
SERVICE BULLETIN

N° 139-653

DATE: December 21, 2022

REV. : /

TITLE

ATA 21 - KIT HEATING RETROFIT

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 AW139 helicopters from S/N 31400 onwards and from S/N 41300 onwards.

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 heating retrofit P/N 3G2140P01311.

E. DESCRIPTION

Leonardo Helicopters has developed this Service Bulletin in order to switch from kit forced ventilation and heating P/N 3G2141F00114 to kit heating P/N 3G2140F00112.

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 twenty-five (25) 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)	ARM (mm)	MOMENT (Kgmm)
		-0.56
LONGITUDINAL BALANCE	5404.0	-3026.24
LATERAL BALANCE	8.0	-4.48

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

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
ECS	Environmental Control System
IPD	Illustrated Part Data
ITEP	Illustrated tool and equipment publication
LH	Leonardo Helicopters
MMH	Maintenance Man Hours
N.A.	Not Applicable
PNL	Panel
P/N	Part Number
SB	Service Bulletin
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	3G2140P01311		KIT HEATING RETROFIT	REF	.	(1)	-
2	3G2120V00951		Fire Blanket	1	..	(1)	139-653L1
3	3G2140V00351		Heating Cockpit Control Panel	1	..	(1)	139-653L1
4	9900B010000		Flexible Duct	1	..	(1)	139-653L1
5	AN3C20A		Bolt	1	..	(1)	139-653L1
6	AN3C3A		Bolt	1	..	(1)	139-653L1
7	AS21919DG64		Clamp	1	..	(1)	139-653L1
8	AW001CK06HS	MS3367-6-0	Strap Tiedown	2	..	(1)	139-653L1
9	NAS1149D0432J		Washer	1	..	(1)	139-653L1
10	NAS43DD3-74FC		Spacer	1	..	(1)	139-653L1

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
11	199-05-152 Type I Class 2	Adhesive RTV 732 (C126)	AR	(1)	-

Refer to AMDI for the consumable materials required to comply with the AMP DMs 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
139-653L1	1		-

NOTE

- (1) Item to be ordered only if ECS kit P/N 3G2150F00114 will not be installed immediately after the application of this SB.
- (2) Item to be procured as local supply.

B. SPECIAL TOOLS

Refer to ITEP for the special tools required to comply with the AMP DMs 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) During the installation of bonding braids or components requiring grounding, clean the surface structure in order to obtain a good ground contact.
 - c) Let adhesive cure at room temperature for at least 24 hours unless otherwise specified.
 - d) Exposed thread surface and nut must be protected using a layer of tectyl according to MIL-C-16173 grade I.
 - e) All lengths are in mm.
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 all external panels, internal panels and internal liners as required to gain access to the area affected by the installation.
 3. With reference to Figures 1 thru 3, perform the installation of kit heating retrofit P/N 3G2140P01311 as described in the following procedure:
 - 3.1 With reference to Figure 2 View B, remove heating cockpit control Panel P/N 3G2141V00353 from the interseat console.

NOTE

Perform the following step 3.2 only if ECS kit P/N 3G2150F00114 will not be installed immediately.

- 3.2 With reference to Figure 2 View B, install heating cockpit control Panel P/N 3G2140V00351 on the interseat console.
- 3.3 With reference to Figure 3 View C, remove the following components from the helicopter:
 - fan bracket P/N 20204-21;

- fire blanket P/N 3G2121V00951;
- water separator P/N 70230A01001;
- flexible duct P/N 9863B010000;
- n°2 sleeves P/N 9928C010000;
- bolt P/N AN3C4A;
- n°7 bolts P/N AN3C5A;
- n°6 nuts P/N MS21042-3;
- n°3 screws P/N MS27039-1-04;
- n°16 washers P/N NAS1149C0332R;
- washer P/N NAS1149D0332J.

NOTE

Perform the following steps 3.4 thru 3.8 only if ECS kit P/N 3G2150F00114 will not be installed immediately.

NOTE

Prior to installation, interpose a layer of adhesive RTV 732 (C126) between duct P/N 9900B10000 and duct P/N 9898B010000.

