

---

---

**SERVICE BULLETIN**

**N° 109EP-179**

**ALERT**

**DATE:** July 21, 2022

**REV. :** /

---

---

**TITLE**

**ATA 53 - CENTRAL FUSELAGE FRAME ASSY AT STA 1815 INSPECTION OF**

**REVISION LOG**

New 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 the A109E helicopters from S/N 11675 included, and subsequent.

### **B. COMPLIANCE**

#### **NOTE**

The helicopter's that have been repaired in accordance this Service Bulletin, shall be inspected in accordance with this Service Bulletin after they have accumulated more than 1000 FH of 3500 landings since repair.

- Helicopters that have accumulated more than 1000FH or 3500 landings, whichever occurs first, within and not later than 100FH from the issuance of this Service Bulletin and every 100FH thereafter.
- Helicopters that have accumulated 1000FH or 3500 landings, or less, within and not later than 100FH upon the achievement of 1000FH or 3500 landings and every 100FH thereafter.

### **C. CONCURRENT REQUIREMENTS**

N.A.

### **D. REASON**

This Service Bulletin is issued in order to provide the necessary instructions on how to perform an inspection to detect cracks in the center fuselage at the intersection of the lateral pylon (LH and RH side) with floor spar.

### **E. DESCRIPTION**

An occurrence of cracks has been found in the fuselage of the LH A109E helicopters at the intersection of the lateral pylon with the floor spar at the STA 1815, in both the LH and RH sides.

This Service Bulletin gives the instructions to perform an inspection in the affected area by the possible presence cracks.

### **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 6 (six) 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 00-20-1	Helicopter safety	-
DM02 25-81-7	Cockpit soundproofing panels - removal/installation	-
DM03 25-81-9	Passenger soundproofing panels - removal/installation	-

### 2) ACRONYMS

DOA	Design Organization Approval
AMD	Aircraft Material Data Information
MM	Maintenance Manual
DM	Data Module
EASA	European Aviation Safety Agency
LH	Leonardo Helicopters
MMH	Maintenance Man Hours
N.A.	Not Applicable
PTUM	Pictorial Tools Usage Manual
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**

N.A.

#### **2) CONSUMABLES**

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

<b>#</b>	<b>Spec./LHD code number</b>	<b>DESCRIPTION</b>	<b>Q.TY</b>	<b>NOTE</b>	<b>PART</b>
1	Commercial	Soft lint-free cloth (C011)	AR	(1)	-
2	MIL-PRF-680 TY II	Cleaning solvent (C287)	AR	(1)	-

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

#### **NOTE**

(1) Local supply.

#### **3) LOGISTIC MATRIX**

N.A.

### **B. SPECIAL TOOLS**

Refer to PTUM for the special tools required to comply with the MM Paragraphs referenced in the accomplishment instructions.

### **C. INDUSTRY SUPPORT INFORMATION**

N.A.

