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AgustaWestland Products

SERVICE BULLETIN

OPTIONAL

N° 189-293

DATE: September 27, 2023

REV. : /

TITLE

ATA 53 – KIT SHELF IN TAIL 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

All AW189 helicopters from S/N 49007, S/N 89001 and S/N 92001 onwards not equipped with kit “shelf in tail” P/N 8G5350F00111.

B. COMPLIANCE

At Customer's option.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin is issued in order to provide the necessary instruction on how to perform the installation of kit “shelf in tail” P/N 8G5350F00111.

LHD issued this SB for the following reason:

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

E. DESCRIPTION

The purpose of the kit is to add a shelf support in the tail in order to increase the available space where to install the equipments that can be placed in the tail avionic bay. The installation consists in a shelf assy fixed to two angles installed on the tail structure.

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 four (4) MMH are deemed necessary.

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

H. WEIGHT AND BALANCE

WEIGHT (Kg)	3.745	
	ARM (mm)	**MOMENT (Kgmm)**
LONGITUDINAL BALANCE	9210.5	34493.3
LATERAL BALANCE	1.0	3.7

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-06-41-00-00A-010A-A	Access doors and panels – General data.	-
DM03	89-A-20-10-16-02A-920A-A	Bonded studs – Replacement.	-

I.2 ACRONYMS & ABBREVIATIONS

AMP	Aircraft Maintenance Publication
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
IPD	Illustrated Part Data
ITEP	Illustrated Tool and Equipment Publication
LH	Left Hand
LHD	Leonardo Helicopters Division
MMH	Maintenance Man Hours
MNL	Monnalisa
N.A.	Not Applicable
P/N	Part Number

RH Right Hand

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	**8G5350F00111**		**KIT SHELF IN TAIL**	**REF**	**.**		**-**
2	**8G5350A25611**		**SHELF INSTALLATION**	**REF**	**..**		**-**
3	8G5350A24431		Angle RH assy	1	…		189-293L1
4	8G5350A24551		Angle	1	…		189-293L1
5	8G5350A24651		Angle	1	…		189-293L1
6	8G5350A24751		Angle	1	…		189-293L1
7	8G5350A25531M01	8G5350A25531M02	Shelf assy	1	…		189-293L1
8	MS21042L3		Nut	8	…		189-293L1
9	MS27039-1-05		Screw	32	…		189-293L1
10	MS27039-1-20		Screw	16	…		189-293L1
11	NAS1149D0316K		Washer	56	…		189-293L1
12	NAS1832C3-3		Insert	32	…		189-293L1
13	A388A3E08C75		Standoff	1	…		189-293L1

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
14	Code no. 999999999000017311	Jointing compound Cor-Ban 27L (C075)	AR	(1)	-
15	DTD 900AA/4488A Code no. 900001846	Jointing compound JC5A (C001)	AR	(1)	-
16	199-05-002 TY II, CL 2 Code no. 900004603	Adhesive EA 934NA AERO (C397)	AR	(1)	-
17	AWMS05-001 TY I, CL C, GR 1	Sealant MC-780 C (C465)	AR	(1)	-
18	Commercial	Adhesive CB200-40 (C356)	AR	(1)	-

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
189-293L1	1		-

NOTE

(1) Item to procured as local supply.

B. SPECIAL TOOLS

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

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

e) 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 and with reference to Figure 1, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation of the kit “shelf in tail” P/N 8G5350F00111.

NOTE

Unless otherwise specified and except for electrical bonding areas, in low/medium indirect/direct exposure zones perform the installation of riveted structural parts and riveted vendor components by means of sealant MC-780 C (C465):

- apply a layer of sealant on all faying surface;
- wet assemble fixing fasteners by means of sealant.

NOTE

Unless otherwise specified and except for electrical bonding areas, in low/medium indirect/direct exposure zones perform the installation of bolted structural parts and bolted vendor parts by means of jointing compound Cor-Ban 27L (C075) or jointing compound JC5A (C001):

- apply a layer of jointing compound on all faying surface;
- wet assemble fixing fasteners by means of jointing compound as follows:
  - for fasteners with a torque, apply it under the head only;
  - for all other fasteners, apply it under the head and also on the shank.

3. With reference to Figures 1 thru 4, perform the “shelf installation” P/N 8G5350A25611 as described in the following procedure:

3.1 In accordance with applicable steps of AMP DM 89-A-20-10-16-02A-920A-A and with reference to Figure 5 Detail A (WAS), remove the standoff P/N A388A3E08C from the structure P/N 8G5350A03832.

NOTE

With reference to step 3.3, in case of findings of rivets interfering with the angles positioning in the electrical bonding zones, they can be replaced with P/N NAS1719H4L2A before surface preparation according to step 3.2.

3.2 With reference to Figure 3 Detail D and Figure 4 Detail D1, prepare the indicate surface for electrical bonding. Swab degrease by means of solvents, abrade using 220 grit and apply chromate conversion coating (alochrom/alodine) to exposed aluminium surfaces.

3.3 With reference to Figure 2 View C and Figure 3 Detail D, temporarily locate the angle P/N 8G5350A24751 and the angle P/N 8G5350A24651 on the structure P/N 8G5350A03933 and countermark n°16 hole positions in accordance with the dimensions shown.

3.4 With reference to Figure 3 Detail D, drill n°16 holes Ø14.25÷14.38 thru the structure P/N 8G5350A03933.

3.5 With reference to Figure 3 Detail D and Section E-E, install n°16 inserts

P/N NAS1832C3-3 on the structure P/N 8G5350A03933 by means of the adhesive EA 934NA AERO (C397).

