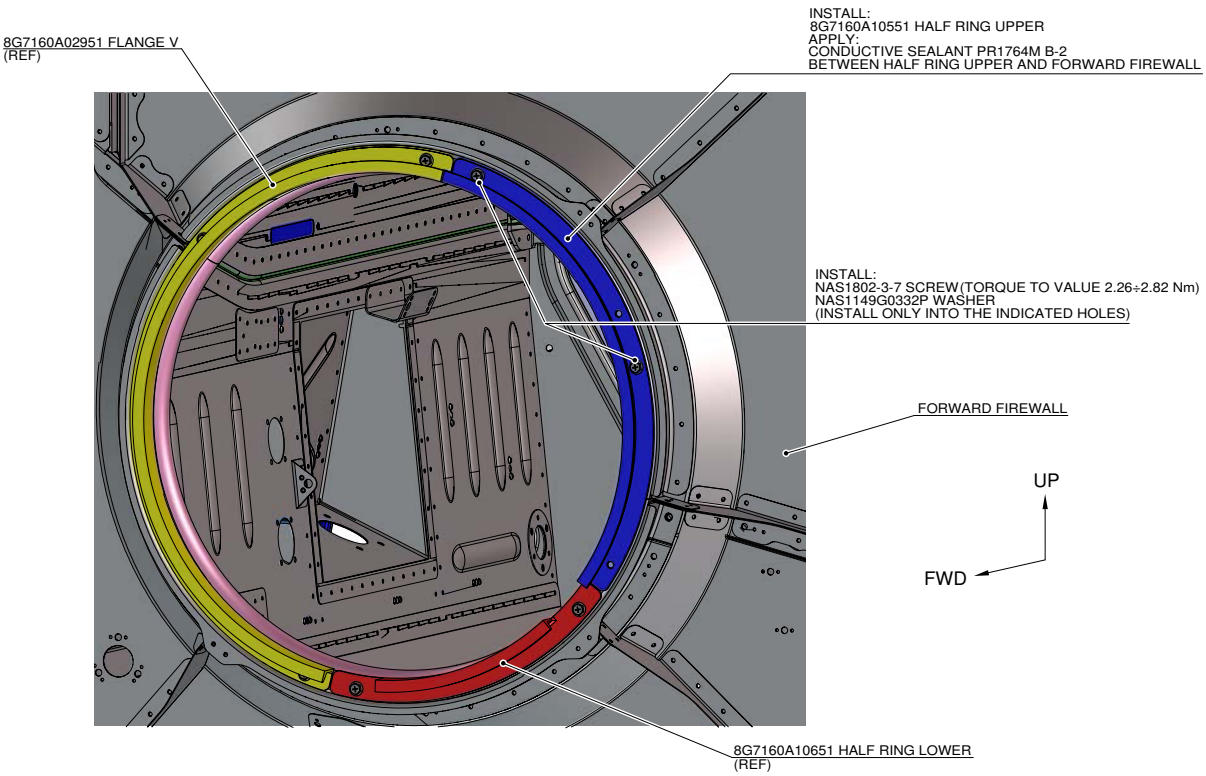

FORWARD FIREWALL
STA 5745.0 (REF)
8G7160A10551 HALF RING UPPER (REF)
8G7160A10651 HALF RING LOWER (REF)
STA 5040.0 (REF)
B
8G7160A02951 FLANGE V (REF)
VIEW A
(LEFT SIDE SHOWN TYP OPPOSITE SIDE)
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 2



