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AgustaWestland Products

SERVICE BULLETIN

N° 139-642

DATE: July 16, 2020

REV. : A - September 27, 2021

TITLE

ATA 64 – TAIL ROTOR HEAD INSPECTION AND MODIFICATION

REVISION LOG

Revision A is issued in order to cancel this Service Bulletin since the content of Part II has been introduced in AMPI Chapter 5 (task 64-38) and Part I has expired.

Helicopters that have complied with task 64-38 before the cancellation of this SB do not need any additional action, otherwise:

- For the first accomplishment of task 64-38 the compliance time must be scheduled starting from the date of the last inspection performed according to Part II of this Service Bulletin.
- For the subsequent applications of task 64-38 the inspections must be planned according to the aircraft maintenance scheduling.

1. PLANNING INFORMATION

A. EFFECTIVITY

Part I:

All AB139/AW139 helicopters.

Part II:

All AB139/AW139 helicopters already compliant with Part I of this SB.

B. COMPLIANCE

Part I:

Within and not later than fifty (50) flight hours or three (3) months, whichever occurs first after the issue of this Service Bulletin.

Part II:

Every fifty (50) flight hours after accomplishment of Part I.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin is issued in order to provide the necessary instructions on how to perform the T/R head inspection and the slippage marks installation.

E. DESCRIPTION

The Service Bulletin introduces the General Visual Inspection (GVI) to be performed on the T/R head installation P/N 3G6400A00113, P/N 4G6400A00112, P/N 3G6400A00112, P/N 4G6400A00111 and P/N 4G6400A00113.

Moreover, the Part I of the Service Bulletin provides instruction to apply two slippage marks between the hub, the upper conical ring and the washer using paint (the applicable colours are yellow, green or blue). The slippage marks shall be located as follows: one, near the scissor attachment and the other one at a 180-degree angle to the first one. The change objective is to early detect any rotation/movement between the conical ring, the hub and the washer. If findings occur the Special Detailed Inspection has to be performed.

Part II of this Service Bulletin provides the instructions for the inspection of the slippage marks and of the other components. If findings occur the Special Detailed Inspection has to be performed.

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, the following MMH are deemed necessary:

Part I: approximately four (4) MMH;

Part II: approximately four (4) MMH.

MMH are based on hands-on time and can change with 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

1) PUBLICATIONS

DATA MODULE		DESCRIPTION	PART
DM01	39-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance	I, II
DM02	39-A-64-21-01-00A-31BA-B	Tail rotor head - Special detailed inspection	I, II

2) ACRONYMS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
DM	Data Module

DOA	Design Organization Approval
EASA	European Aviation Safety Agency
GVI	General Visual Inspection
ITEP	Illustrated Tool and Equipment Publication
LHD	Leonardo Helicopters Division
MMH	Maintenance-Man-Hours
SDI	Special Detailed Inspection
TGB	Tail gearbox
T/R	Tail Rotor

3) ANNEX

N.A.

J. PUBLICATIONS AFFECTED

AW139 AMP

AW139 IPD

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:

#	Spec./LHD code number	DESCRIPTION	Q.TY	NOTE	PART
1	Commercial	Slippage mark, yellow	AR	(1)	I
2	Commercial	Slippage mark, green	AR	(1)	I
3	Commercial	Slippage mark, blue	AR	(1)	I
4	Commercial	Clean, lint-free, dry cloth (C011)	AR	(1)	I
5	P-D-680, Type II or MIL-PRF-680B, Type II	Cleaning solvent (C010)	AR	(1)	I

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

Refer to ITEP for the special tools required to comply with the AMP DM 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 has been removed to gain access to the modification area and adequately protect them until their later re-use.

b) Protect properly all those equipment not removed from area affected by the modification during installation procedure.

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

d) All lengths are in mm.