3.6 With reference to Figure 2 View C and Figure 3 Section E-E, install the angle P/N 8G5350A24751 and the angle P/N 8G5350A24651 on the structure P/N 8G5350A03933 by means of n°16 screws P/N MS27039-1-05 and n°16 washers P/N NAS1149D0316K.

3.7 With reference to Figure 2 View C and Figure 4 Detail D1 and Section F-F, repeat steps from 3.2 thru 3.6 to install the angle P/N 8G5350A24551 and the angle RH assy P/N 8G5350A24431 on the RH structure P/N 8G5350A03832.

3.8 In accordance with applicable steps of AMP DM 89-A-20-10-16-02A-920A-A and with reference to Figure 6 Detail A (BECOMES), install the standoff P/N A388A3E08C75 on the angle RH assy P/N 8G5350A24431 by means of adhesive CB200-40 (C356) according to dimensions shown.

3.9 With reference to Figure 6 View B, reroute the cable as indicated in figure.

NOTE

Align the holes of the shelf assy with the holes of the RH and LH angles.

3.10 With reference to Figure 1 View A and Figure 2 View B, temporarily locate the shelf assy P/N 8G5350A25531M01 on the angle P/N 8G5350A24751, the angle P/N 8G5350A24651, the angle P/N 8G5350A24551 and the angle RH assy P/N 8G5350A24431.

3.11 With reference to Figure 1 View A, Figure 2 View B, Figure 3 Section E-E and Figure 4 Section F-F, install the shelf assy P/N 8G5350A25531M01 on the angles by means of n°8 screws P/N MS27039-1-20, n°8 nuts P/N MS21042L3 and n°16 washers P/N NAS1149D0316K on the LH side and n°8 screws P/N MS27039-1-20 and n°8 washers P/N NAS1149D0316K on the RH side.

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 this Service Bulletin on the helicopter logbook.
6. Gain access to My Communications section on Leonardo WebPortal and compile the “Service Bulletin Application Communication”.

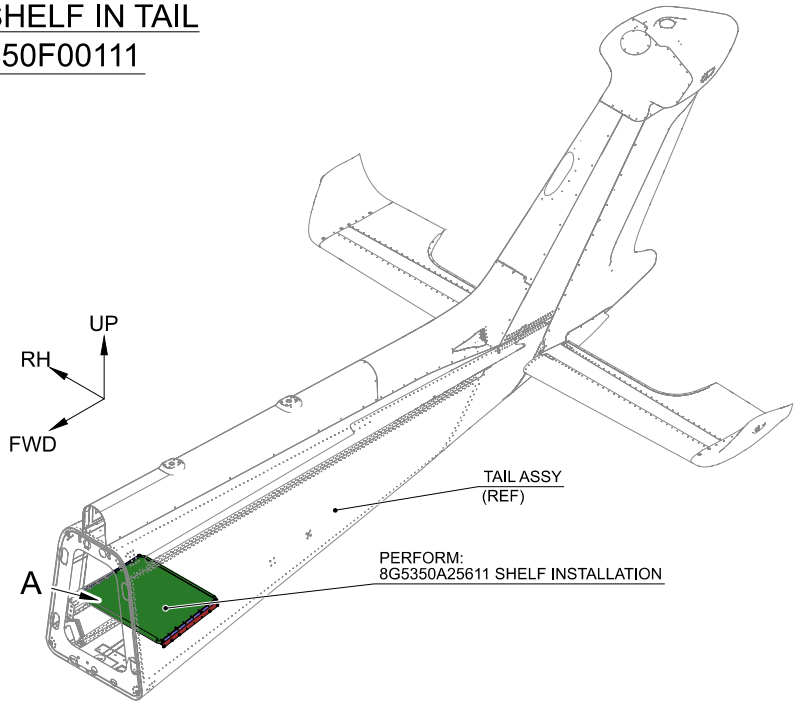
   As an alternative, send the attached compliance form to the following mail box:

