
SERVICE BULLETIN

N° 139-738

DATE: May 8, 2023

REV. : /

TITLE

ATA 53 – TAIL BOOM ASSY CORROSION PREVENTION IMPROVEMENT

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

Part I

All AB/AW139 helicopters from S/N 31005 to S/N 31157 (except S/N 31007), from S/N 31201 to S/N 31398, from S/N 31400 to S/N 31699, from S/N 31700 to S/N 32022 (except S/N 32006, S/N 32007, from S/N 32009 to S/N 32015, S/N 32018 and S/N 32019), from S/N 41001 to S/N 41023, from S/N 41201 to S/N 41293, from S/N 41300 to S/N 41499, from S/N 41501 to S/N 41583 (except S/N 41581) and from S/N 41801 to S/N 41806.

Part II

All AB/AW139 helicopters from S/N 31005 to S/N 31157 (except S/N 31007), from S/N 31201 to S/N 31398, from S/N 31400 to S/N 31699, from S/N 31700 to S/N 32004 (except S/N 31959, S/N 31982, from S/N 31988 to S/N 31990, S/N 31994, S/N 31995, from S/N 31997 to S/N 31999, S/N 32001 and S/N 32002), from S/N 41001 to S/N 41023, from 41201 to S/N 41293, from S/N 41300 to S/N 41499, from S/N 41501 to S/N 41580, from S/N 41801 to S/N 41806.

B. COMPLIANCE

At Customer's option.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

Due to the evidences received from the in-service fleet about recurrent corrosion problems in the area of tail boom assy, the main purpose of this Service Bulletin is to introduce some corrective improvements in order to avoid the formation of corrosion.

E. DESCRIPTION

This Service Bulletin is divided into two (2) parts:

- Part I provides the necessary instructions on how to perform the vertical fin bonding improvement retromod P/N 3G5350P00911;
- Part II provides the necessary instructions on how to perform the leading edge fairing trim retromod P/N 3G5350P01011.

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, the following MMH are deemed necessary:

Part I: approximately eight (8) MMH;

Part II: approximately four (4) MMH.

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

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.	All
DM02 39-A-06-41-00-00A-010A-A	Access doors and panels - General data.	All
DM03 39-A-20-10-01-00A-259A-A	Ground connections - Other procedure to protect surfaces	I

2) ACRONYMS & ABBREVIATIONS

AMD	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication

AR	As Required
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
N.A.	Not Applicable
P/N	Part Number
S/N	Serial Number

3) ANNEX

N.A.

J. PUBLICATIONS AFFECTED

N.A.

K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

1) PARTS

PART I

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	3G5350P00911		VERTICAL FIN BONDING IMPROVEMENT RETMOD	REF	.		-
2	3G5318A63631		Bonding plate assy	1	..		139-738L1
3	3G5355A09151		Bonding plate	1	..		139-738L1
4	A298A04TW02		Rivet	2	..		139-738L1
5	A428A08C05		Screw	1	..		139-738L1

PART II

N.A.

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

2) CONSUMABLES

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
6	199-05-003 Type I, Class 1, Shape IIB	Sealant tape (C405)	AR	(1)	I

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
139-738L1	1		I

NOTE

(1) 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

Product improvement.

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) Exposed thread surface and nut must be protected using a layer of tectyl according to MIL-C-16173 grade I.
- f) 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 Figure 1, remove the trailing edge fairing assy (access panel 360CL) P/N 3G5355A00137 (access panel 360CL) from the tail boom assy.
3. With reference to Figure 1 “View looking outboard left side”, remove existing anchor nut in the indicated position from the RW longeron assy P/N 3G5351A00336. Retain for later reuse.
4. In accordance with AMP DM 39-A-20-10-01-00A-259A-A and with reference to Figure 1 Detail A, prepare the indicated area on the RW longeron assy P/N 3G5351A00336 to assure the correct electrical bonding.
5. With reference to Figure 1 “View looking outboard left side”, install the bonding plate assy P/N 3G5318A63631 and the anchor nut previously removed (Ref. step 3) on the RW longeron assy P/N 3G5351A00336.