PART I

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. With reference to Figure 1, gain access to the T/R head installation.
3. With reference to Figure 1 Detail A, examine the presence and the condition of the safety wire (C014) P/N MS20995C32 on the n°8 nuts P/N NAS509-4 and n°8 bolts P/N 3G6420A01451. In case of findings go to step 8.
4. With reference to Figure 1 Detail A, examine the presence and the condition of the washer P/N 3G6420A01251. In case of findings go to step 8.
5. With reference to Figure 2 View B, make sure that there is an equal gap between the ends of the bottom conical half rings P/N 3G6420A00451. In case of findings go to step 8.
6. With reference to Figures 1 and 2, perform the operational check of the T/R axial movement, by manually moving it, to detect potential play of the T/R on TGB shaft. In case of findings go to step 8.

NOTE

Perform step 7 only if the slippage marks shown in Figure 3 are already applied. Otherwise go to step 9 to apply slippage marks.

7. With reference to Figure 3 View C and View D, examine the condition of slippage marks and verify misalignment of the components monitored with slippage marks. In case of findings go to step 8.

NOTE

Perform step 8 only in case of findings during the execution of steps 3 thru 7. Otherwise go to step 9.

8. In accordance with the applicable steps of AMP DM 39-A-64-21-01-00A-31BA-B perform the SDI of the tail rotor head.

NOTE

Perform step 9 only if the slippage marks shown in Figure 3 are not already applied. Otherwise go to step 10.

NOTE

During the application of slippage marks, the relevant blade must face upwards to allow the paint to drip by gravity.

9. With reference to Figure 3, perform the application of slippage marks as described in the following procedure:

   9.1 With reference to Figure 3 View C and View D, clean the surface indicated with a clean cloth (C011) soaked with cleaning solvent (C010). Let the solvent air dry.

NOTE

Use commercially available varnish such as thread securing/sealing product or equivalent alternatives. Let dry for one hour at 25°C, or as otherwise specified by product specification.

   9.2 With reference to Figure 3 View C, apply n°1 slippage mark with a colour between the hub, the top conical ring P/N 3G6420A00551 and the washer P/N 3G6420A01251 in the indicated position using the applicable paint colour: yellow, green or blue.

   9.3 With reference to Figure 3 View D, turn the tail rotor blade of 180° and apply n°1 slippage mark with a colour between the hub, the top conical ring P/N 3G6420A00551 and the washer P/N 3G6420A01251 in the indicated position using the applicable paint colour: yellow, green or blue.

10. Return the helicopter to flight configuration and record for compliance with Part I of this Service Bulletin on the helicopter logbook.

11. Send the attached compliance form to the following mail box:

    engineering.support.lhd@leonardocompany.com

    As an alternative, gain access to My Communications section on Leonardo WebPortal and

compile the “Service Bulletin Application Communication”.

PART II

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. With reference to Figure 1 Tail Rotor, gain access to the T/R head installation and perform the inspection as follows:
   2.1 With reference to Figure 3 View C and View D, examine the condition of slippage marks and verify misalignment of the components monitored with slippage marks. In case of findings go to step 3.
   2.2 With reference to Figures 1 and 2, examine the components of the T/R head as described in the following procedure:
      2.2.1 With reference to Figure 1 Detail A, examine the presence and the condition of the safety wire (C014) P/N MS20995C32 on the n°8 nuts P/N NAS509-4 and n°8 bolts P/N 3G6420A01451. In case of findings go to step 3.
      2.2.2 With reference to Figure 1 Detail A, examine the presence and the condition of the washer P/N 3G6420A01251. In case of findings go to step 3.
      2.2.3 With reference to Figure 2 View B, make sure that there is an equal gap between the ends of the bottom conical half rings P/N 3G6420A00451. In case of findings go to step 3.
      2.2.4 With reference to Figures 1, 2 and 3, perform the operational check of the T/R axial movement, by manually moving it, to detect potential play of the T/R on TGB shaft. In case of findings go to step 3.