   engineering.support.lhd@leonardo.com

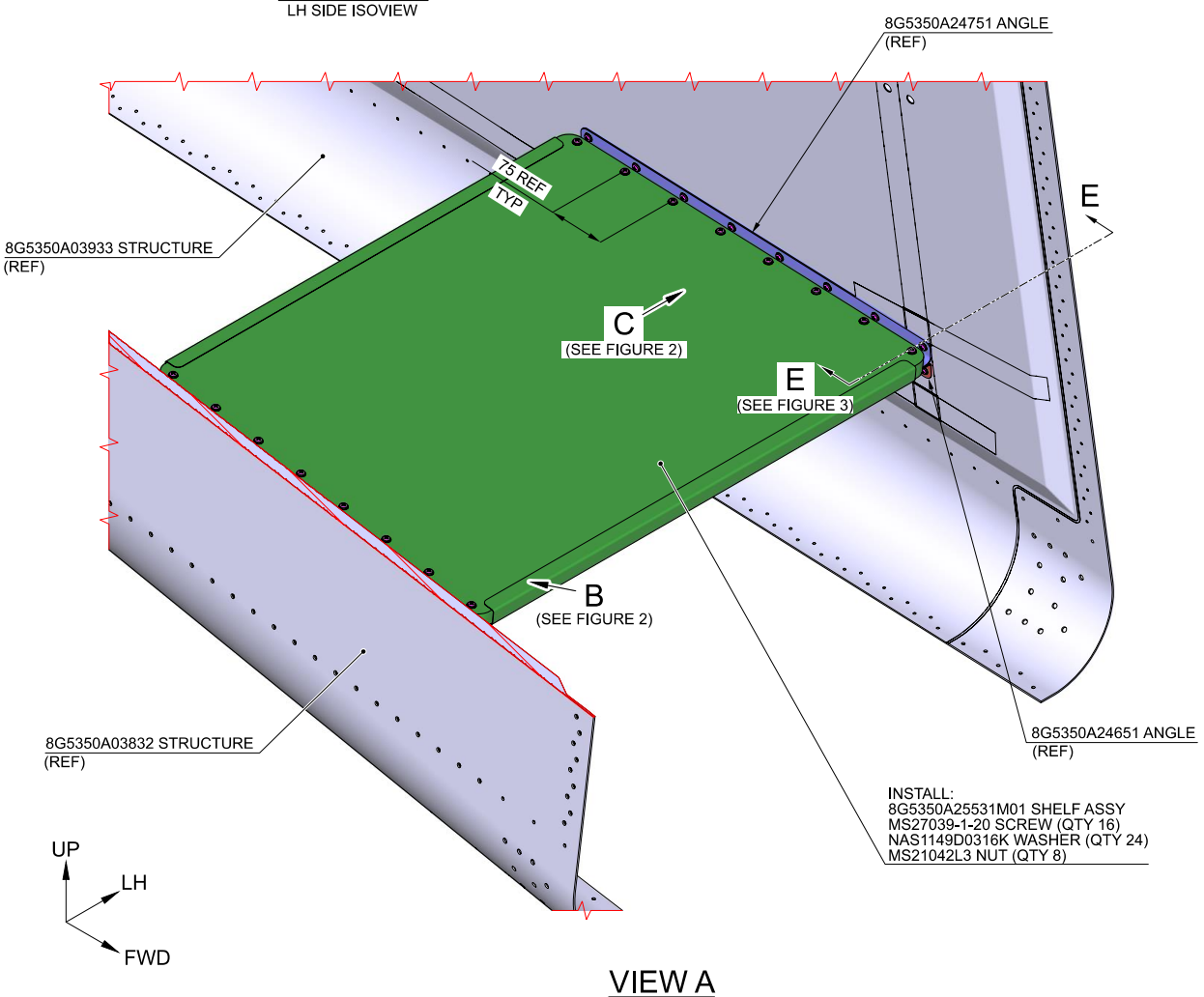
   and (for North, Central and South America) also to:

   AWPC.Engineering.Support@leonardocompany.us

KIT SHELF IN TAIL
8G5350F00111

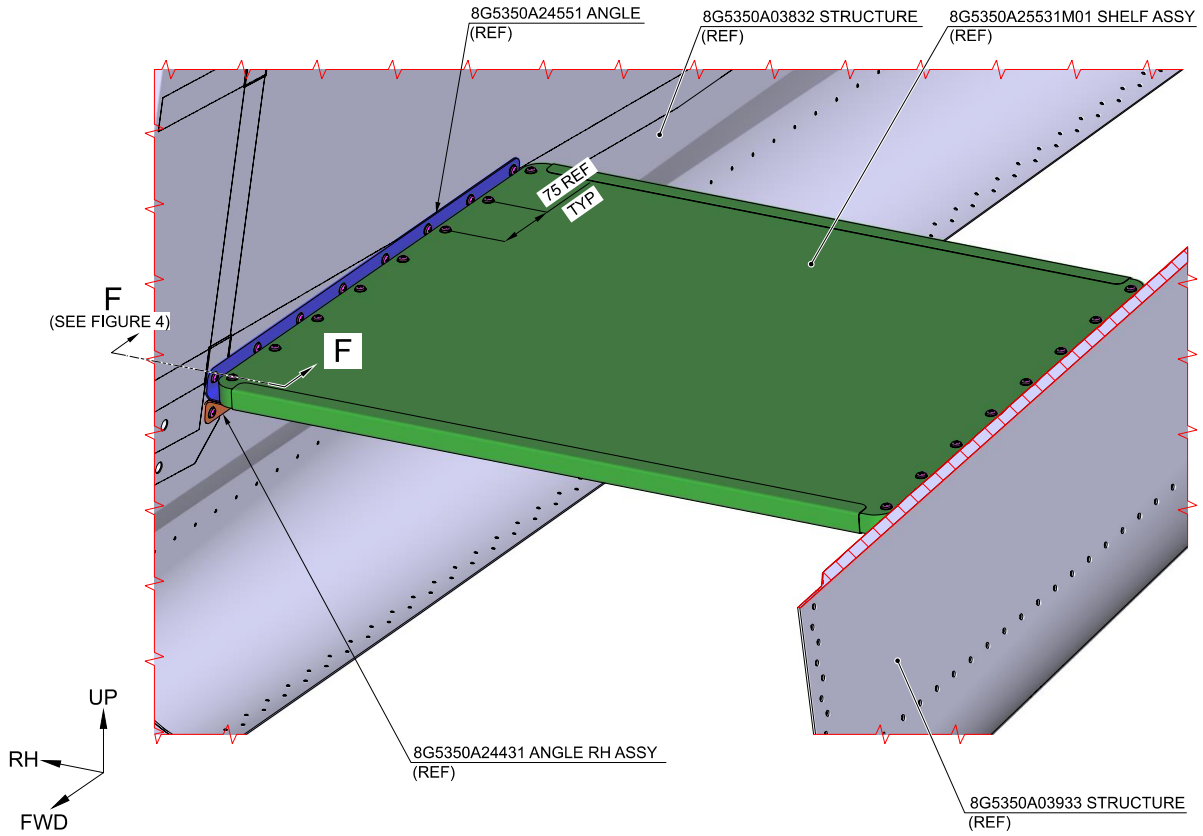


TAIL ASSY
LH SIDE ISOVIEW



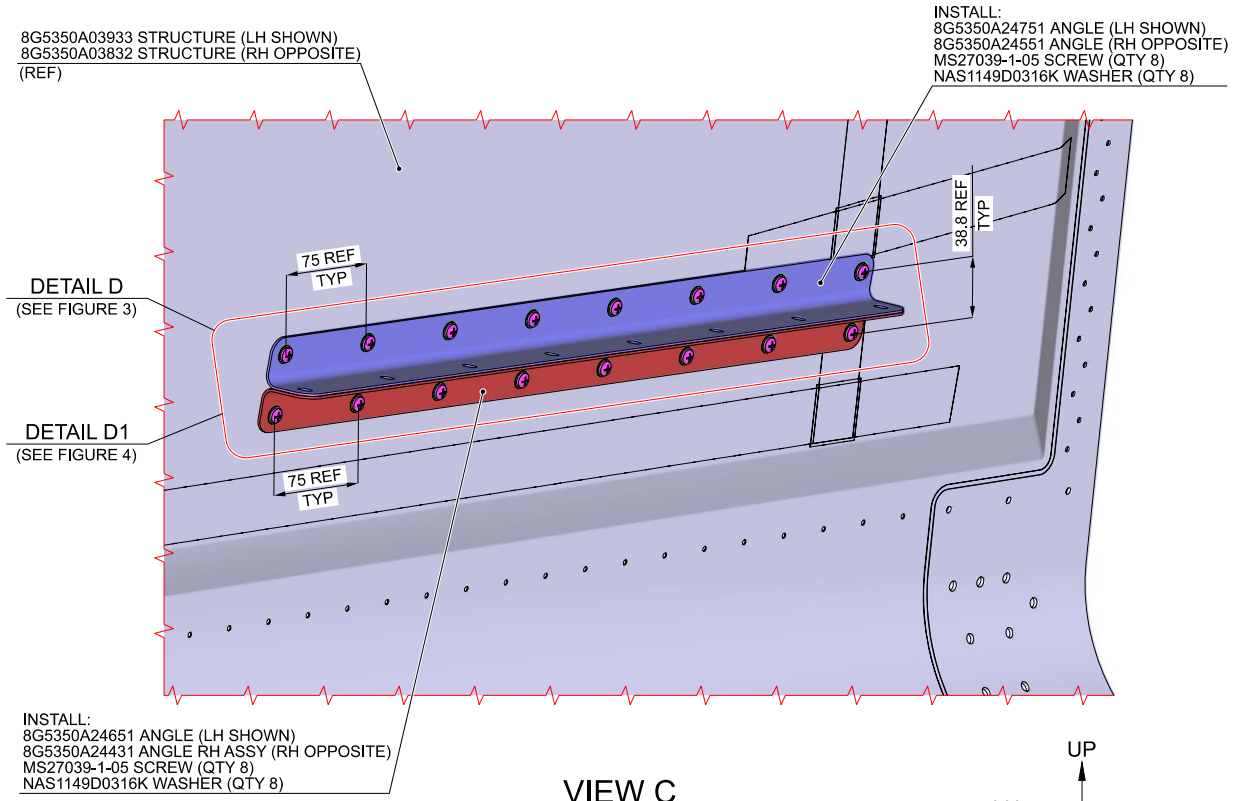
VIEW A
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 1



