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## SERVICE BULLETIN

N° **139-596**

**DATE:** December 11, 2020

**REV. :** A - September 22, 2021

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## TITLE

**ATA 21 - INSTALLATION OF INSULATION TUBES ON ECS PIPE**

## REVISION LOG

Helicopters already compliant with the first issue of this Service Bulletin do not need any additional action.

Rev. A of this Service Bulletin is issued to update the effectivity.

Revision bars identify changes.

## **1. PLANNING INFORMATION**

### **A. EFFECTIVITY**

AW139 helicopters S/N 31005, S/N 31006, S/N 31008 thru S/N 31157, S/N 41001 thru S/N 41023, S/N 31201 thru S/N 31398, S/N 41201 thru S/N 41293, S/N 31400 thru S/N 31699, S/N 41300 thru S/N 41499, S/N 31700 thru S/N 31954, S/N 31956, S/N 31958, S/N 31960, S/N 31964 thru S/N 31966 and S/N 41501 thru S/N 41576 equipped with air conditioning installation P/N 3G2150A04211, or P/N 3G2150A04811, or P/N 3G2150A05011, or P/N 3G2150A05411, or P/N 3G2150A05611 and subsequent.

### **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 insulating tubes on the overhead panel area.

### **E. DESCRIPTION**

This Service Bulletin provides the necessary instructions to allow the application of the retromod P/N 3G2150P01211. The retromod consists in the installation of insulating tube on R134a pipe (low pressure) in order to increase the reliability of the ECS installation in the overhead panel area.

### **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

N.A.

## I. REFERENCES

### 1) PUBLICATIONS

<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.	-
DM02 39-A-24-91-01-01A-921A-A	Circuit breaker (circuit breaker panel) - Replacement (remove and install a new item)	-

### 2) ACRONYMS

AMP	Aircraft Maintenance Publication
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
ECS	Environmental Control System
LHD	Leonardo Helicopters
IPD	Illustrated Parts Data Publication
MMH	Maintenance Man Hours

### 3) ANNEX

N.A.

## J. PUBLICATIONS AFFECTED

AW139 IPD.

## 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	3G2150P01211		REFRIGERANT PIPE ECS RETRO MOD	REF	.		-
2	3G2150A06551		Insulating tube	1	..		-
3	3G2150A06651		Insulating tube	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
4	/017A-XX_001	KB48A HUTCHINSON ADHESIVE TAPE	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

N.A.

#### NOTE

(1) Item to be procured as local supply.

### B. SPECIAL TOOLS

N.A.

### 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) All lengths are in mm.
1. In accordance with 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. With reference to Figure 1 and in accordance to relevant maintenance step of AMP DM 39-A-24-91-01-01A-921A-A loosen the captive screws and open the circuit breaker control panel.

#### **NOTE**

It is possible to remove the hose fixing to facilitate insulation installation.

3. Thoroughly clean and remove all traces of moisture from ECS R134a pipe (low pressure) P/N 1133625-8, electrical switch panel, auxiliary breaker panel and all hardware installed on overhead using lint-free clothes.
4. With reference to Figure 1 install on ECS R134a pipe (low pressure) P/N 1133625-8 insulation tubes P/N 3G2150A06551 and P/N 3G2150A06651.
5. Fix the insulating tubes on hose P/N 1133625-8 applying a strip of KB48A HUTCHINSON adhesive tape P/N /017A-XX\_001 along the two insulation tube edges and wrapping all the insulating tubes using the same adhesive tape.

