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## BOLLETTINO TECNICO

The technical content of this document is approved  
under the authority of DOA nr. EASA.21J.005

N° **139-467**

DATE December 20, 2016

REV. /

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Compliance with  
this Bulletin is:

**COMPANY MANDATORY**

### **SUBJECT**

**TAIL ROTOR DRIVE LINE (TRDL) BEARING SUPPORT BRACKET**

### **REASON**

To check the proper installation and the condition of the TRDL bearing support bracket.

### **HELICOPTERS AFFECTED**

All AW139 helicopters installing bearing support assy P/N 3G6510A05232, part of TRDL P/N 4G6500A00212 and of tail rotor drive variant P/N 3G6506P00111.

### **COMPLIANCE**

Part I: within twenty-five (25) flight hours from the receipt of this Bollettino Tecnico and then every twenty-five (25) flight hours.

Part II: within three hundred (300) flight hours or six (6) months from the receipt of this Bollettino Tecnico, whichever occurs first.

### **DESCRIPTION**

Cases of cracks in the bearing support have been reported in service.

Part I of this Bollettino Tecnico introduces a periodic inspection to check tail rotor bearing support bracket for cracks and condition, while part II provides the

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An appropriate entry should be made in the aircraft log book upon accomplishment.  
If ownership of aircraft has changed, please, forward to new owner.

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instructions to perform a one-off torque check of the tail rotor bearing support bolts/nuts.

### **REQUIRED MANPOWER**

To comply with this Bollettino Tecnico the following Maintenance Man-Hours (MMH) are deemed necessary:

Part I: one (1) MMH;

Part II: three (3) MMH on helicopters S/N 41501 and subsequent and S/N 31700 and subsequent with through holes in STA 8947.66;  
one (1) MMH on other helicopters.

Maintenance-Man-Hours are based on hands-on time and can change with personnel and facilities available.

### **WARRANTY**

N.A.

### **REQUIRED MATERIALS**

#### **NOTE**

A bearing support bracket assy P/N 3G6510A05431 or P/N 3G6510A05432 can be ordered to Leonardo Helicopters (LHD) only in case replacement is requested by this Bollettino Tecnico.

The following materials are required for compliance with part II of this Bollettino Tecnico:

<b><u>P/N</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>Q.TY</u></b>	<b><u>NOTE</u></b>
MS24665-136	Cotter pin	4	Local Supply(1)

Moreover, the following consumable materials, or equivalent, are necessary to accomplish this Bollettino Tecnico:

<u>Spec./AW code number</u>	<u>DESCRIPTION</u>	<u>Q.TY</u>	<u>NOTE</u>
MS20995C32	Lockwire	AR	Local Supply (1)
TT-N-95 Type II cod. 531055030	Aliphatic naphtha (C059)	AR	Local Supply
Commercial	Clean, lint-free, cloth (C011)	AR	Local Supply
MIL-PRF-16173 grade 1 cod. 999999999000000191	Corrosion protection compound	AR	Local Supply
MIL-S-8802 class A cod. 900001586	Proseal 890A (C065)	AR	Local supply (2)
P-D-680, Type II cod. 505405407	Cleaning solvent, Ardrex 5503 (C010)	AR	Local Supply

**NOTES:**

- (1) Cotter pins are required for helicopters S/N 41501 and subsequent and S/N 31700 and subsequent with through holes in STA 8947.66. On other helicopters use lockwire P/N MS20995C32.
- (2) Proseal 700 P/N 500203980 (C032) may be used as an alternative.

**SPECIAL TOOLS**

the following special tools, or equivalent, are necessary to accomplish this Bollettino Tecnico:

<u>P/N</u>	<u>DESCRIPTION</u>	<u>Q.TY</u>	<u>NOTE</u>
RMGE-SL-06-2010	Platform, right (GG-02-00) or approved alternative	AR	
Commercial	Magnifying glass, 10-power	1	Local supply
Commercial	Strong light	1	Local supply
Commercial	Plastic scraper	1	Local supply

**WEIGHT AND BALANCE CHANGES**

N.A.

