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AgustaWestland Products

SERVICE BULLETIN

N° 189-281

DATE: March 27, 2023

REV. : /

TITLE

ATA 34 – TSS4100 LOWER FAIRING RETROMOD

REVISION LOG

First Issue

1. PLANNING INFORMATION

A. EFFECTIVITY

AW189 helicopters S/N 49007 to S/N 49070 (SN's 49024, 49036, 49040 and 49041 excluded) not equipped with "TCAS kit" P/N 8G3450F00111 or "Transponder & TCAS II integrated system" P/N 8G3450P02911.

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 instructions on how to perform the installation of "TSS4100 lower fairing retromod" P/N 8G5338P00311.

E. DESCRIPTION

LHD received a report from an in-service helicopters of a possible interference between the central lower fairing assy, installed in the central part of the belly, and the electric power supply cable of the fuel pumps.

LHD developed the "TSS4100 lower fairing retromod" P/N 8G5338P00311 in order to replace the "central lower fairing assy" P/N 8G5338A02631 with a new fairing assy consisting of two parts:

- "TCAS central lower FWD fairing assy" P/N 8G3450A04031;
- "TCAS central lower aft fairing assy" P/N 8G3450A04331.

The new aft panel have the setup for two ducts which eliminate the possible interference with the electric power supply cable of the fuel pumps.

For the installation of the new fairings it is necessary to rework the sealing tape and install a new conductive gasket.

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 twelve (12) 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)	0.814	
	ARM (mm)	**MOMENT (Kgmm)**
LONGITUDINAL BALANCE	6047.1	4922.3
LATERAL BALANCE	0.0	0.0

I. REFERENCES

1) PUBLICATIONS

Following Data Modules refer to AMP:

DATA MODULE		**DESCRIPTION**	**PART**
DM01	89-A-00-20-00-00A-120A-A	Helicopter safety – Pre-operation (make helicopter safe for maintenance)	-
DM02	89-A-06-41-00-00A-010A-A	Access doors and panels – General data	-
DM03	89-A-20-00-07-00A-921A-A	Conductive gasket tape – Replacement (remove and install a new item)	-

2) ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
FWD	Forward

IPD	Illustrated Parts Data
LHD	Leonardo Helicopters
MMH	Maintenance Man Hours
P/N	Part Number
TCAS	Traffic Alert and Collision Avoidance System

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	**8G5338P00311**		**TSS4100 LOWER FAIRING RETROMOD**	**REF**	**.**	**-**	**-**
2	8G3450A04031	8G3450A04031A	TCAS central LWR FWD fairing assy	1	..	-	189-281L1
3	8G3450A04331		TCAS central LWR aft fairing assy	1	..	-	189-281L1
4	A428A3C08		Screw	9	..	-	189-281L1
5	AW001GH000B1		Conductive gasket	1	.	-	189-281L1
6	A407A3C2P		Anchor nut	9	.	-	189-281L1

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

2) CONSUMABLES

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

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
7	TEFLON, Type I, Cass 1, SHP IIB, 199-05-003	PTFE tape (C405)	AR	(1)	-
8	199-05-002 Type I, Class 2	Hysol EA9309NA (C231)	AR	(1)	-
9	TT-I-735, Grade A	Isopropyl alcohol (C039)	AR	(1)(2)	-
10	ASTM D740, Type I	MEK (C005)	AR	(1)	-
11	MIL-C-16173 grade I	Tectyl	AR	(1)	

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

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
189-281L1	1	-	-

NOTE

(1) Item to be procured as local supply.

(2) May be used as alternative to solvent MEK (C005).

B. SPECIAL TOOLS

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

#	P/N	DESCRIPTION	Q.TY	NOTE	PART
12	-	Bondimeter	1	(B1)	-

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

SPECIAL TOOLS NOTE

(B1) Item to be procured as local supply.

C. INDUSTRY SUPPORT INFORMATION

Owners/Operators who comply with the instructions of this Service Bulletin no later than the applicable date in the “Compliance” section will be eligible to receive “Required Materials” on free of charge basis. Consumables / Special Tools / AMP / AMDI materials are not covered by SB.

NOTE: Customers who fail to comply with the instructions in this Service Bulletin before the compliance date are not eligible for the aforementioned special policy. Please Issue relevant MMIR form to your Warranty Administration Dpt.

3. ACCOMPLISHMENT INSTRUCTIONS

GENERAL NOTES

a) Place an identification tag on all components that are re-usable, including the attaching hardware that has been removed to gain access to the modification area and adequately protect them until their later re-use.

b) Shape the cables in order to prevent interference with the structure and the other existing installations, using where necessary suitable lacing cords and plastic cable tiedown.

c) Exercise extreme care during drilling operations to prevent instruments, cables and hoses damage.

d) After drilling, remove all swarf and sharp edges. Apply on bare metal a light film of primer unless the hole is used for ground connection.