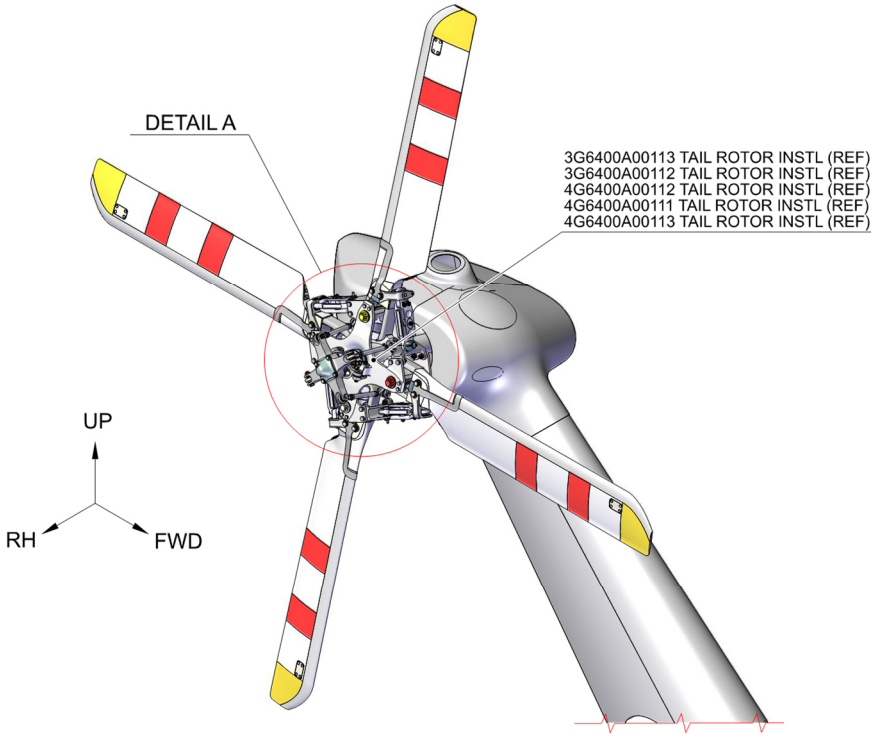
NOTE

Perform step 3 only in case of findings during the execution of step 2. Otherwise go to step 4.

