SERVICE BULLETIN

RECOMMENDED

N° **189-376**

DATE: April 18, 2024

REV. : /

TITLE

ATA 06 – ENGINE CABLE ASSY RE-ROUTING

REVISION LOG

First Issue

1. PLANNING INFORMATION

A. EFFECTIVITY

All AW189 helicopters from S/N 49007 thru 49103 (S/N's 49024, 49036, 49040 and 49041 excluded), from S/N 89001 thru S/N 89016 (S/N's 89005 and 89006 excluded) and from S/N 92001 thru S/N 92010.

B. COMPLIANCE

NOTE

The compliance time is subject to the same tolerances
as per AMPI Chap. 05 DM 89-A-05-11-00-00A-028E-P
Inspection/task interval tolerances - General.

Within 1 year from receipt of this Service Bulletin.

LH recommends the implementation of this SB in accordance with the indicated compliance time, with related tolerances as applicable. It is Operator's responsibility to properly plan and execute the SB application i.a.w. LH recommendations. The Operator remains liable for any deviation.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin provides instruction on how to install fixing points on the C/As in the upper deck engine area to modify the routing in order to avoid possible interference between the harnesses connecting the engine FADEC and the firewall.

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 "engine 1/2 CTRL & IND C/A installation retromod" P/N 8G0630P09011.

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, sixty-four (64) 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

N.A.

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-71-01-01-00A-520A-A	Number 1 engine – Remove procedure	-

DATA MODULE		DESCRIPTION	PART
DM04	89-A-71-01-01-00A-720A-A	Number 1 engine – Install procedure	-
DM05	89-A-71-01-02-00A-520A-A	Number 2 engine – Remove procedure	-
DM06	89-A-71-01-02-00A-720A-A	Number 2 engine – Install procedure	-

I.2 ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
APU	Auxiliary Power Unit
AR	As Required
ATA	Air Transport Association
C/A	Cable Assy
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
FADEC	Full Authority Digital Electronic Control
IPD	Illustrated Parts Data
ITEP	Illustrated Tool and Equipment Publication
LH	Leonardo Helicopters
MMH	Maintenance Man Hours
N.A.	Not Applicable
P/N	Part Number

I.3 ANNEX

N.A.

J. PUBLICATIONS AFFECTED

N.A.

K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

2. <u>MATERIAL INFORMATION</u>

A. REQUIRED MATERIALS

A.1 PARTS

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	8G0630P09011		ENGINE 1/2 CTRL & IND C/A INST. RETROMOD	REF		.	
2	AW001CB11H		Clamp	4		..	189-376L1
3	MS21043-3		Nut	2		..	189-376L1
4	NAS1149C0316R		Washer	4		..	189-376L1
5	NAS1802-3-8		Screw	2		..	189-376L1

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
6	-	Corrosion inhibitor Ardrox AV 40 (C551)	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
189-376L1	1	-	-

NOTES

(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

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, except for Consumable Materials and Special Tools. 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. <u>ACCOMPLISHMENT INSTRUCTIONS</u>

<u>GENERAL NOTES</u>

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

d) Unless otherwise specified, in high temperature zones (engine and APU bays) protect all removable fasteners exposed surfaces installed in engine bay (that are not sealant overcoated) using corrosion inhibitor Ardrox AV 40 (C551).

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.

<u>NOTE</u>

To ensure a proper installation, it is allowed to use:

- wires/harnesses clamps (diameter only) two dash greater or lesser than the nominal one;

- bolts (length only) two dash shorter or longer than the nominal one;

- screws (length only) two dash shorter or longer than the nominal one;

- washers (thickness only) two dash greater or lesser than the nominal one;

- spacers (length only) two dash shorter or longer than the nominal one.