VIEW B

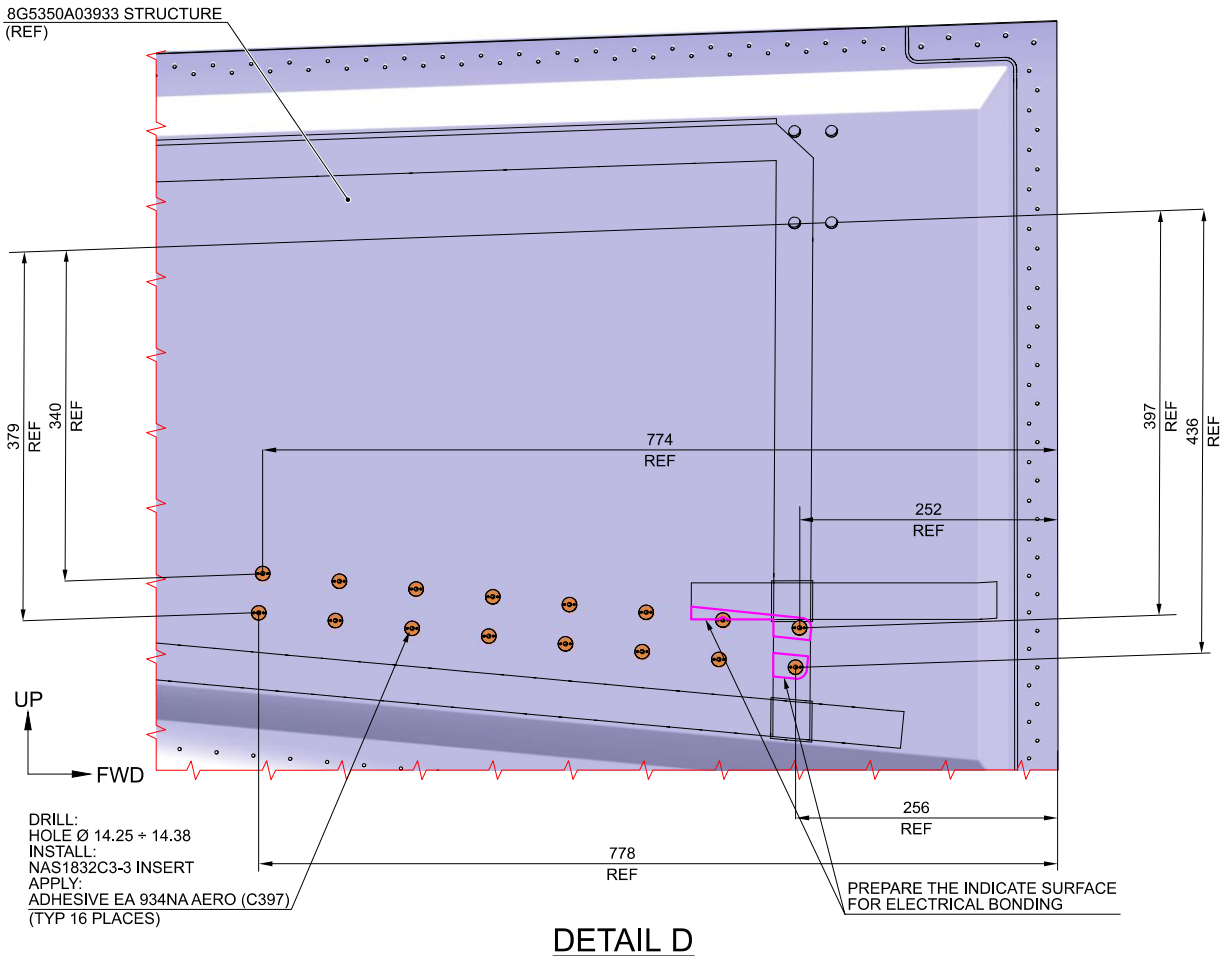
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 1)



VIEW C

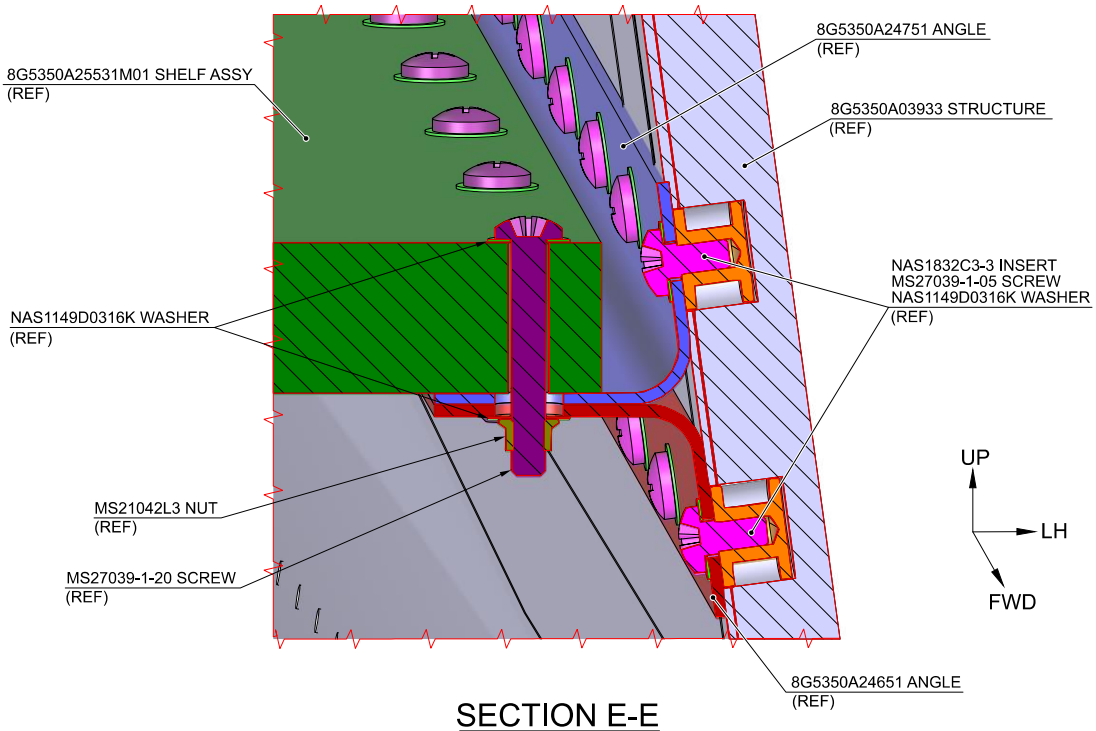
LH SHOWN (TYP RH OPPOSITE)
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 1)