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

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

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

h) 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, gain access to the area affected by the “TSS4100 lower fairing retromod” P/N 8G5338P00311.
3. With reference to Figures 1 and 2, perform the “TSS4100 lower fairing retromod” P/N 8G5338P00311 as described in the following procedure:

   3.1 With reference to Figure 1, remove all existing hardware from the “central lower fairing assy” P/N 8G5338A02631 and retain for later reuse.

3.2 With reference to Figure 1, remove the “central lower fairing assy” P/N 8G5338A02631 from the helicopter.

3.3 With reference to Figure 2 View B, perform the cut-out of the existing PTFE tape (C405) according to the dimensions shown.

3.4 With reference to Figure 2 View B, temporarily locate the PTFE tape (C405) on the “TCAS central lower FWD fairing assy” P/N 8G3450A04031 and perform the cut-out of the tape according to the dimensions shown.

3.5 With reference to Figure 2 View B, install the PTFE tape (C405) on the “TCAS central lower FWD fairing assy” P/N 8G3450A04031 according to the dimensions shown.

NOTE

Before installation the conductive gasket P/N AW001GH000B1 must not be torn or damaged and must have the metal mesh suspended within the gel layer of the gasket, without exposure of the metal mesh outside of the gel layer, and without areas of the gel layer missing.

The gasket must also remain tacky on both sides to ensure a good seal between the components when installation is complete.

3.6 With reference to Figures 1 and 2, install the conductive gasket P/N AW001GH000B1 as described in the following procedure:

NOTE

Surfaces that will come into contact with the conductive gasket P/N AW001GH000B1 shall be free of paint, dust, oil, grease, fingerprints and other contamination.

Residue of previously applied adhesives, sealants, or fillet sealing materials shall be removed.

3.6.1 With reference to Figure 1 View A, clean and prepare the surface by means of a clean cloth moistened with isopropyl alcohol (C039) or MEK (C005). Clean immediately after with a clean dry cloth.

NOTE

The conductive gaskets P/N AW001GH000B1 are supplied with protective release film on both sides of the gasket. Leave the release film in place until ready to install the gasket.

3.6.2 Remove the gasket P/N AW001GH000B1 from the protective packaging, taking care not to fold or bend it.

3.6.3 With reference to Figure 1 View A, temporarily locate the conductive gasket P/N AW001GH000B1 in position on the “TCAS central lower FWD fairing assy” P/N 8G3450A04031. Carefully trim the perimeter of the gasket if needed and use a tool to create the interfacing fastener holes required within the gasket.

NOTE

Do not over tighten installation fasteners, causing excessive compression of the gasket and rippling effect on the fairing.

3.6.4 In accordance with AMP DM 89-A-20-00-07-00A-921A-A and with reference to Figure 1 View A and Figure 2 View A1, install the conductive gasket P/N AW001GH000B1 on the “TCAS central lower FWD fairing assy” P/N 8G3450A04031, ensuring the position is aligned with the no paint area. Monitor the squeeze out of the gasket gel layer during installation of the fasteners, achieving a consistent squeeze out around the perimeter of a maximum of 3 mm.

3.7 With reference to Figure 1 View A, temporarily locate the “TCAS central lower FWD fairing assy” P/N 8G3450A04031 in the correct position on the structure and countermark n°32 holes on the “TCAS FWD fairing assy” and n°9 holes on the structure.

3.8 With reference to Figure 1 View A, drill n°9 holes Ø 5.326 ÷ 5.446 thru the structure and drill n°32 holes Ø 5.326 ÷ 5.446 thru the “TCAS central lower FWD fairing assy” P/N 8G3450A04031 according to the dimensions shown.

3.9 With reference to Figure 1 View A, install the “TCAS central lower FWD fairing assy” P/N 8G3450A04031 on the structure by means of n°23 existing hardware previously removed.

3.10 With reference to Figure 2 View A1, temporarily locate the “TCAS central lower aft fairing assy” P/N 8G3450A04331 in the correct position on the structure and countermark n°30 holes.

3.11 With reference to Figure 2 View A1, drill n°30 holes Ø 5.326 ÷ 5.446 thru the “TCAS central lower aft fairing assy” P/N 8G3450A04331.

3.12 With reference to Figure 2 View A1, install n°9 anchor nuts P/N A407A3C2P on the “TCAS central lower aft fairing assy” P/N 8G3450A04331 by means of the adhesive (C231).