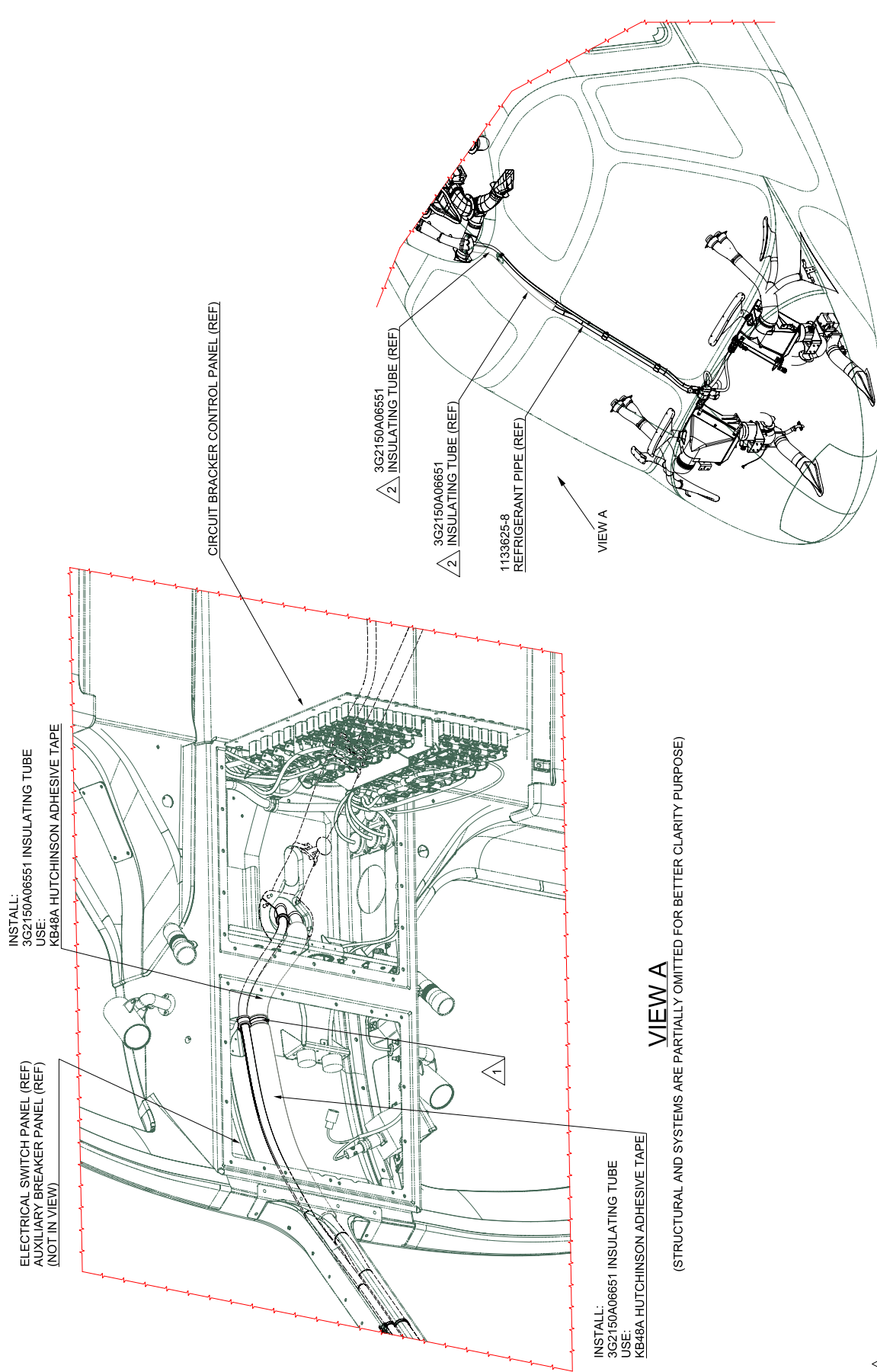
#### **NOTE**

Restore the hose fixing after the modification.

6. With reference to Figure 1 and in accordance to relevant maintenance step of AMP DM 39-A-24-91-01-01A-921A-A tighten the captive screws and close the circuit breaker control panel.
7. Return the helicopter to flight configuration and record for compliance with this Service Bulletin on the helicopter logbook.
8. Send the attached compliance form to the following mail box:

[engineering.support.lhd@leonardocompany.com](mailto:engineering.support.lhd@leonardocompany.com)

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



**3G2150P01211**  
**REFRIGERANT PIPE ECS RETRO MODIFICATION**

- △ 1 - IT IS POSSIBLE TO REMOVE THE HOSE FIXING TO FACILITATE INSULATION INSTALLATION. RESTORE THE HOSE FIXING AFTER THE MODIFICATION.
- △ 2 - FIX THE INSULATING TUBE ON HOSE P/N 1133625-8 APPLYING A STRIP OF KB48A HUTCHINSON ADHESIVE TAPE ALONG THE TWO INSULATION TUBE EDGES AND THEN COVER ALL THE INSULATING TUBE USING THE SAME TAPE.

**Figure 1**

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