DETAIL B

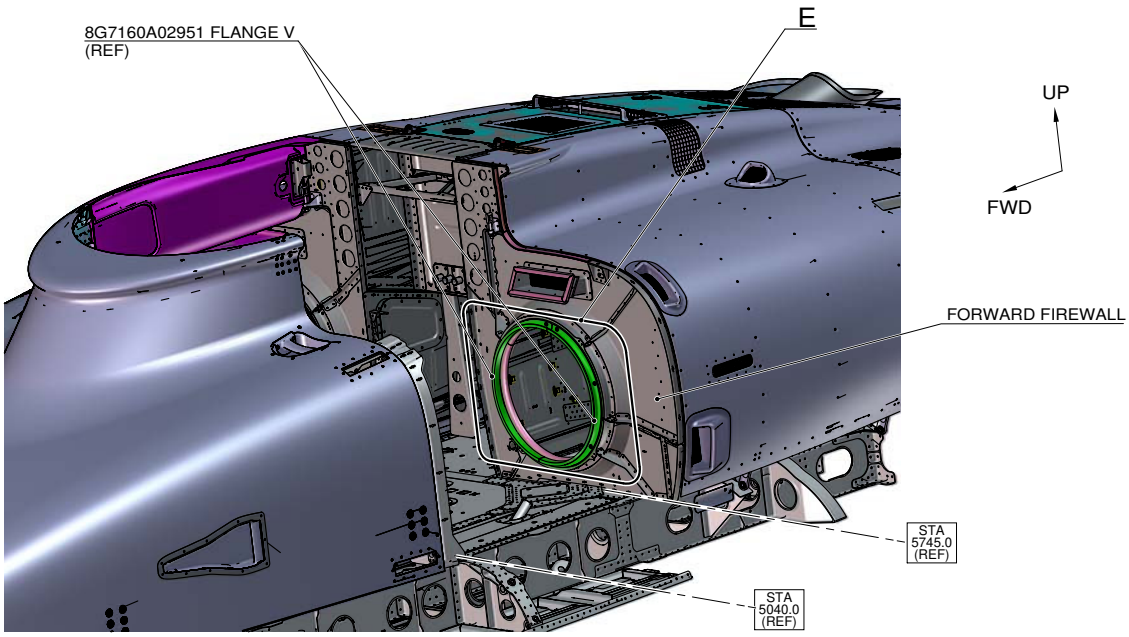
(LEFT SIDE SHOWN TYP OPPOSITE SIDE)
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE



VIEW C

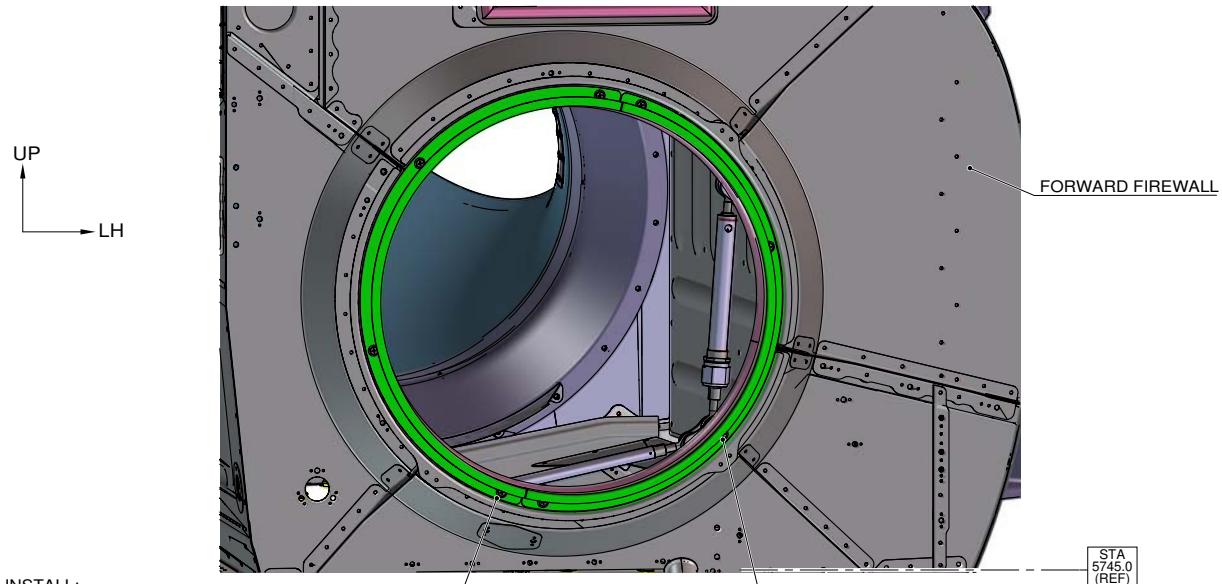
(LEFT SIDE SHOWN TYP OPPOSITE SIDE)
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 3