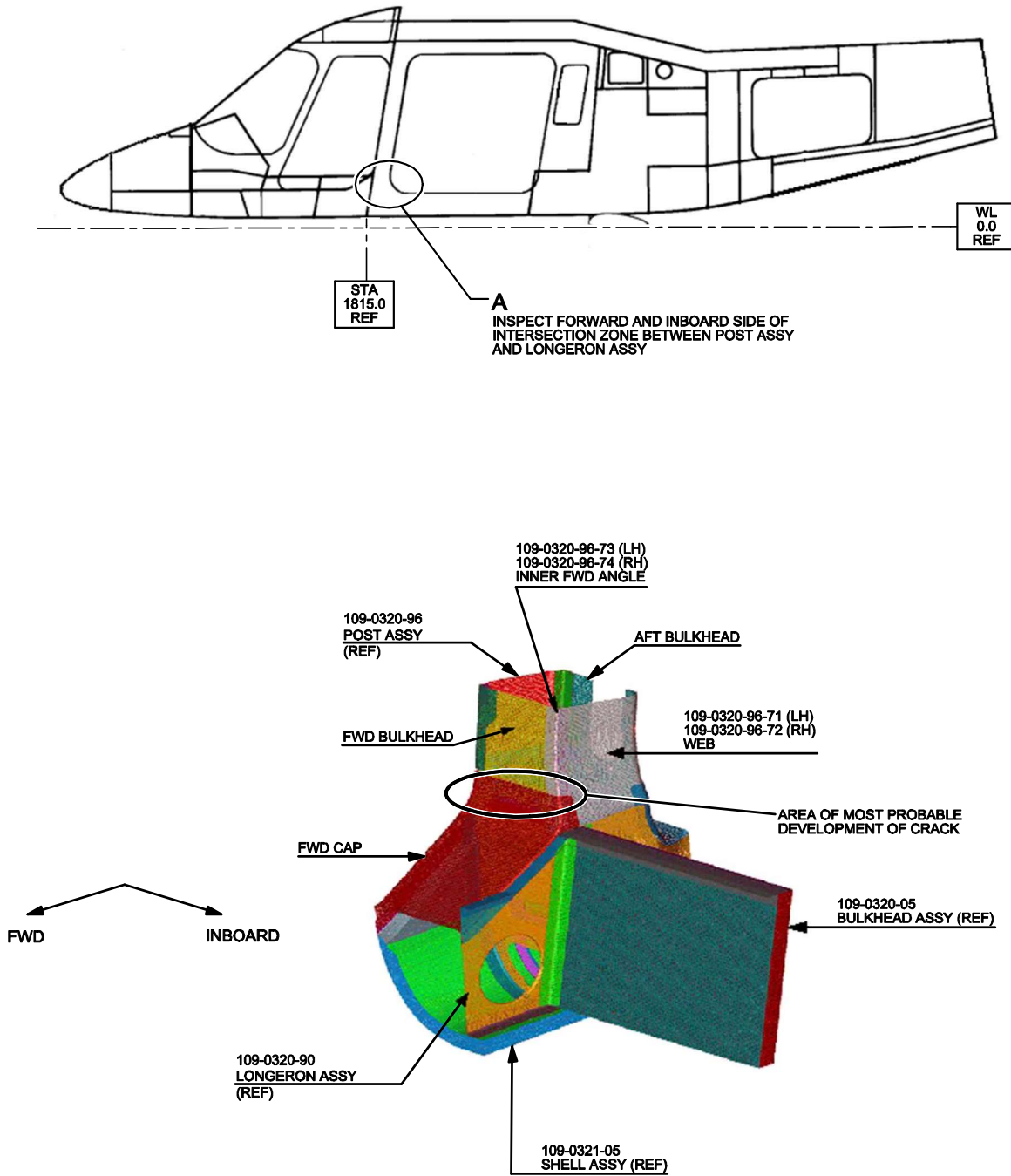
### **3. ACCOMPLISHMENT INSTRUCTIONS**

#### **GENERAL NOTES**

- a) Place an identification tag on all components that are re-usable, including the attaching hardware that have 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.
  - 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) Exposed thread surface and nut must be protected using a layer of tectyl according to MIL-C-16173 grade I.
  - f) All lengths are expressed in mm.
- 
1. In accordance with MM Paragraph 00-20-1, 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, open both the passenger doors and both the cockpit doors and secure them in opened position to gain access to the indicated areas.
  3. If installed, remove any item of furnishing in the passenger compartment that might prevent the access to the inspection zone.
  4. If installed, in accordance with MM Paragraphs 25-81-7 and 25-81-9, remove the cockpit and passenger compartment soundproofing panels or the moquette lining that might prevent the access to the inspection zone.
  5. With reference to Figure 2, on both lateral posts, remove the access panels on the aft side (P/N 109-0320-96-309 on LH side and P/N 109-0320-96-310 on RH side) and on the inboard side (P/N 109-0320-96-521 on LH side and P/N 109-0320-96-522 on RH side). Retain all the fixing hardware for later reuse.
  6. If necessary, clean the inspection area using a soft lint-free cloth (moist with) cleaning solvent MIL-PRF-680 Type II or equivalent.