- 3.4 With reference to Figure 3 View C and View D, install duct P/N 9900B010000 by means of n°2 straps P/N AW001CK06HS.
- 3.5 With reference to Figure 3 View D, install fire blanket P/N 3G2120V00951 on the duct P/N 9900B010000 previously installed.
- 3.6 With reference to Figure 3 View E, install clamp P/N AS21919DG64, bolt P/N AN3C20A, washer P/N NAS1149C0332R and spacer P/N NAS43DD3-74FC.
- 3.7 In accordance with AMP DM 39-A-20-10-01-00A-259A-A and with reference to Figure 3 View C, prepare the contact surfaces to assure the correct electrical bonding.
- 3.8 With reference to Figure 3 View C, fix bonding cable by means of bolt P/N AN3C3A and washer P/N NAS1149D0432J.
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. 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”.

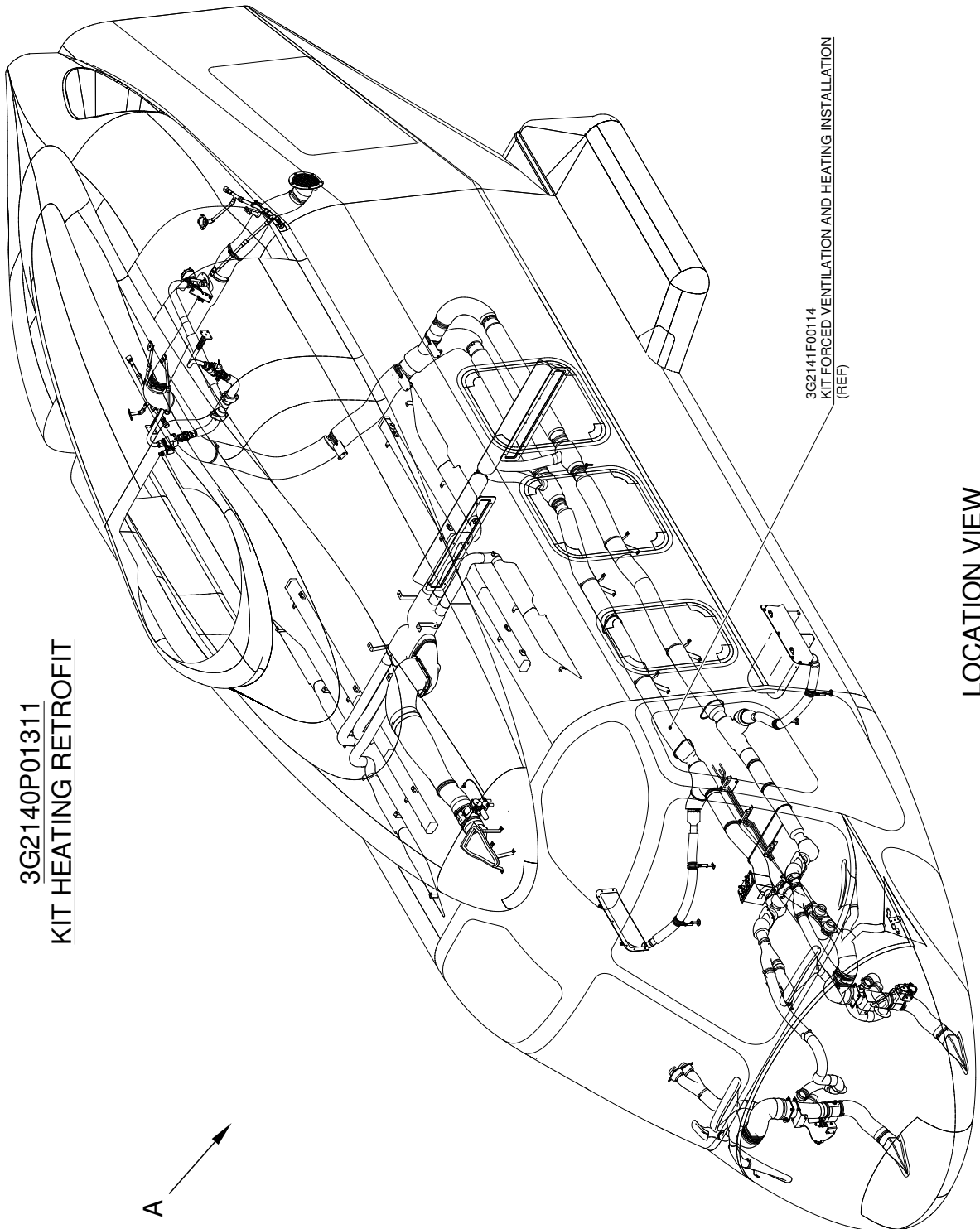


Figure 1

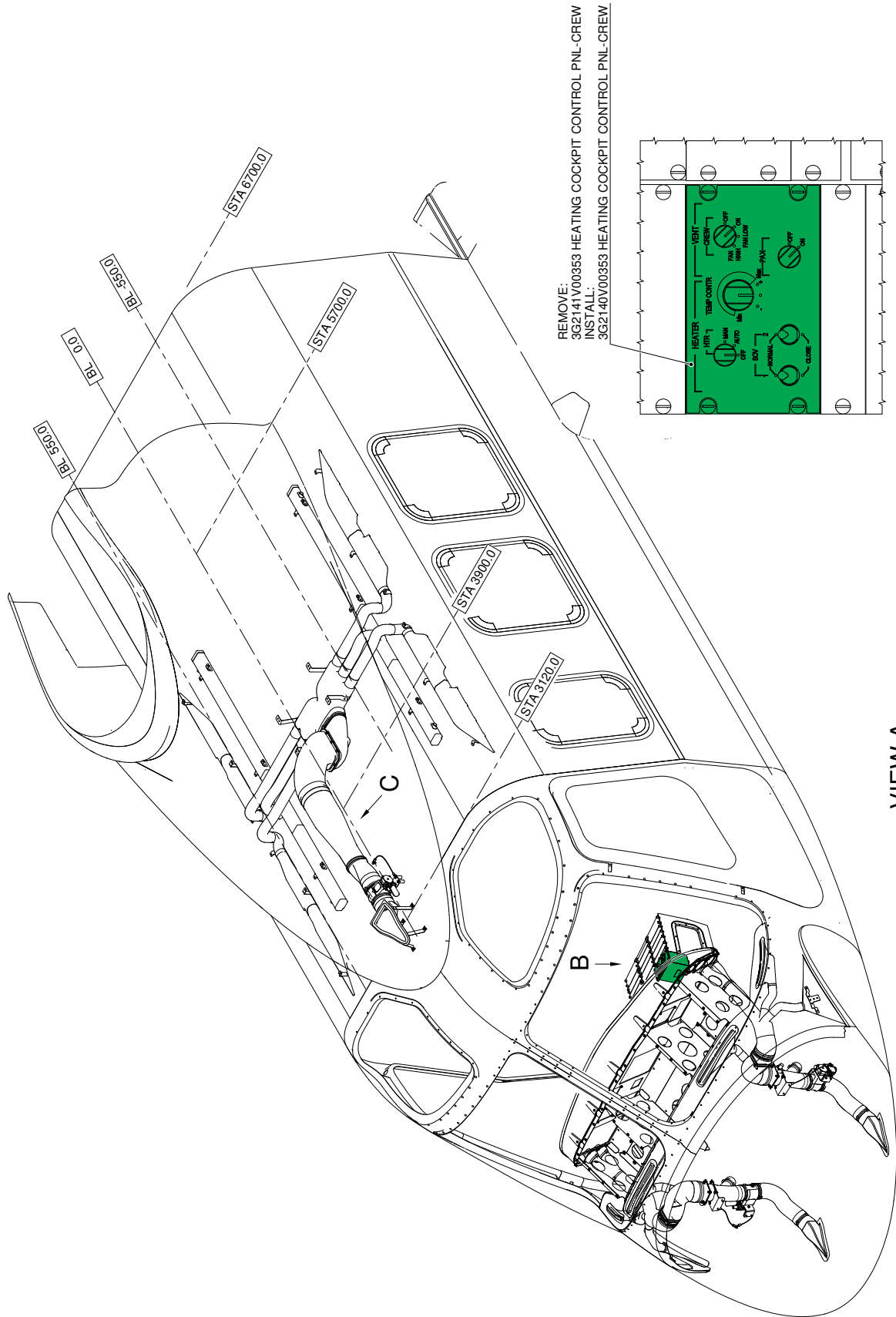


Figure 2

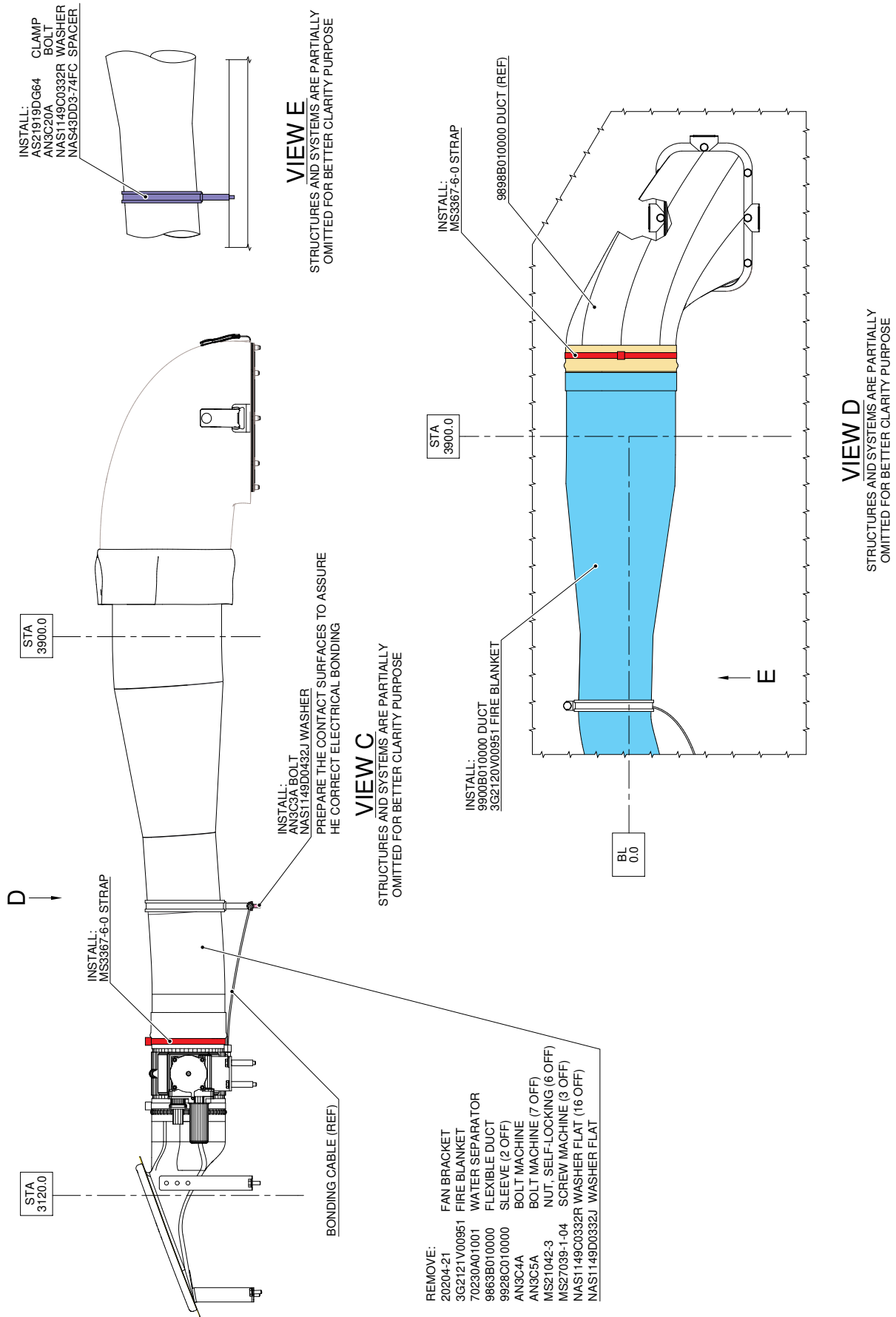


Figure 3

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