



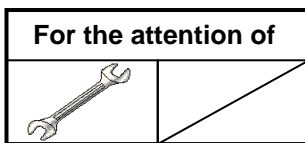
# EMERGENCY ALERT SERVICE BULLETIN

### PROTECTIVE MEASURE

#### LIMITATIONS

**Tail Gear Box (TGB) P/Nos. 365A33-6005-09 and 365A33-6005-10**

ATA 65



HELICOPTER(S) CONCERNED	NUMBER	Version(s)	
		Civil	Military
AS365	01.00.71	N, N1, N2, N3	F, Fi, Fs, K, K2
AS565	01.00.24		CA, MA, MB, MBe, SA, SB, UB
EC155	04A016	B, B1	
SA366	01.31		GA

Revision No.	Date of issue
Revision 0	2019-10-24
Revision 1	2019-12-11
Revision 2	2020-03-25
Revision 3	2021-06-14

#### **Summary:**

Airbus Helicopters has recently been informed of a case of chip detection on a control rod double bearing of a TGB P/N 365A33-6005-09.

The examination of this bearing showed that in case of damage, the degradations spread more quickly than initially expected.

Complementary tests are ongoing to fully define the bearing degradation scenario.

Pending these results and as a precautionary measure, Airbus Helicopters introduces protective measures to reinforce the monitoring of this bearing.

#### **Reason for last revision:**

Following additional tests and their analysis, the purpose of revision 3 of this ALERT SERVICE BULLETIN is to reinforce the monitoring criteria of the double bearing.

#### **Compliance:**

Compliance with this ALERT SERVICE BULLETIN is mandatory.

### 1. PLANNING INFORMATION

#### 1.A. EFFECTIVITY

##### 1.A.1. Helicopters/installed equipment or parts

Helicopters equipped with a Tail Gear Box (TGB) P/N 365A33-6005-09 or 365A33-6005-10.

#### **NOTE**

*Refer to the Log Card (FM) of the TGB.*

##### 1.A.2. Non-installed equipment or parts

Tail Gear Box (TGB) P/Nos. 365A33-6005-09 and 365A33-6005-10.

#### 1.B. ASSOCIATED REQUIREMENTS

Not applicable.

#### 1.C. REASON

##### Revision 0

Airbus Helicopters has recently been informed of a case of chip detection on a control rod double bearing of a TGB P/N 365A33-6005-09.

The examination of this bearing showed that in case of damage, the degradations spread more quickly than initially expected.

Complementary tests are ongoing to fully define the bearing degradation scenario.

Pending these results and as a precautionary measure, Airbus Helicopters introduces protective measures to reinforce the monitoring of this bearing.

##### Revision 1

The purpose of revision 1 is to improve the washing procedure for the double bearing of the TGB control rod and to specify the commercial conditions related to the return of the bearings in paragraph 2.D.

##### Revision 2

Following experience feedback (Flight Hours (FH) cumulated and chip events) which allowed Airbus Helicopters to review the global detection performances of the bearing degradation, Airbus Helicopters is reducing the interval of the chip detector inspection.

The purpose of revision 2 is to introduce this reduction of interval on the chip detector to 20 FH for bearings with less than 250 FH and 10 FH for bearing with more than 250 FHs to improve detection of the particles. This protective measure is a temporary measure.

Airbus Helicopters takes advantage of this revision to modify Appendix 4.A to mention the type of oil used and its manufacturer.

### Revision 3

Following additional tests and their analysis, the purpose of revision 3 of this ALERT SERVICE BULLETIN is to reinforce the monitoring criteria of the double bearing.

## 1.D. DESCRIPTION

This ALERT SERVICE BULLETIN consists in:

- introducing the periodic replacement of the TGB double bearing every 500 FH,
- introducing a reduced interval for the check of the chip detector and new interpretation criteria every 10 FH,
- introducing specific maintenance for double bearings with a TSN of more than 500 FH, pending their replacement only for the first replacement of the double bearing.

## 1.E. COMPLIANCE

### 1.E.1. Compliance at H/C manufacturer level

#### 1.E.1.a. Helicopters/installed equipment or parts:

Comply with paragraph 1.E.2.a.