6. In accordance with AMP DM 39-A-20-10-01-00A-259A-A and with reference to Figure 1 Detail A, prepare the indicated area on the bonding rib P/N 3G5355A06651 to assure the correct electrical bonding.

NOTA

Make sure that the bonding plate P/N 3G5355A09151 is coordinated with the bonding plate assy P/N 3G5318A63631.

7. With reference to Figure 1 "View looking outboard left side", install the bonding plate P/N 3G5355A09151 by means of n°2 rivets P/N A298A04TW02 on the trailing edge fairing assy P/N 3G5355A00137.
8. With reference to Figure 1 "View looking inboard left side", install n°1 ply of sealant tape (C405) to restore finishing surface between RW longeron assy P/N 3G5351A00336 and bonding rib P/N 3G5355A06651.
9. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figure 1, reinstall the trailing edge fairing assy P/N 3G5355A00137 (access panel 360CL) on the tail boom assy. Use the screw P/N A428A08C05 to fix the bonding plate P/N 3G5355A09151 to the bonding plate assy P/N 3G5318A63631.
10. Return the helicopter to flight configuration and record for compliance with Part I of this Service Bulletin on the helicopter logbook.
11. 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

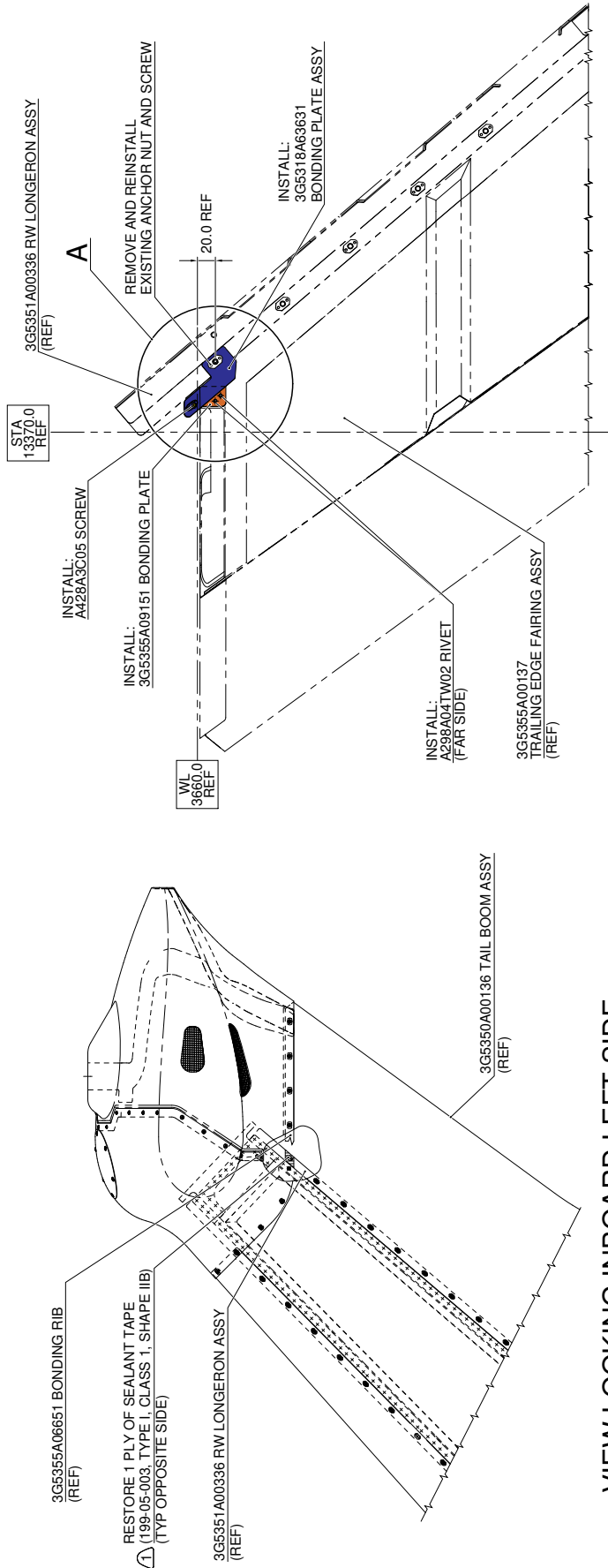
1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figure 2, remove the up leading edge fairing assy (access panel 360AL) P/N 3G5355A00434 and the lower leading edge fairing assy (access panel 313AL) P/N 3G5355A00535 or P/N 3G5355A00536 from the tail boom assy.
3. With reference to Figure 3 Section A-A, trim the up leading edge fairing assy P/N 3G5355A00434 as indicated.
4. With reference to Figure 3 Section B-B, trim the lower leading edge fairing assy P/N 3G5355A00535 or P/N 3G5355A00536 as indicated.
5. With reference to Figure 3 Detail C, trim the lower leading edge fairing assy P/N 3G5355A00535 or P/N 3G5355A00536 as indicated.
6. With reference to Figure 3 Detail C, remove gore tape from the indicated area.
7. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figure 2, reinstall the up leading edge fairing assy (access panel 360AL) P/N 3G5355A00434 and the lower leading edge fairing assy (access panel 313AL) P/N 3G5355A00535 or P/N 3G5355A00536 on the tail boom assy.
8. Return the helicopter to flight configuration and record for compliance with Part II of this Service Bulletin on the helicopter logbook.
9. 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:

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VIEW LOOKING INBOARD LEFT SIDE

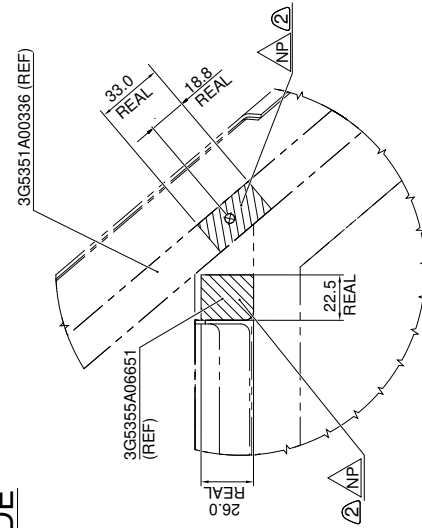
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

VIEW LOOKING OUTBOARD LEFT SIDE

STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

NOTE:

- ① RESTORE FINISHING SURFACE BETWEEN 3G5351A00336 RW LONGERON ASSY AND 3G5355A06651 BONDING RIB.
- ② REMOVE IN THE INDICATED AREA THE PROTECTIVE FINISH TO ASSURE GROUND CONTACT.



DETAILA

3G5318A63631, 3G5355A09151, STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

**3G5350P00911
VERTICAL FIN BONDING
IMPROVEMENT RET-MOD**

Figure 1

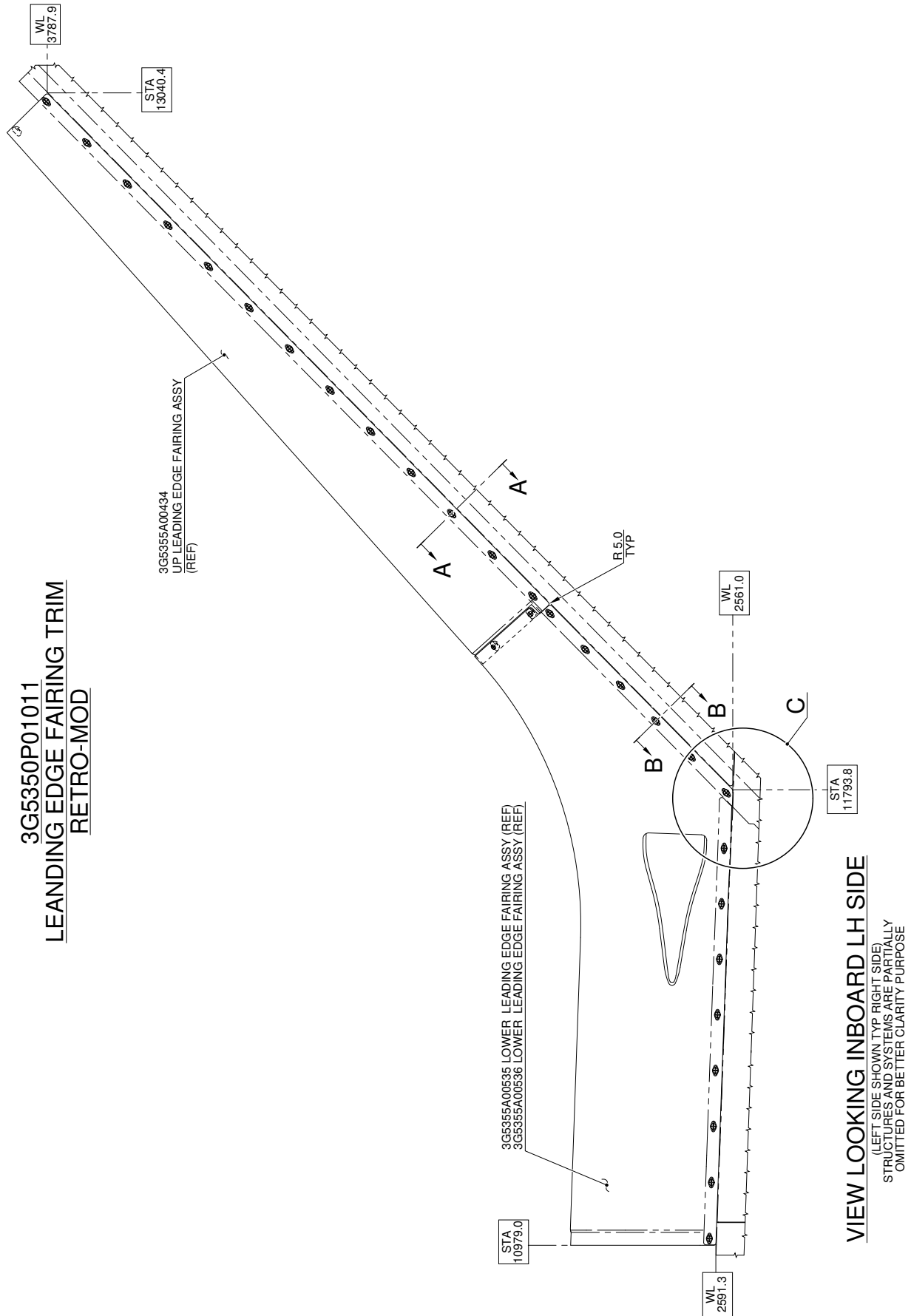
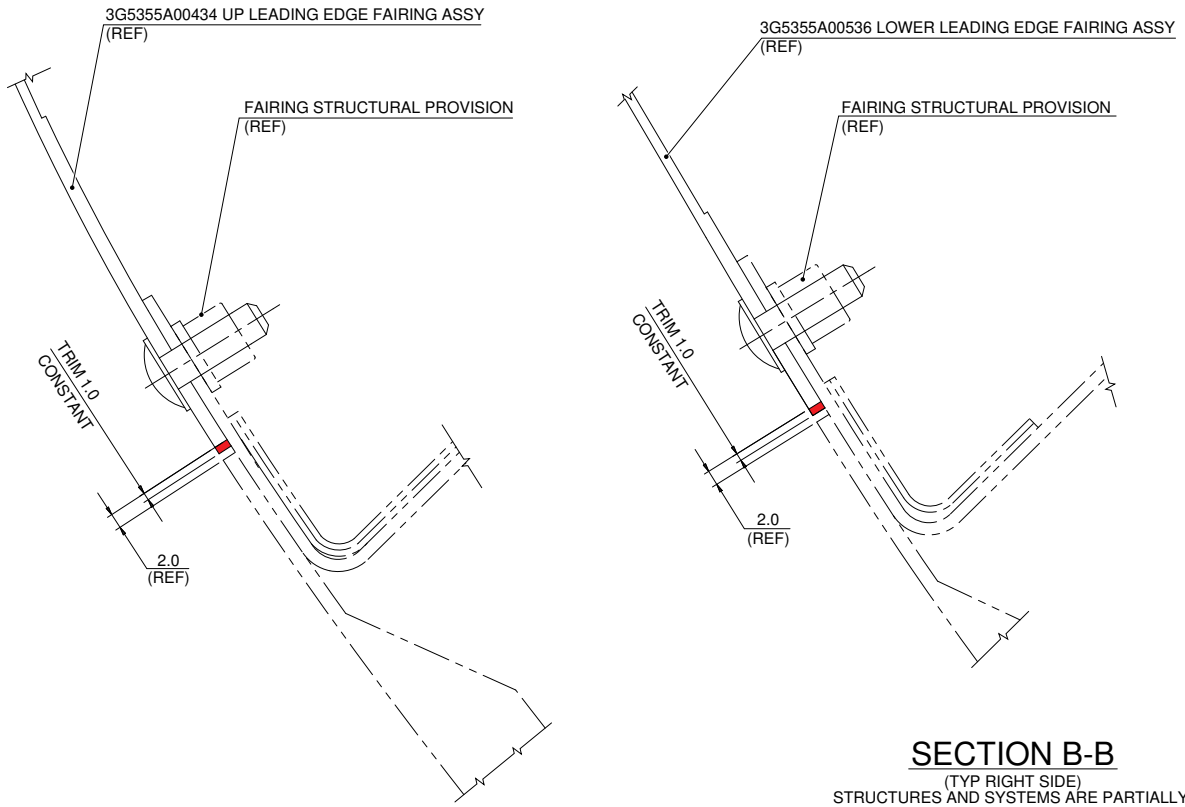