7. With reference to Figure 1, using a bright light source, visually inspect the whole zone of intersection between the lateral post and the floor spar, on both sides of the fuselage, for evidence of cracks. Pay particular attention to the forward area of the post (toward cockpit) and to inboard side of the post.
8. In case of no findings, reinstall all the components removed from Step 3 to Step 5 and continue with Step 10.
9. In case of findings, in accordance with CSRP standard repair procedures perform a fluorescent liquid penetrant inspection of the crack to determine the exact extent, then stop-drill at both ends of crack to relieve the stresses in the extremities and to prevent any further propagation.
  - 9.1 If the length of crack on the FWD CAP does not exceed 50 mm and no other damages are detected in the affected area, contact Leonardo for repair within and not later than 25 flight hours, at the following mail box:  
[engineering.support.lhd@leonardo.com](mailto:engineering.support.lhd@leonardo.com).
  - 9.2 If the length of crack on the FWD CAP exceed 50 mm, or any other crack is found, contact Leonardo for immediate repair before the next flight, at the following mail box:  
[engineering.support.lhd@leonardo.com](mailto:engineering.support.lhd@leonardo.com).
10. Return the helicopter to a ready to flight condition and record for compliance this Service Bulletin on the helicopter logbook.
11. Send the attached compliance form to the following mail box:  
[engineering.support.lhd@leonardo.com](mailto:engineering.support.lhd@leonardo.com)

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



STA  
1815.0  
REF

WL  
0.0  
REF

**A**  
INSPECT FORWARD AND INBOARD SIDE OF  
INTERSECTION ZONE BETWEEN POST ASSY  
AND LONGERON ASSY

109-0320-96-73 (LH)  
109-0320-96-74 (RH)  
INNER FWD ANGLE

109-0320-96  
POST ASSY  
(REF)

AFT BULKHEAD

FWD BULKHEAD

109-0320-96-71 (LH)  
109-0320-96-72 (RH)  
WEB

AREA OF MOST PROBABLE  
DEVELOPMENT OF CRACK

FWD CAP

109-0320-05  
BULKHEAD ASSY (REF)

FWD

INBOARD

109-0320-90  
LONGERON ASSY  
(REF)

109-0321-05  
SHELL ASSY (REF)