#### 1.E.1.b. Non-installed equipment or parts:

Comply with paragraph [1.E.2.b.](#)

### 1.E.2. Compliance in service

#### 1.E.2.a. Helicopters/installed equipment or parts:

##### **1) For bearings with a TSN that is strictly below 500 FH**

##### **a) For helicopters in close monitoring as per Work Card 05-53-00-201 (MET) or Task 05-50-01-211 (AMM):**

- Comply with the flow chart as per paragraph [3.B.2.](#) for the particles collected before the issue of this ALERT SERVICE BULLETIN and for the particles added to the collection during the close monitoring, if any.

Then,

- At the end of the close monitoring period:
- comply with the flow chart as per paragraph 3.B.2. **at intervals that do not exceed 10 FH.**

And,

- For the first replacement of the double bearing:
  - . Comply with paragraph 1.E.2.a.2. when the double bearing **reaches 500 FH.**
- For the next replacement of the double bearing:
  - . Replace the double bearing as per Work Card 65-21-00-702 (MRM) or as per Task 65-20-01-961 (AMM) **at intervals that do not exceed 500 FH.**

### **b) For helicopters not in close monitoring:**

- For double bearings with less than 250 FH:
  - . comply with the flow chart as per paragraph 3.B.2. **within 10 FH** from receipt of revision 3 of this ALERT SERVICE BULLETIN issued on the date indicated in the page footer without exceeding 20 FH since the last inspection of the TGB chip detector.
- For double bearings with 250 FH or more:
  - . comply with the flow chart as per paragraph [3.B.2.](#) without exceeding 10 FH since the last inspection of the TGB chip detector.

Then,

- Comply with the flow chart as per paragraph 3.B.2. **at intervals that do not exceed 10 FH.**

And,

- For the first replacement of the double bearing:
  - . Comply with paragraph [1.E.2.a.2.](#) when the double bearing **reaches 500 FH.**
- For the next replacement of the double bearing:
  - . Replace the double bearing as per Work Card 65-21-00-702 (MRM) or as per Task 65-20-01-961 (AMM) **at intervals that do not exceed 500 FH.**

### **2) For bearings with a TSN that is greater than or equal to 500 FH**



#### **CAUTION**

**FOR HELICOPTERS IN CLOSE MONITORING AS PER WORK CARD 05-53-00-201 (MET) OR TASK 05-50-01-211 (AMM):  
COMPLY WITH THE FLOW CHART AS PER PARAGRAPH [3.B.2.](#) FOR THE PARTICLES COLLECTED BEFORE THE ISSUE OF THIS ALERT SERVICE BULLETIN AND FOR THE PARTICLES ADDED TO THE COLLECTION DURING THE CLOSE MONITORING IF ANY.**

- Comply with paragraph [3.B.3.](#) **within 10 FH** from receipt of revision 3 of this ALERT SERVICE BULLETIN or from the moment the bearing has reached 500 FH, except if already complied with during revision 0 or 1 or 2.

Then,

- Replace the double bearing as per Work Card 65-21-00-702 (MRM) or as per Task 65-20-01-961 (AMM) **within 110 FH** from receipt of revision 0 of this ALERT SERVICE BULLETIN or from the moment the bearing has reached 500 FH without exceeding December 31, 2021.

**And, pending the replacement of the bearing:** (2 possibilities)



### **CAUTION**

**TO CHANGE FROM AN INSPECTION AS PER CHOICE 2 TO AN INSPECTION AS PER CHOICE 1, A WASHING OPERATION AS PER PARAGRAPH 3.B.3. IS MANDATORY BEFORE CONTINUING FLIGHTS.**

Either (choice 1):

- . Comply with paragraph [3.B.2.](#) at intervals that do not exceed **10 FH.**
- . Comply with paragraph [3.B.3.](#) at intervals that do not exceed **30 FH.**

Or (choice 2):

- . Comply with paragraph 3.B.2. **at each ALF check without exceeding 5 FH.**

Then,

- Following the first replacement of the double bearing:
  - . Replace the double bearing as per Work Card 65-21-00-702 (MRM) or as per Task 65-20-01-961 (AMM) **at intervals that do not exceed 500 FH**

**And,**

- comply with paragraph [3.B.2.](#) **at intervals that do not exceed 10 FH.**

#### 1.E.2.b. Non-installed equipment or parts

On a TGB with a double bearing with a TSN that is greater than or equal to 500 FH, replace the double bearing as per Work Card 65-21-00-702 (MRM) or as per Task 65-20-01-961 (AMM) before installing the TGB on the helicopter.