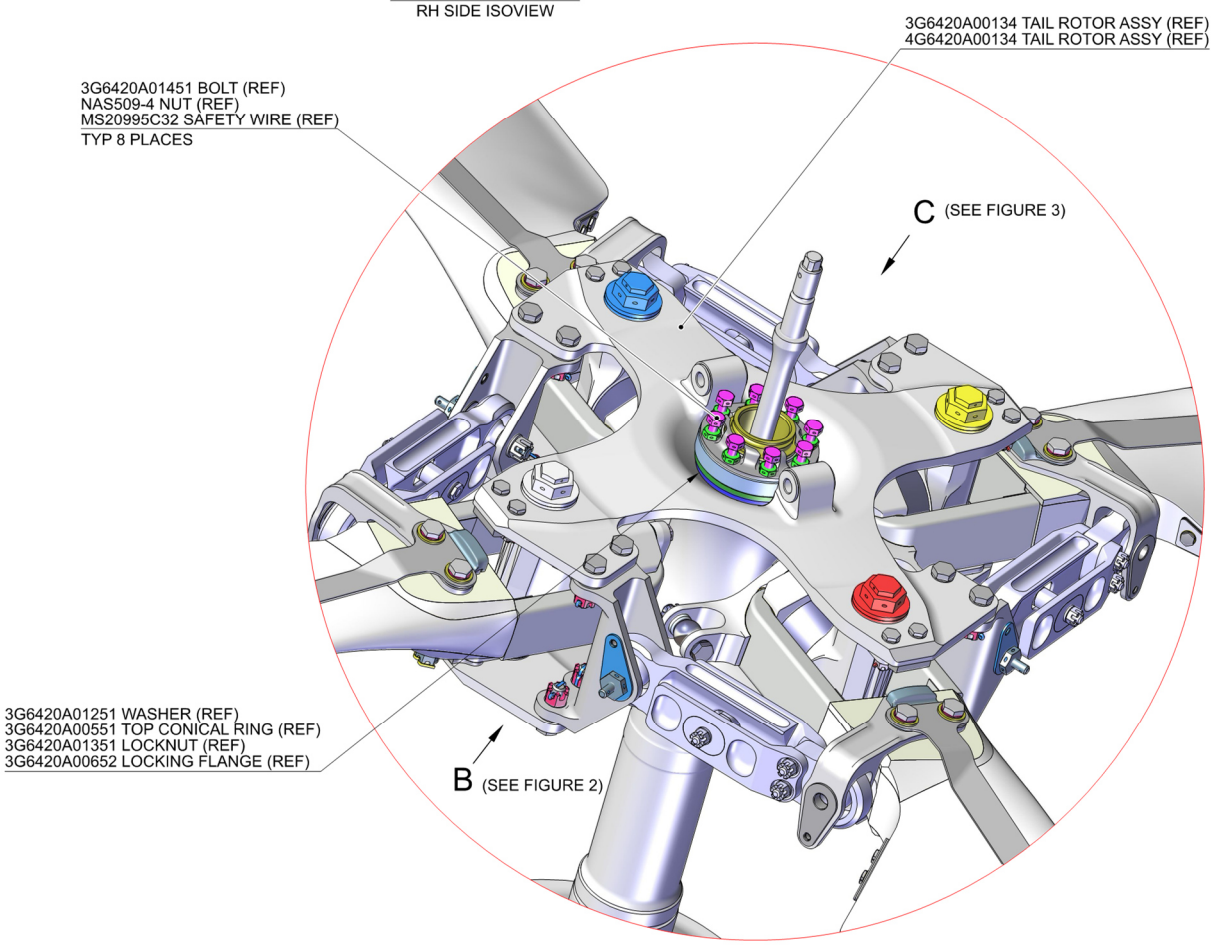
3. In accordance with the applicable steps of AMP DM 39-A-64-21-01-00A-31BA-B perform the SDI of the tail rotor head.
4. Return the helicopter to flight configuration and record for compliance with Part II of this Service Bulletin on the helicopter logbook.
5. Send the attached compliance form to the following mail box:

   engineering.support.lhd@leonardocompany.com

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

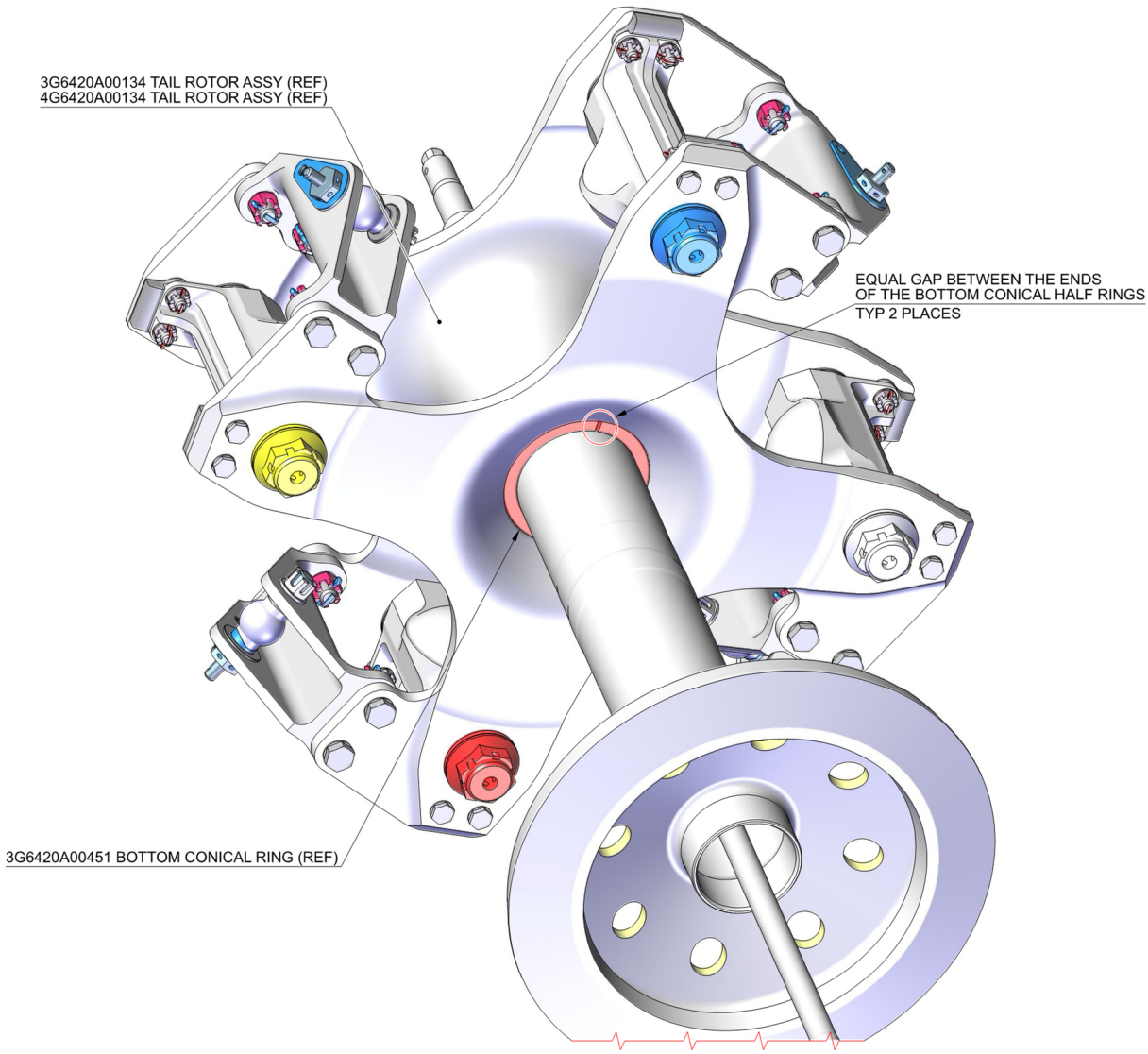


TAIL ROTOR
RH SIDE ISOVIEW



DETAIL A
TAIL ROTOR CONTROL INSTL OMITTED FOR BETTER CLARITY PURPOSE

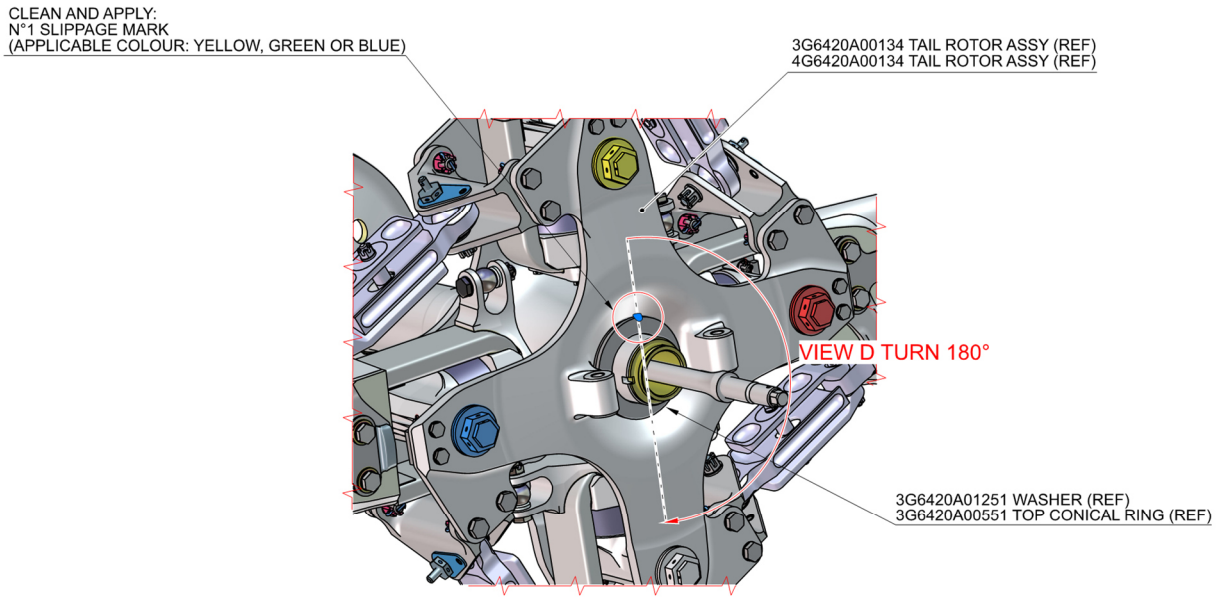
Figure 1



VIEW B