**REFERENCES**

- ✓ AW139 Aircraft Material Data Information (AMDI)
- ✓ AW139 Aircraft Maintenance Publication (AMP)

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- ✓ AW139 Illustrated Tools and Equipment Publication (ITEP)

### **PUBLICATIONS AFFECTED**

- ✓ AW139 Illustrated Parts Data (IPD)

**COMPLIANCE INSTRUCTIONS**

**WARNING**

CLEANING SOLVENT, ALIPHATIC NAPHTHA AND CORROSION PROTECTION COMPOUND ARE DANGEROUS MATERIALS. BEFORE YOU DO THIS PROCEDURE, MAKE SURE THAT YOU KNOW ALL THE SAFETY PRECAUTIONS AND FIRST AID INSTRUCTIONS FOR THESE MATERIALS:

**CAUTION**

During this procedure, do not touch the components made of metal with your bare hands. Put on applicable cotton gloves before you touch the components. Contamination from your bare hands will cause corrosion of the metals.

**Part I**

1. Prepare the helicopter for a safe ground maintenance, if necessary. Disconnect the battery and all the electrical power sources and/or the external power supply. Refer to Aircraft Maintenance Publication (AMP), see DM n° 39-A-00-20-00-00A-120A-A.
2. Put the platform (GG-02-00), or an approved alternative, adjacent to the right side of the fuselage.
3. Do a visual inspection of the bearing support bracket as follows:
  - 3.1 Remove access panel 310AL to get access to the TRDL. Refer to AMP, see DM n° 39-A-06-41-00-00A-010A-A.

**CAUTION**

Do not remove paint from the bearing support bracket to perform the inspection at following step 3.2. Even in case of cracks in the paint, replacement of the bearing support bracket is required.

**NOTE**

To clean the bearing support bracket to perform the inspection at following step 3.2, refer to figure 1 to identify the areas to be inspected. Remove sealing compound from those areas, if present.

- 3.2 With reference to figure 1, get access to the bearing support area and clean the bearing support bracket from dust, particles and lubricant using a clean, lint-free, cloth (C011) and aliphatic naphta (C059).

**CAUTION**

Make sure that the areas to be inspected are fully enlightened and perform the inspection close to the bearing support bracket.

- 3.3 Perform the visual inspection for cracks of the bearing support bracket according to figure 1, using a magnifying glass and a strong light.
4. If you do not find any crack, go to step 5, otherwise do as follows:

**NOTE**

To remove / install the bearing support:

- refer to AMP DM n° 39-B-65-11-11-00B-520A-A and DM n° 39-B-65-11-11-00B-720A-A for helicopters S/N 41501 and subsequent and S/N 31700 and subsequent with through holes in STA 8947.66;
- refer to AMP DM n° 39-B-65-11-11-00A-520A-A and DM n° 39-B-65-11-11-00A-720A-A on other helicopters.

- 4.1 Replace the bearing support bracket. Refer to AMP DM n° 39-B-65-11-11-

00A-530A-B and DM n° 39-B-65-11-11-00A-710A-B.

- 4.2 Return the defective bearing support bracket to LHD. Contact Product Support Engineering ([CSE.AW139.AW@leonardocompany.com](mailto:CSE.AW139.AW@leonardocompany.com)) for the appropriate instruction to return defective components.
5. Install access panel 310AL. Refer to AMP, see DM n° 39-A-06-41-00-00A-010A-A.
6. Remove the platform from the right side of the fuselage.
7. Return the helicopter to flight configuration and record for compliance with part I of this Bollettino Tecnico on the helicopter logbook.

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### Part II

1. Prepare the helicopter for a safe ground maintenance, if necessary. Disconnect the battery and all the electrical power sources and/or the external power supply. Refer to Aircraft Maintenance Publication (AMP), see DM n° 39-A-00-20-00-00A-120A-A.