**DETAIL A**

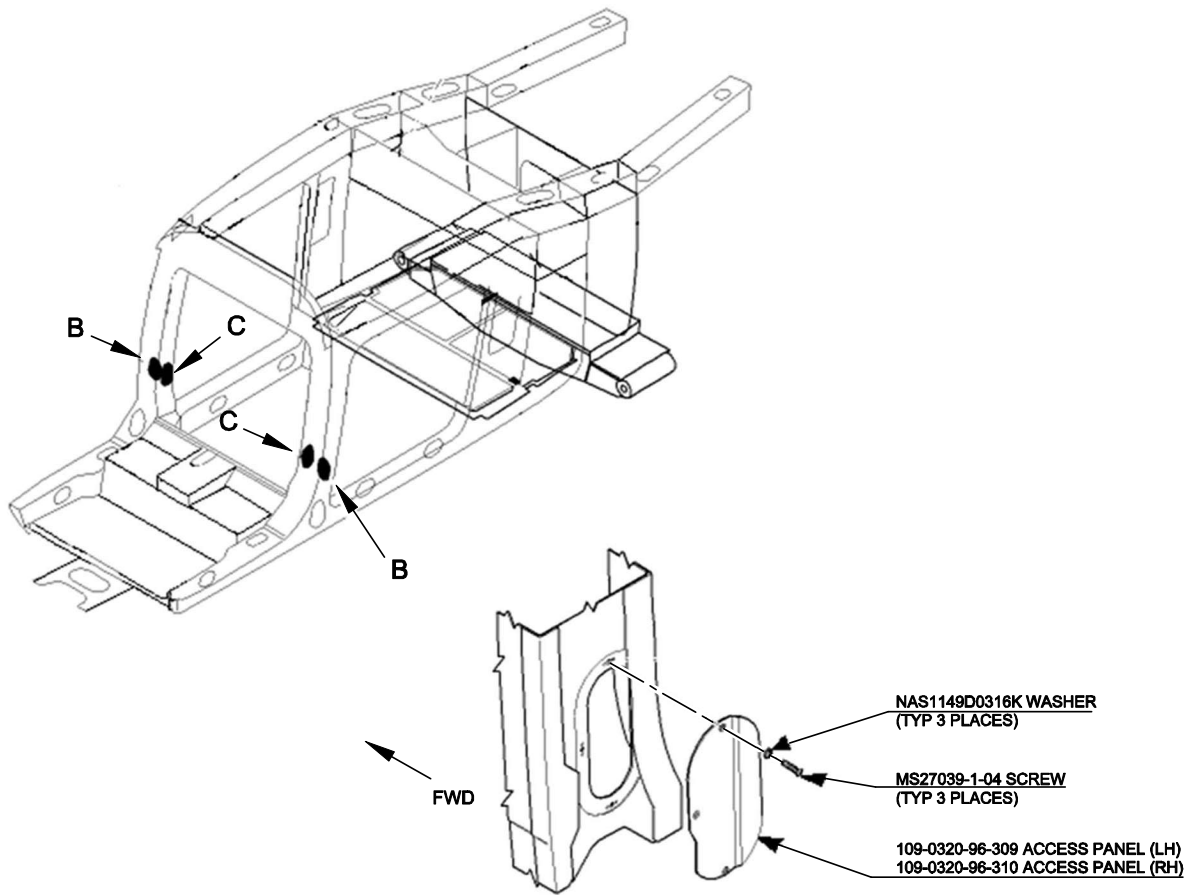
RIGHT SIDE SHOWN  
LEFT SIDE SYMMETRICAL

STRUCTURES AND SYSTEMS ARE PARTIALLY  
OMITTED FOR BETTER CLARITY PURPOSES

**Figure 1**

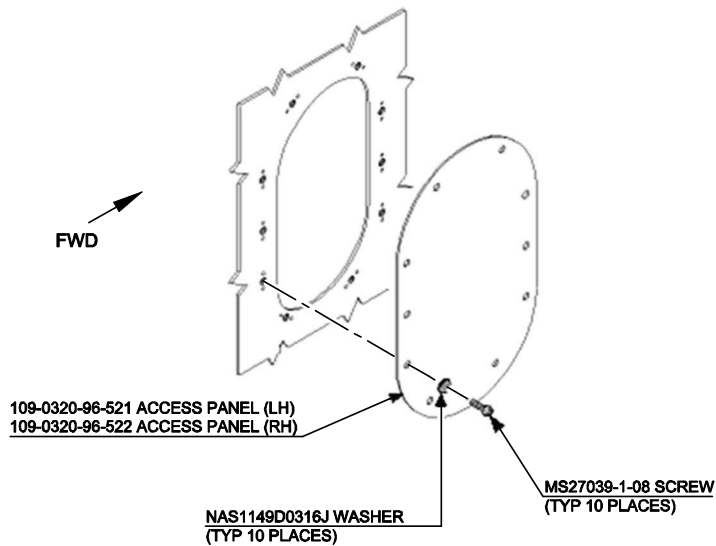
S.B. N°109EP-179 ALERT  
DATE: July 21, 2022  
REVISION: /





**DETAIL B**

STRUCTURES AND SYSTEMS ARE PARTIALLY  
OMITTED FOR BETTER CLARITY PURPOSES



**DETAIL C**

STRUCTURES AND SYSTEMS ARE PARTIALLY  
OMITTED FOR BETTER CLARITY PURPOSES

**Figure 2**

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.