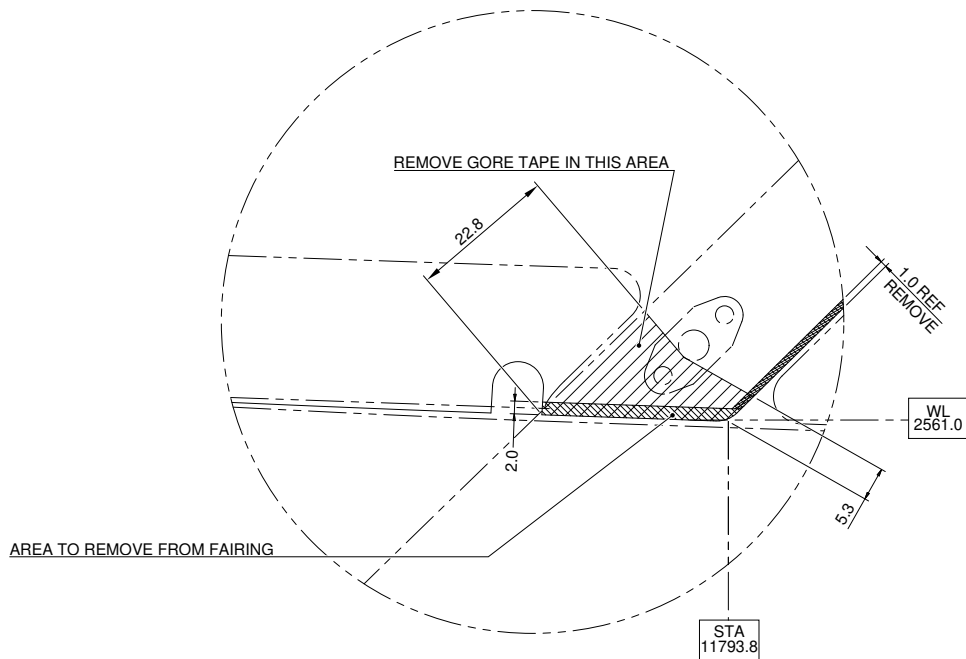
Figure 2

S.B. N°139-738
DATE: May 8, 2023
REVISION: /



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

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



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

Figure 3

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.					