#### NOTE

Following step 2 is applicable on helicopters S/N 41501 and subsequent and S/N 31700 and subsequent with through holes in STA 8947.66.  
Skip to step 3 for other helicopters.

2. With reference to figure 2 view A2, check the torque of the four nuts (1) that fix the bearing support bracket as follows:
  - 2.1 Open access panel 183AL or 184AR and remove access panel 190AL to get access to the work area.
  - 2.2 Get access to the four nuts (1) on the tail section ceiling through the baggage compartment.
  - 2.3 Remove the four cotter pins (2) that safety the four nuts (1) to the four bolts. Discard the cotter pins.
  - 2.4 Remove the sealing compound from the nuts (1) with the plastic scraper.
  - 2.5 Remove the remaining sealing compound using a clean, lint-free, cloth (C011) and solvent (C010).
  - 2.6 Check the torque of the four nuts. Make sure that the torque value is between 6.78 and 9.60 Nm (60.00 thru 85.00 lbf in).
  - 2.7 Report any under-torque / over-torque cases to LHD; contact Product Support Engineering ([CSE.AW139.AW@leonardocompany.com](mailto:CSE.AW139.AW@leonardocompany.com)). Safety the four nuts with four new cotter pins P/N MS24665-136.
  - 2.8 Seal nuts and bolts using Proseal 890A or Proseal 700.
  - 2.9 Apply corrosion protection compound MIL-PRF-16173 grade 1 on the exposed/not sealed parts of the nuts and cotter pins where applicable, ensuring to cover their surface completely with an homogenous and gap free layer. Make sure to guarantee 2 mm overlap over the mating surfaces.



- 2.10 Install access panel 190AL and close access panel 183AL or 184AR removed at step 2.1.
- 2.11 Skip to step 4.
3. With reference to figure 2, check the torque of the four bolts (3) that fix the bearing support bracket as follows:
  - 3.1 Put the platform (GG-02-00), or an approved alternative, adjacent to the right side of the fuselage.
  - 3.2 Remove access panel 310AL to get access to the work area.
  - 3.3 With reference to figure 2 view A1, remove the sealing compound from the bearing support bracket bolts (3) with the plastic scraper.
  - 3.4 Remove the remaining sealing compound using a clean, lint-free, cloth (C011) and solvent (C010).

**NOTE**

Record the lockwire installation scheme before performing following step 3.5.

- 3.5 Remove the lockwire from the four bolts (3).
- 3.6 Check the torque of the four bolts. Make sure that the torque value is between 6.78 and 9.60 Nm (60.00 thru 85.00 lbf in).
- 3.7 Report any under-torque / over-torque cases to LHD; contact Product Support Engineering ([CSE.AW139.AW@leonardocompany.com](mailto:CSE.AW139.AW@leonardocompany.com)).
- 3.8 Safety the four bolts with lockwire P/N MS20995C32 according to figure 2 view B.
- 3.9 Seal the bolts using Proseal 890A or Proseal 700.
- 3.10 Apply corrosion protection compound MIL-PRF-16173 grade 1 on the exposed/not sealed parts of the bolt heads and washers where applicable, ensuring to cover their surface completely with an homogenous and gap free layer. Make sure to guarantee 2 mm overlap over the mating surfaces.
- 3.11 Install access panel 310AL removed at step 3.2.
- 3.12 Remove the platform from the right side of the fuselage.
4. Return the helicopter to flight configuration and record for compliance with part II of this Bollettino Tecnico on the helicopter logbook.

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5. Send the attached compliance form to the following email box: [CSE.AW139.AW@leonardocompany.com](mailto:CSE.AW139.AW@leonardocompany.com). As an alternative, gain access to My Communications section on Leonardo AW Customer Portal and compile the “Technical Bulletin Application Communication”.