Figure 2



DETAIL D

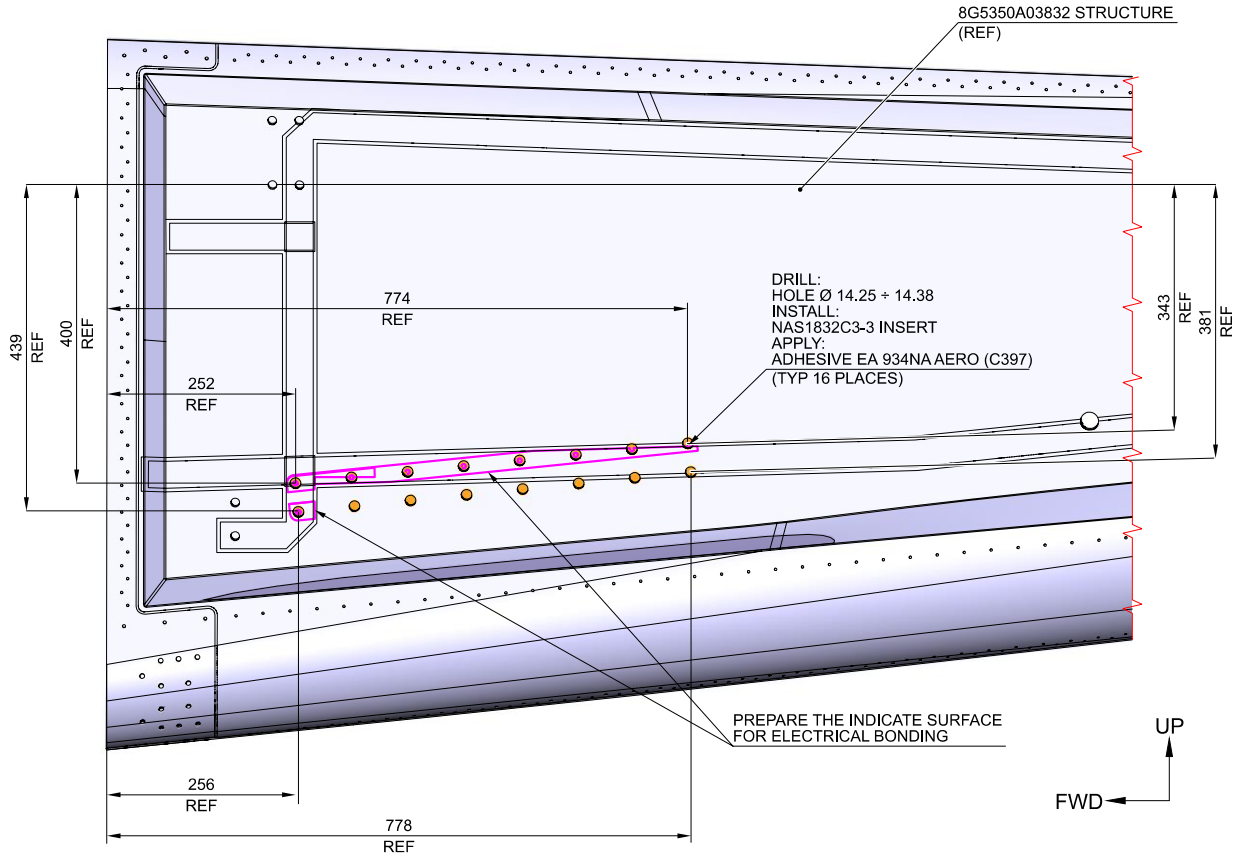
LH SHOWN
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 2)



SECTION E-E

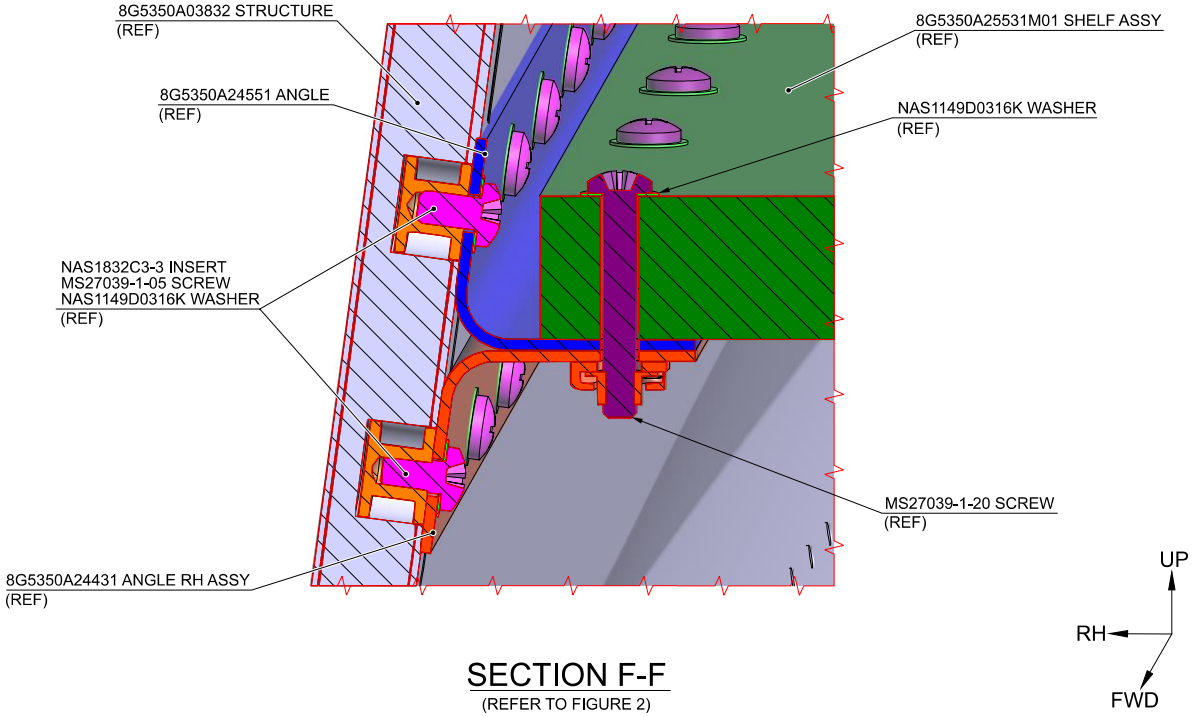
(REFER TO FIGURE 1)