3.13 With reference to Figure 2 View A1, install the “TCAS central lower aft fairing assy” P/N 8G3450A04331 on the structure by means of n°21 existing hardware previously removed and n°9 screws P/N A428A3C08.

NOTE

The resistance measured must not exceeds the value of 10 milliohms.

3.14 With reference to Figure 2 View A1, perform the bonding test in the indicated position by means of the “Bondimeter”.

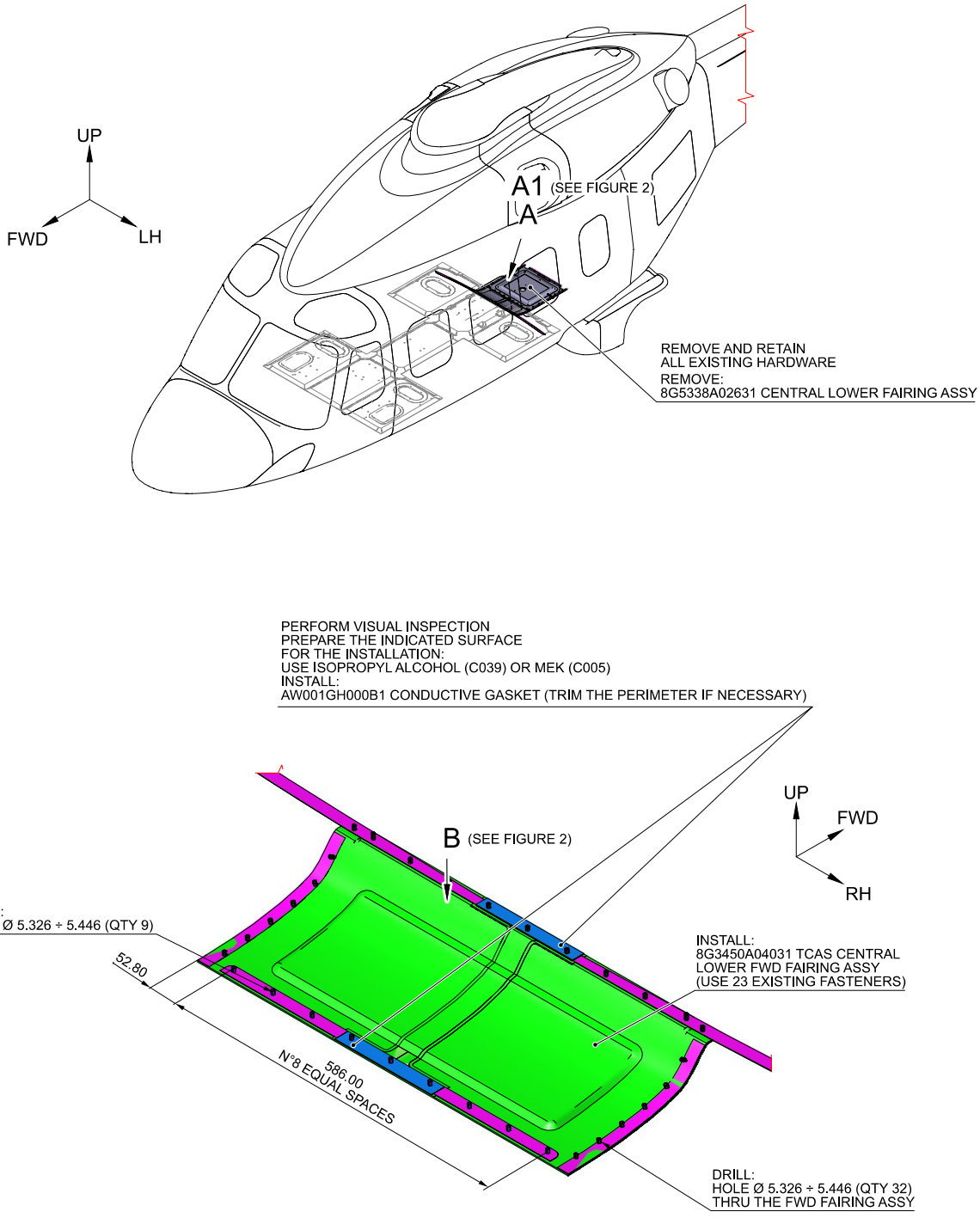
4. Return the helicopter to flight configuration and record for compliance with this Service Bulletin on the helicopter logbook.