VIEW D
IBF KIT ALTERNATIVE CONFIGURATION

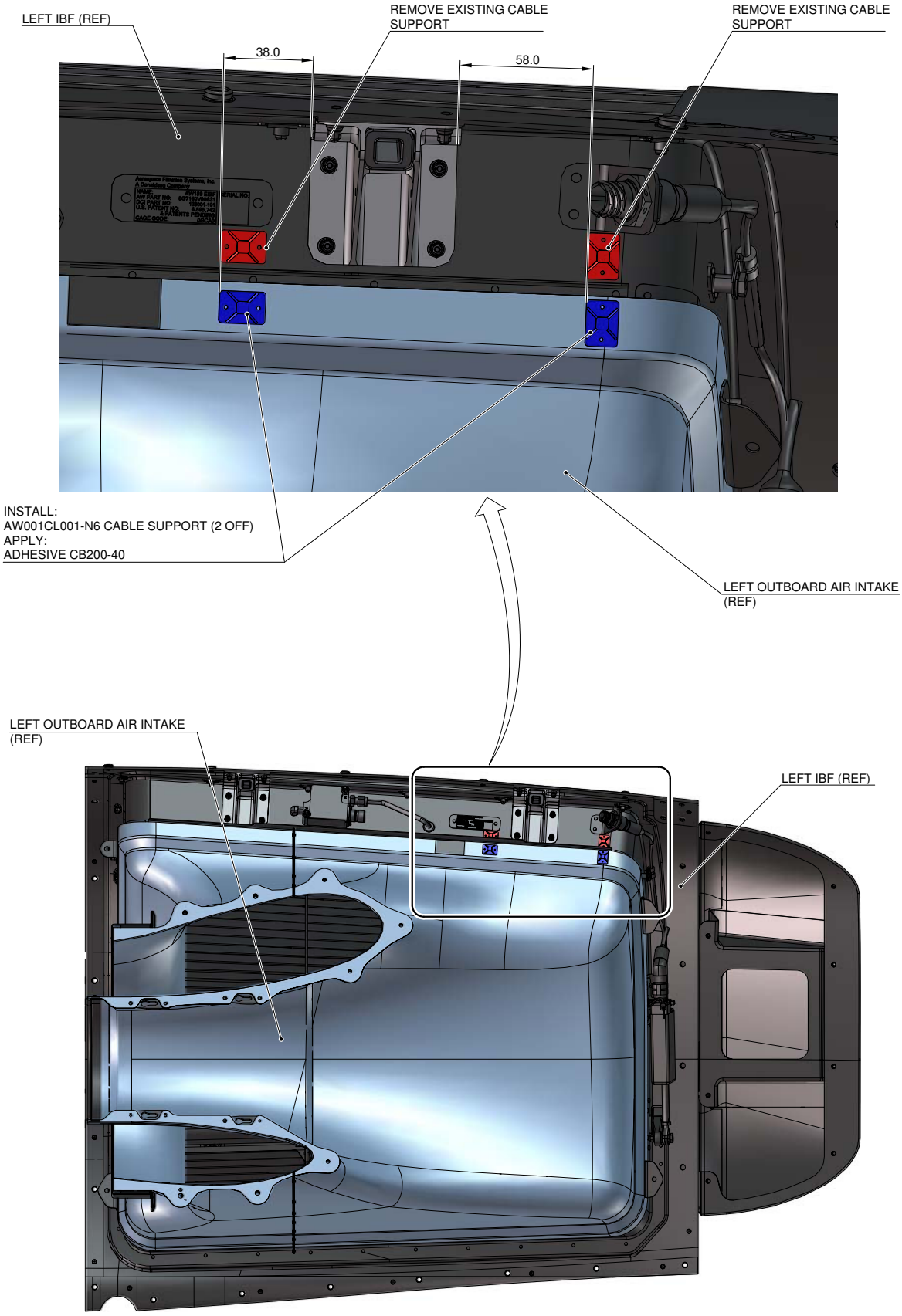
(LEFT SIDE SHOWN TYP OPPOSITE SIDE)
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE



DETAIL E

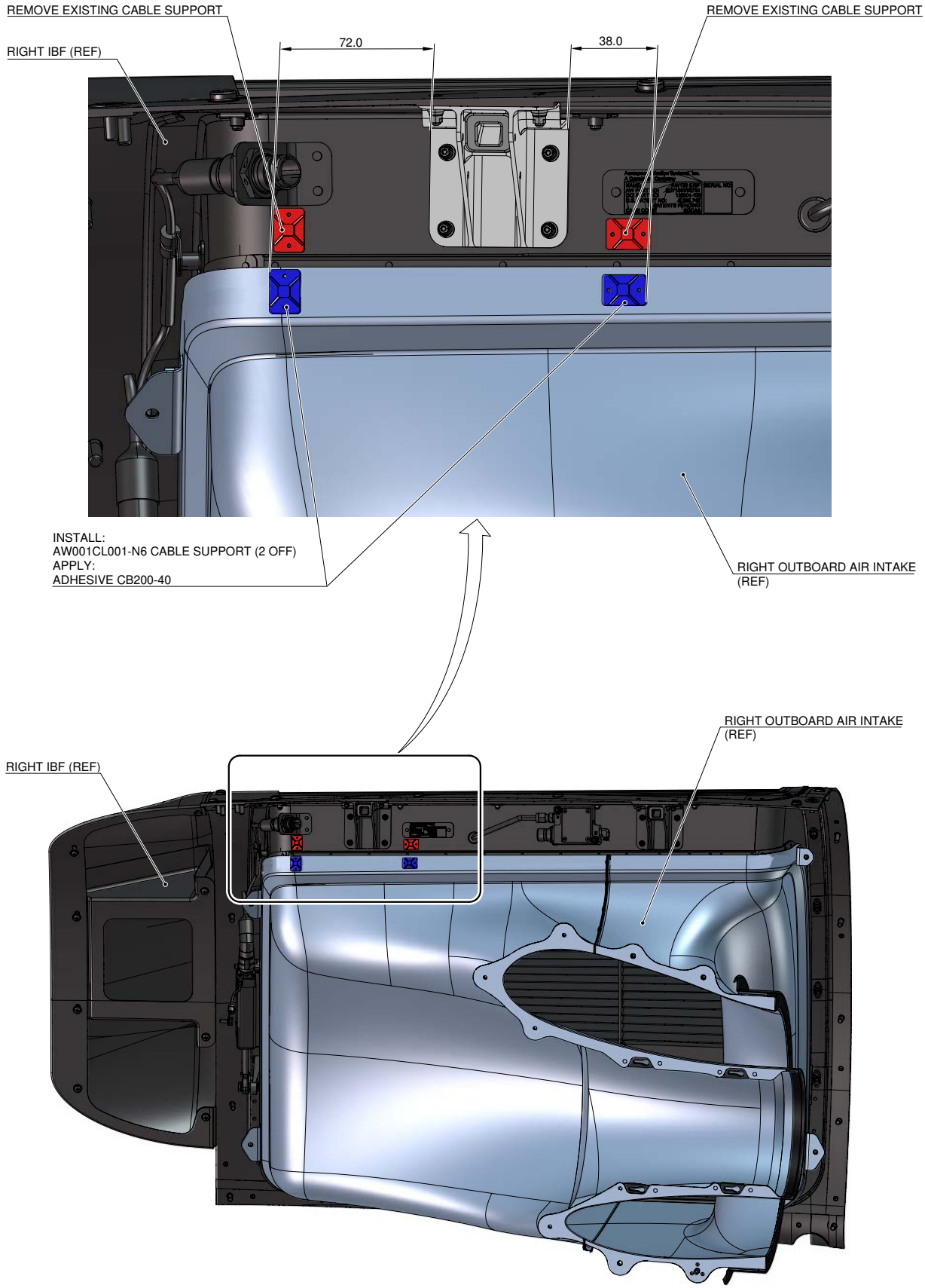
(LEFT SIDE SHOWN TYP OPPOSITE SIDE)
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 4



DETAIL F
APPLICABLE ONLY TO HELICOPTER S/N 49023

Figure 5



DETAIL G
APPLICABLE ONLY TO HELICOPTER S/N 49023

Figure 6

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.