### **1.F. APPROVAL**

#### Approval of modifications:

Not applicable.



#### Approval of this document:

The technical information contained in this ALERT SERVICE BULLETIN Revision 0 was approved on October 24, 2019 under the authority of EASA Design Organization Approval No. 21J.700 for civil version helicopters subject to an Airworthiness Certificate.

The technical information contained in this ALERT SERVICE BULLETIN Revision 0 was approved on October 24, 2019 by the Airbus Helicopters Airworthiness Department for export military versions.

The technical information contained in this ALERT SERVICE BULLETIN Revision 0 was approved on October 24, 2019 under the prerogatives of the recognition of design capability FRA21J-002-DGA for French Government helicopters.

The technical information contained in this ALERT SERVICE BULLETIN Revision 1 was approved on December 10, 2019 under the authority of EASA Design Organization Approval No. 21J.700 for civil version helicopters subject to an Airworthiness Certificate.

The technical information contained in this ALERT SERVICE BULLETIN Revision 1 was approved on December 10, 2019 by the Airbus Helicopters Airworthiness Department for export military versions.

The technical information contained in this ALERT SERVICE BULLETIN Revision 1 was approved on December 10, 2019 under the prerogatives of the recognition of design capability FRA21J-002-DGA for French Government helicopters.

The technical information contained in this ALERT SERVICE BULLETIN Revision 2 was approved on March 24, 2020 under the authority of EASA Design Organization Approval No. 21J.700 for civil version helicopters subject to an Airworthiness Certificate.

The technical information contained in this ALERT SERVICE BULLETIN Revision 2 was approved on March 24, 2020 by the Airbus Helicopters Airworthiness Department for export military versions.

The technical information contained in this ALERT SERVICE BULLETIN Revision 2 was approved on March 24, 2020 under the prerogatives of the recognition of design capability FRA21J-002-DGA for French Government helicopters.

The technical information contained in this ALERT SERVICE BULLETIN Revision 3 was approved on June 09, 2021 under the authority of EASA Design Organization Approval No. 21J.700 for civil version helicopters subject to an Airworthiness Certificate.

The technical information contained in this ALERT SERVICE BULLETIN Revision 3 was approved on June 09, 2021 by the Airbus Helicopters Airworthiness Department for export military versions.

The technical information contained in this ALERT SERVICE BULLETIN Revision 3 was approved on June 09, 2021 under the prerogatives of the recognition of design capability FRA21J-002-DGA for French Government helicopters.

### 1.G. MANPOWER



For compliance with this ALERT SERVICE BULLETIN, Airbus Helicopters recommends the following staff qualifications:

Qualification: 1 Mechanical Technician.



The Estimated Man-hours are indicated for reference purposes only and based on a standard helicopter configuration.

#### Estimated Man-hours:

- approximately 1 hour to comply with paragraph [3.B.2.](#) (excluding metallurgical analysis and if no particles are found),
- approximately 1 day to comply with paragraph [3.B.3.](#),
- approximately 2 days to replace the double bearing.

### 1.H. WEIGHT AND BALANCE

Not applicable.

### 1.I. POWER CONSUMPTION

Not applicable.

### 1.J. SOFTWARE UPGRADES/UPDATES

Not applicable.

### 1.K. REFERENCES

The following documents are required for compliance with this ALERT SERVICE BULLETIN.