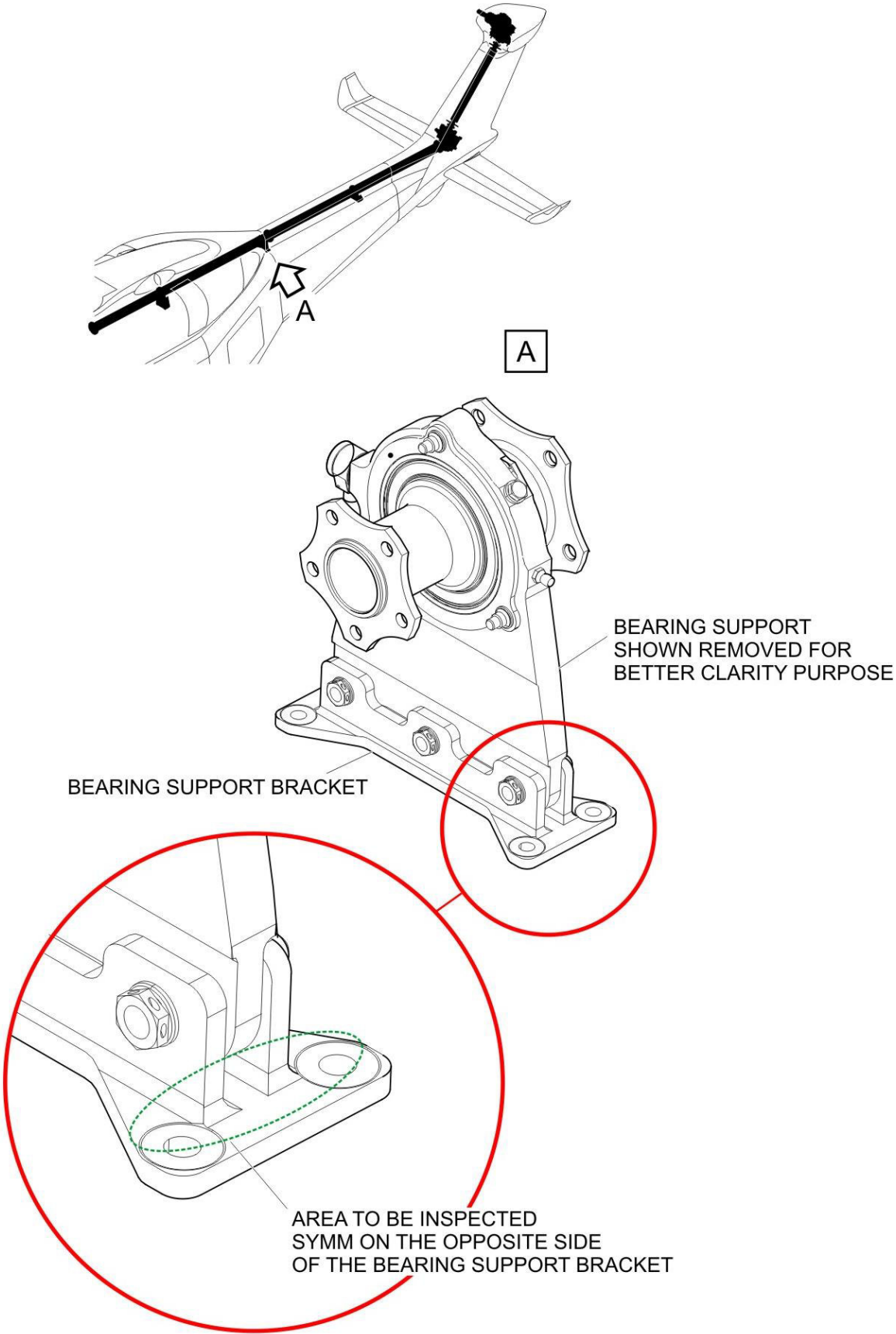


Figure 1

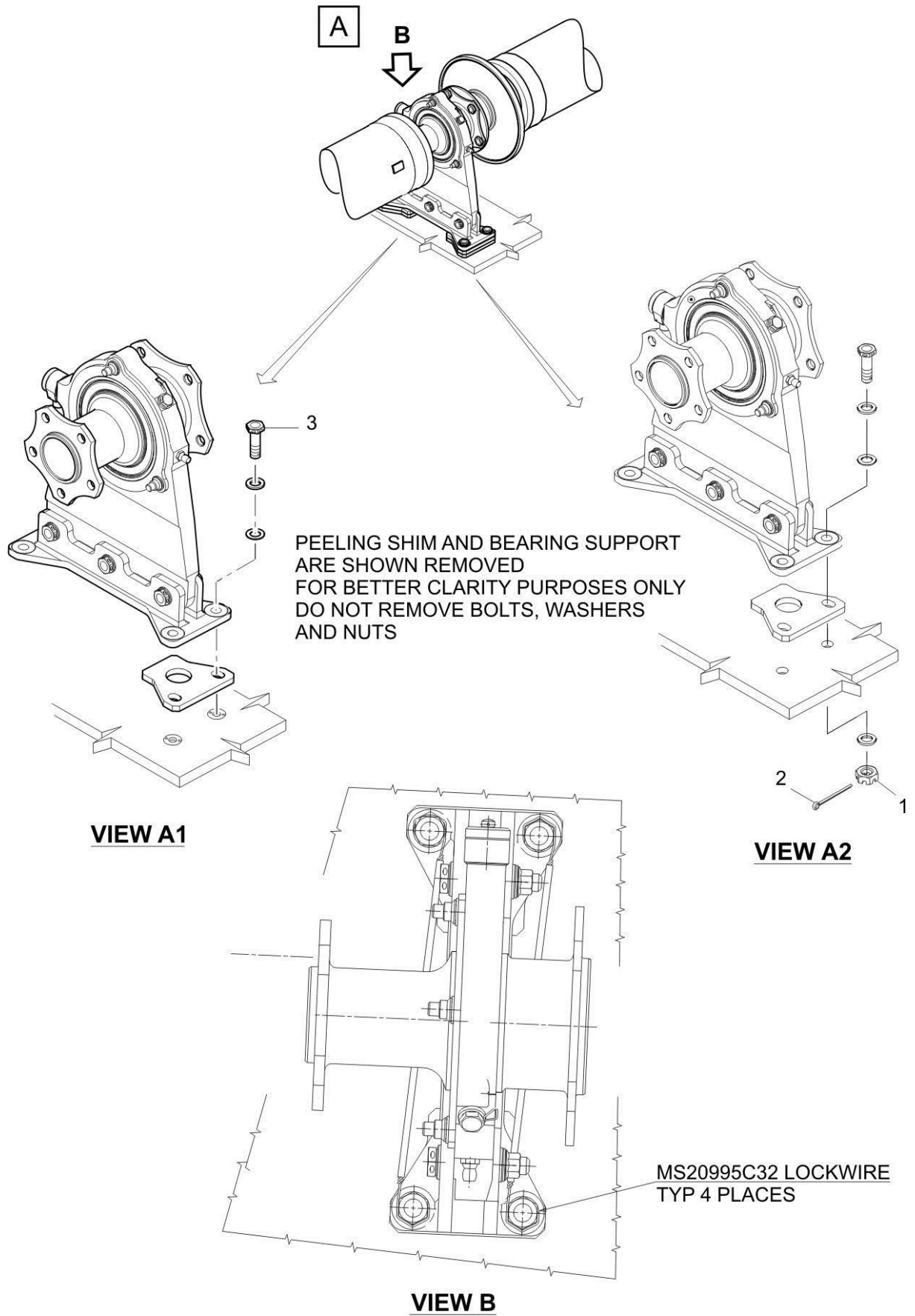


Figure 2

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>BOLLETTINO TECNICO COMPLIANCE FORM</b>	Date:																																																																																										
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