Figure 3



DETAIL D1

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



SECTION F-F

(REFER TO FIGURE 2)

Figure 4

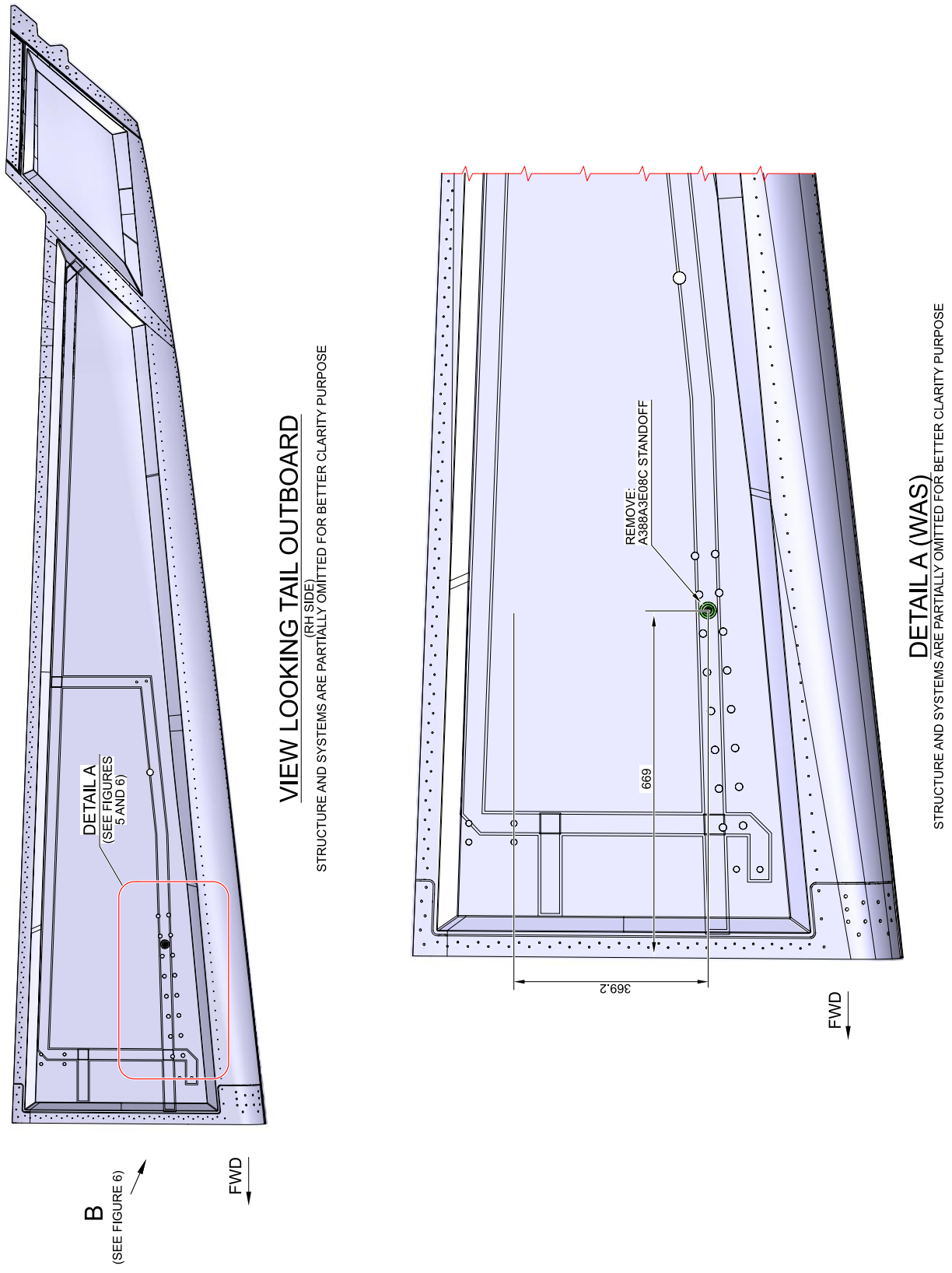
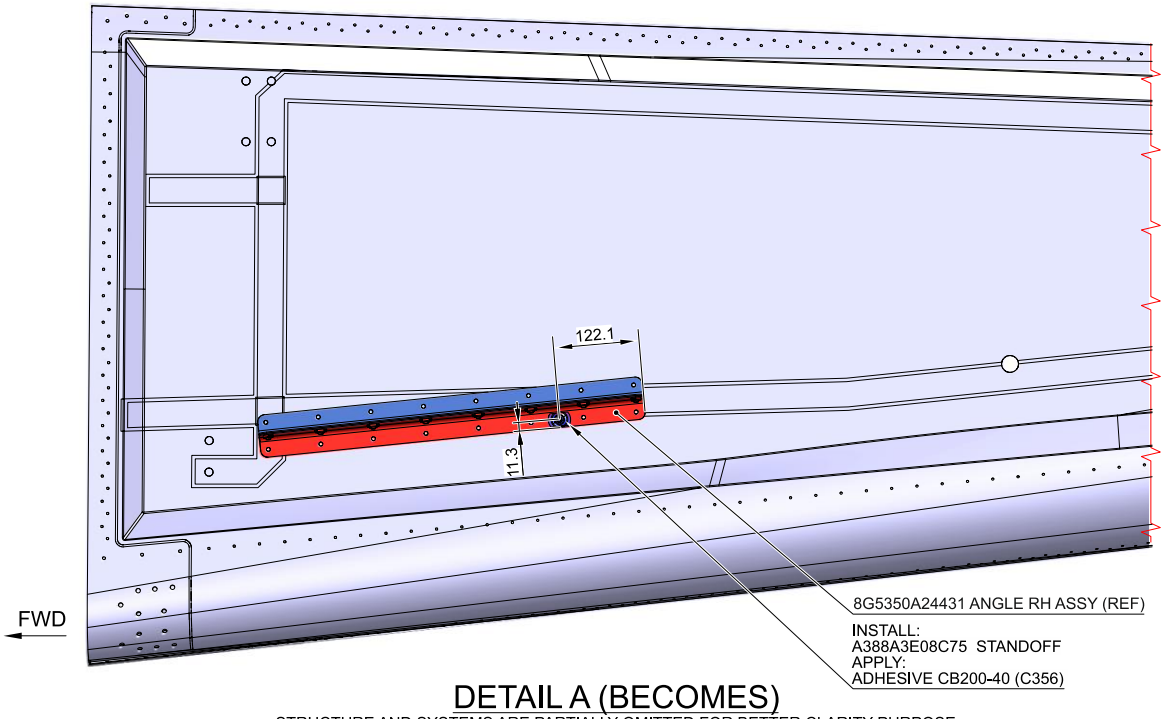
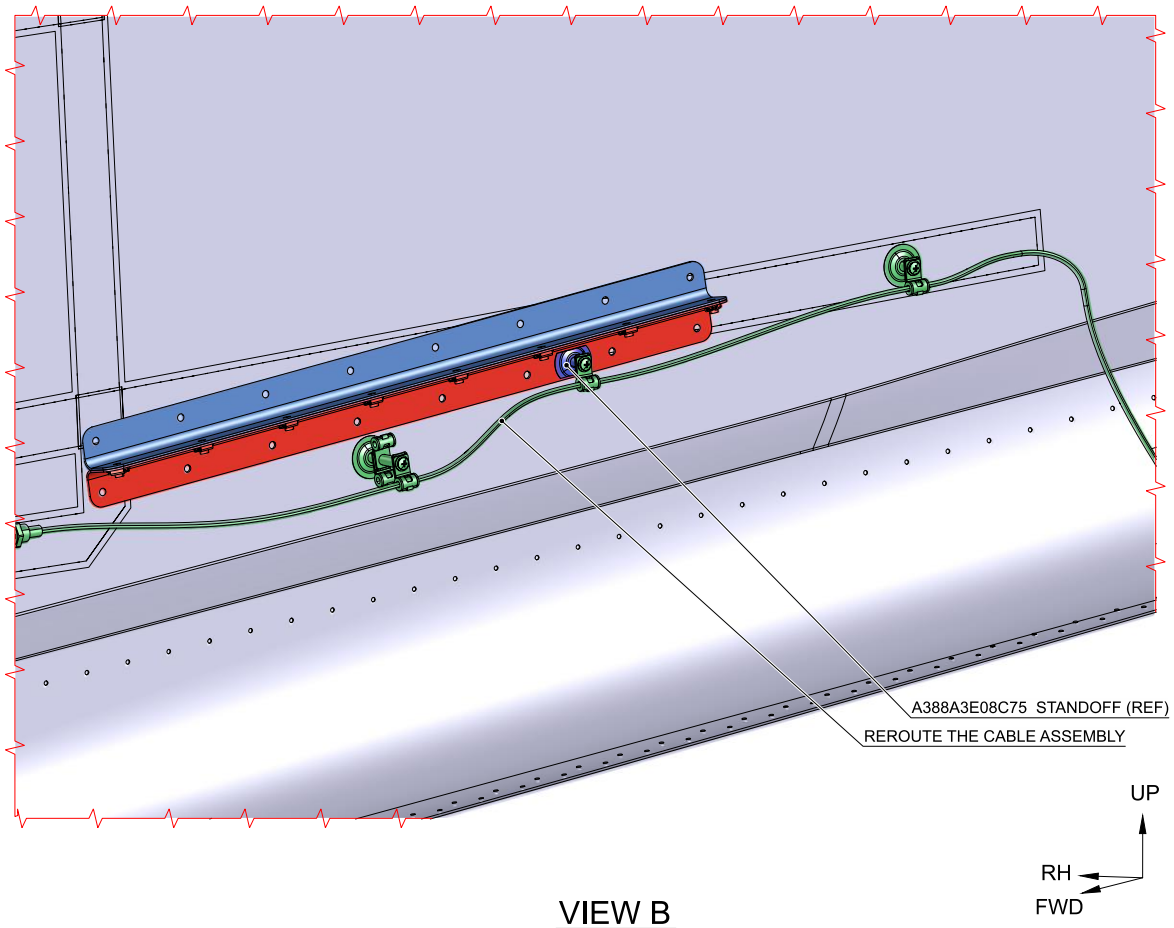

VIEW LOOKING TAIL OUTBOARD
(RH SIDE)
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
DETAIL A
(SEE FIGURES 5 AND 6)
B
(SEE FIGURE 6)
FWD
DETAIL A (WAS)
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
REMOVE:
A388A3E08C STANDOFF
669
369.2
FWD

Figure 5



DETAIL A (BECOMES)
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 5)



VIEW B
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 5)

Figure 6

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HELICOPTERS

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

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

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

Remarks:

Information:

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