For AS365 helicopters, all versions:

- Maintenance Manual (MET):
  - . 05-53-00-201 - Action to be taken after discovery of magnetic particles on the MGB magnetic plug and/or in the MGB oil filter - Following operating incidents
  - . 12-00-00-601 - Check of a magnetic component - Routine servicing
- Mechanical Repair Manual (MRM):
  - . 65-21-00-701 - Removal - Installation of control rod assy - Tail gear box
  - . 65-21-00-702 - Replacement of control rod bearing - Tail gear box
- Standard Practices Manual (MTC):
  - . 20-04-01-102 - Use of cleaning products on individual parts and on helicopters - Cleaning
  - . 20-08-01-601 - Monitoring of lubricating oil contamination on mechanical assemblies equipped with magnetic plugs - Periodical monitoring of lubricating oil checking elements

For AS565 helicopters, all versions:

- Maintenance Manual (MET):
  - . 05-53-00-201 - Action to be taken after discovery of magnetic particles on the MGB magnetic plug and/or in the MGB oil filter - Following operating incidents
  - . 12-00-00-601 - Check of a magnetic component - Routine servicing
- Mechanical Repair Manual (MRM):
  - . 65-21-00-701 - Removal - Installation of control rod assy - Tail gear box
  - . 65-21-00-702 - Removal - Installation of control rod assy - Tail gear box
- Standard Practices Manual (MTC):
  - . 20-04-01-102 - Use of cleaning products on individual parts and on helicopters - Cleaning
  - . 20-08-01-601 - Monitoring of lubricating oil contamination on mechanical assemblies equipped with magnetic plugs - Periodical monitoring of lubricating oil checking elements

For EC155 helicopters, versions B and B1:

- Aircraft Maintenance Manual (AMM):
  - . 05-50-01-211 - Steps to do when you Find Particles on the Magnetic Plugs and/or on the Oil Filter of the Gear Box
  - . 12-20-00-211 - Inspection of the magnetic plugs
  - . 65-20-01-066 - Removal / Installation - Control Shaft / Rod Assembly of the TGB
  - . 65-20-01-961 - Replacement of the Tail Rotor's Control Shaft Bearing

- Standard Practices Manual (MTC):
  - . 20-04-01-102 - Use of cleaning products on individual parts and on helicopters - Cleaning
  - . 20-08-01-601 - Monitoring of lubricating oil contamination on mechanical assemblies equipped with magnetic plugs - Periodical monitoring of lubricating oil checking elements

For SA366 helicopters, version GA:

- Maintenance Manual (MET):
  - . 05-53-00-201 - Action to be taken after discovery of magnetic particles on the MGB magnetic plug and/or in the MGB oil filter - Following operating incidents
  - . 12-00-00-601 - Check of a magnetic component - Routine servicing
- Mechanical Repair Manual (MRM):
  - . 65-21-00-701 - Removal - Installation of control rod assy - Tail gear box
  - . 65-21-00-702 - Removal - Installation of control rod assy - Tail gear box
- Standard Practices Manual (MTC):
  - . 20-04-01-102 - Use of cleaning products on individual parts and on helicopters - Cleaning
  - . 20-08-01-601 - Monitoring of lubricating oil contamination on mechanical assemblies equipped with magnetic plugs - Periodical monitoring of lubricating oil checking elements

For all helicopters, all versions:

- Information Notice (IN):
  - . 3481-I-00: The Marketplace: an AirbusWorld eOrdering service
  - . 3643-I-00: Introduction of the digital Service Bulletin reporting R-Text

### 1.L. OTHER AFFECTED PUBLICATIONS

Not applicable.

### 1.M. PART INTERCHANGEABILITY OR MIXABILITY

Not applicable.



## 2. EQUIPMENT OR PARTS INFORMATION

### 2.A. EQUIPMENT OR PARTS: PRICE - AVAILABILITY - PROCUREMENT

#### Price

For any information on the price of modification kits and/or components or for assistance, contact the Airbus Helicopters Network Sales and Customer Relations Department.

#### Availability

Delivery lead times will be indicated by the Sales and Customer Relations Department on the operator's request.

#### Procurement

Order the required quantity from the Airbus Helicopters Network Sales and Customer Relations Department:

Airbus Helicopters  
Etablissement de Marignane  
Direction Ventes et Relations Client  
13725 MARIIGNANE CEDEX  
FRANCE

#### **NOTE 1**

*On the purchase order, please specify the mode of transport, the destination and the serial numbers of the helicopters to be modified.*

#### **NOTE 2**

*For ALERT SERVICE BULLETINS, order by:  
Telex: HELICOP 410 969F  
Fax: +33 (0)4.42.85.99.96.*

### 2.B. LOGISTIC INFORMATION

For any information concerning modification kits and/or components or for assistance, contact the Airbus Helicopters Network Sales and Customer Relations Department.