2. In accordance with AMP DM 89-A-06-41-00-00A-010A-A and with reference to Figure 1, remove all external panels, as required to gain access to the area affected by the modification and perform the "engine 1/2 CTRL & IND C/A retromod" P/N 8G0630P09011 as described in the following procedure:

  2.1 With reference to Figure 1 View A and in accordance to AMP DM 89-A-71-01-01-00A-520A-A, remove the Number 1 engine to gain access to the LH upper deck.

  2.2 With reference to Figure 1 View A, re-route the engine 1 CTRL & IND cable assemblies as shown.

  2.3 With reference to Figure 1 View A, install n°2 clamps P/N AW001CB11H on the engine 1 CTRL & IND cable assemblies and fix by means of one screw P/N NAS1802-3-8, n°2 washers P/N NAS1149C0316R and the nut P/N MS21043-3.

  2.4 In accordance to AMP DM 89-A-71-01-01-00A-720A-A, re-install the Number 1 engine.

  2.5 With reference to Figure 1 View B and in accordance with AMP DM 89-A-71-01-02-00A-520A-A, remove the Number 2 engine to gain access to the RH upper deck and repeat steps 2.2 and 2.3 for the RH upper deck to re-route the engine 2 CTRL & IND cable assemblies.

  2.6 In accordance with AMP DM 89-A-71-01-02-00A-720A-A, re-install the Number 2 engine.

3. In accordance with AMP DM 89-A-06-41-00-00A-010A-A, re-install all external panels previously removed.

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

5. Gain access to My Communications section on Leonardo WebPortal and compile the "Service Bulletin Application Communication".
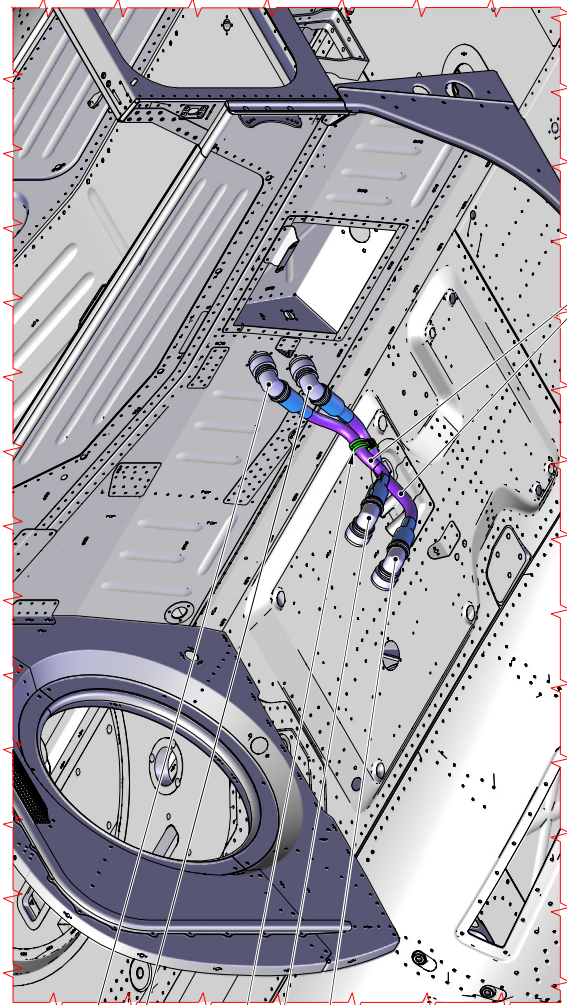
   As an alternative, send the attached compliance form to the following mail box:

   engineering.support.lhd@leonardo.com

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

   AWPC.Engineering.Support@leonardocompany.us
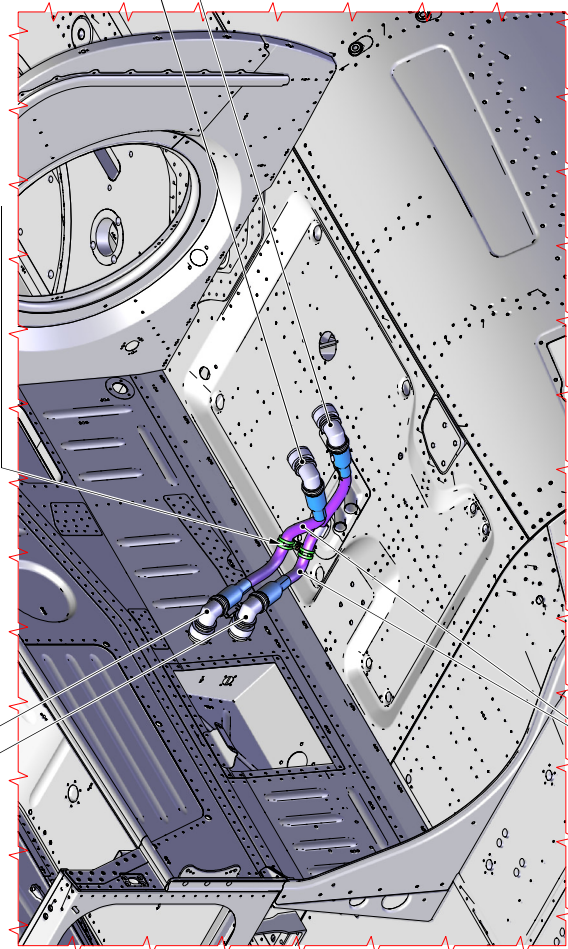
ENGINE 1/2 CTRL & IND C/A INST. RETROMOD
8G0630P09011

P267 CONNECTOR (REF)

P265 CONNECTOR (REF)

INSTALL:
AW001CB11H CLAMP (QTY 2)
NAS1802-3-8 SCREW
NAS1149C0316R WASHER (QTY 2)
MS21043-3 NUT

A11P2 CONNECTOR (REF)

A11P1 CONNECTOR (REF)

UP

FWD

LH

INSTALL:
AW001CB11H CLAMP (QTY 2)
NAS1802-3-8 SCREW
NAS1149C0316R WASHER (QTY 2)
MS21043-3 NUT

RE-ROUTE AS SHOWN:
ENGINE 1 CTRL & IND C/A

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

A

B

A12P1 CONNECTOR (REF)

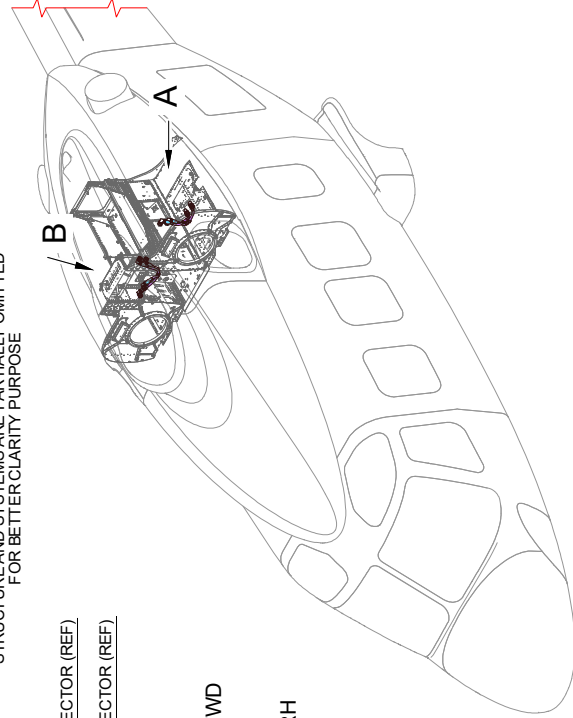A12P2 CONNECTOR (REF)

UP

FWD

RH

P266 CONNECTOR (REF)

P268 CONNECTOR (REF)

RE-ROUTE AS SHOWN:
ENGINE 2 CTRL & IND C/A

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

LEONARDO
HELICOPTERS

S.B. N°189-376 RECOMMENDED
DATE: April 18, 2024
REVISION: /

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.