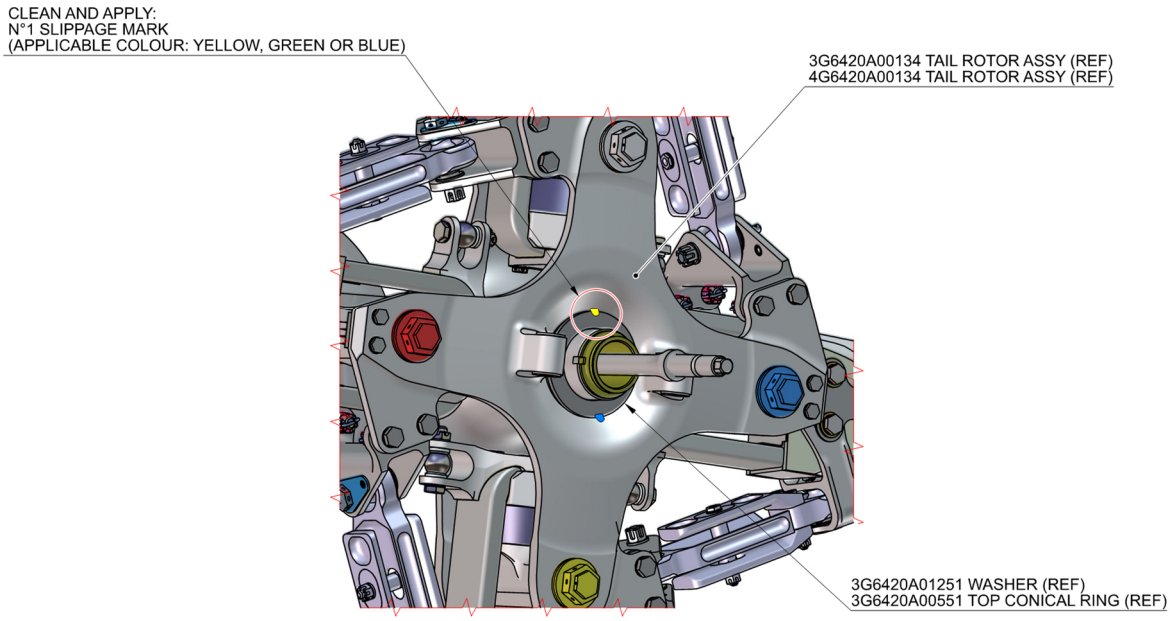
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 1)

Figure 2



VIEW C

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 1)



VIEW D

ROTATED 180°

Figure 3

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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.