5. Send the attached compliance form to the following mail box:

engineering.support.lhd@leonardo.com

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

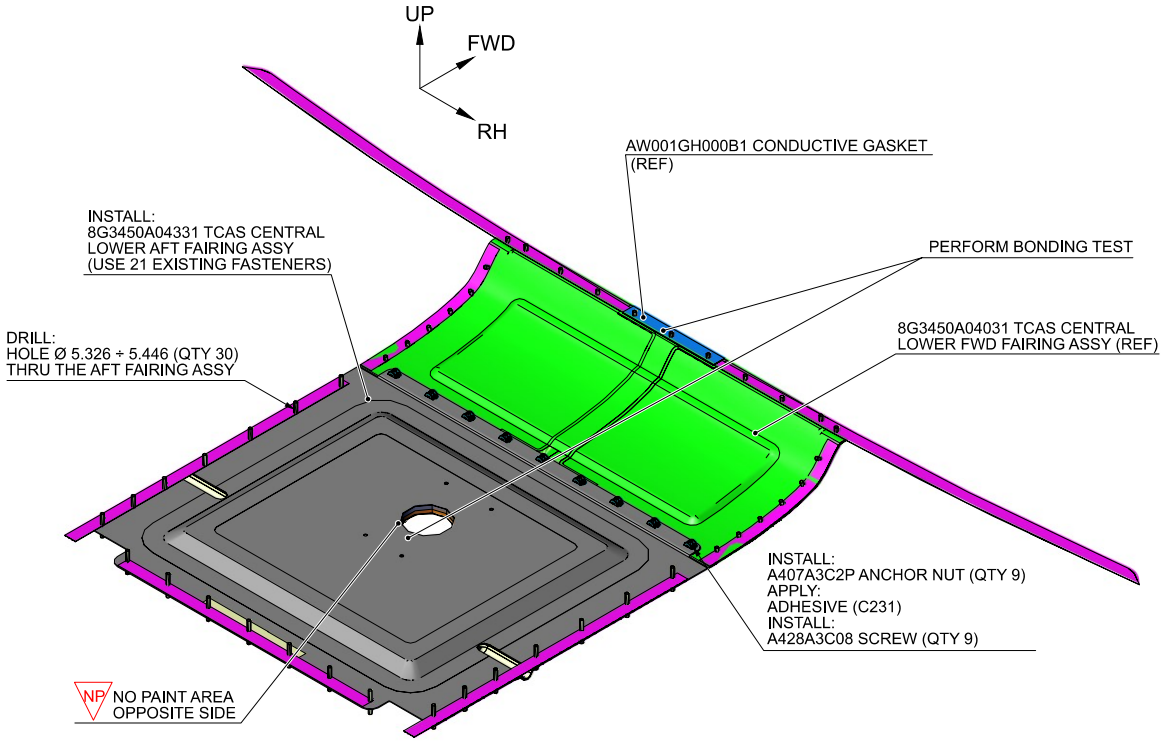
TSS4100 LOWER FAIRING RETROMOD
8G5338P00311



VIEW A

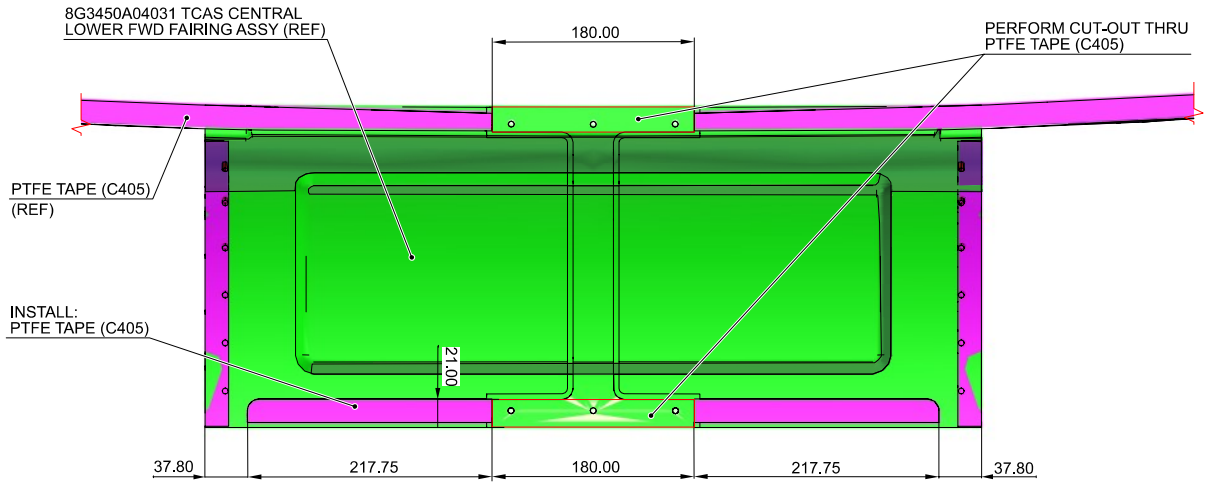
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 1



VIEW A1

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



VIEW B

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

Figure 2

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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.