### 2.C. EQUIPMENT OR PARTS REQUIRED PER HELICOPTER/COMPONENT

Kits to be ordered for one helicopter or one assembly:

Designation	Qty	New P/N	Item	Old P/N	→	Instruction
Double bearing (FAG) Or Double bearing (SNR)	1	704A33-651-245	1	/		Replace
	1	704A33-651-246	1	/		Replace

### Consumables to be ordered separately:

As per the Work Cards and Tasks indicated in this ALERT SERVICE BULLETIN and the list below:

<u>Designation</u>	<u>Qty</u>	<u>Consumable P/N</u>	<u>CM</u>	<u>Item</u>
Cleaning agent (White Spirit)	A/R	DCSEA 602/B	CM 208	2

You can order the consumables from the AirbusWorld Marketplace through e-ordering (IN No. 3481-I-00).

If you cannot get access to e-ordering, please contact your Logistic Focal Point.

## 2.D. EQUIPMENT OR PARTS TO BE RETURNED

- Place the double bearing into a package.
- Send the package to the following address:

Airbus Helicopters  
Aéroport Marseille Provence  
RETEX Factory - roulement double de BTA  
MAH09MGA2 - B1 - LES BORIES  
SOUS SOL - ARRIVEE  
13725 Marignane CEDEX  
FRANCE

Add a label (format A4) on the package, which specifies:

**UNSERVICABLE FOR EXPERTISE  
-ESETM-**

Recipient: RETEX FACTORY  
Contact: [support.technical-dyncomp.ah@airbus.com](mailto:support.technical-dyncomp.ah@airbus.com)

### **NOTE 3**

*The expenses related to the return of the bearing to Airbus Helicopters are supported by Airbus Helicopters.*

And,

- Send APPENDIX 4. to the Airbus Helicopters Technical Support:

Fax: +33 (0)4.42.85.99.66

E-mail: [support.technical-dyncomp.ah@airbus.com](mailto:support.technical-dyncomp.ah@airbus.com)

### 3. ACCOMPLISHMENT INSTRUCTIONS

#### 3.A. GENERAL

Not applicable.

#### 3.B. WORK STEPS

##### 3.B.1. Preliminary steps

Not applicable.

##### 3.B.2. Check of the manual chip detector or chip detector with electrical indicating of the TGB



#### CAUTION

**IN THE FLOW CHART, THE ABRASION PARTICLES (CLASS g AS PER MTC) MUST BE TAKEN INTO ACCOUNT IN ADDITION TO THE PARTICLE TYPES USUALLY TAKEN INTO ACCOUNT.**

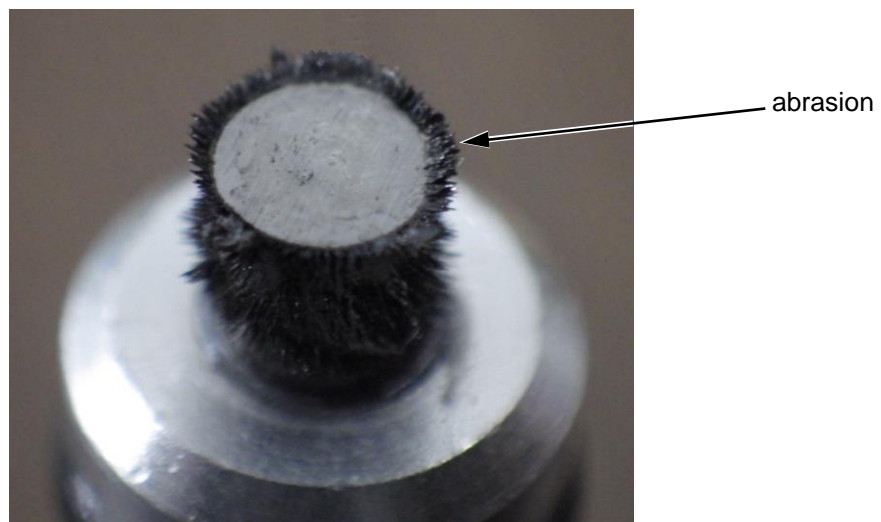
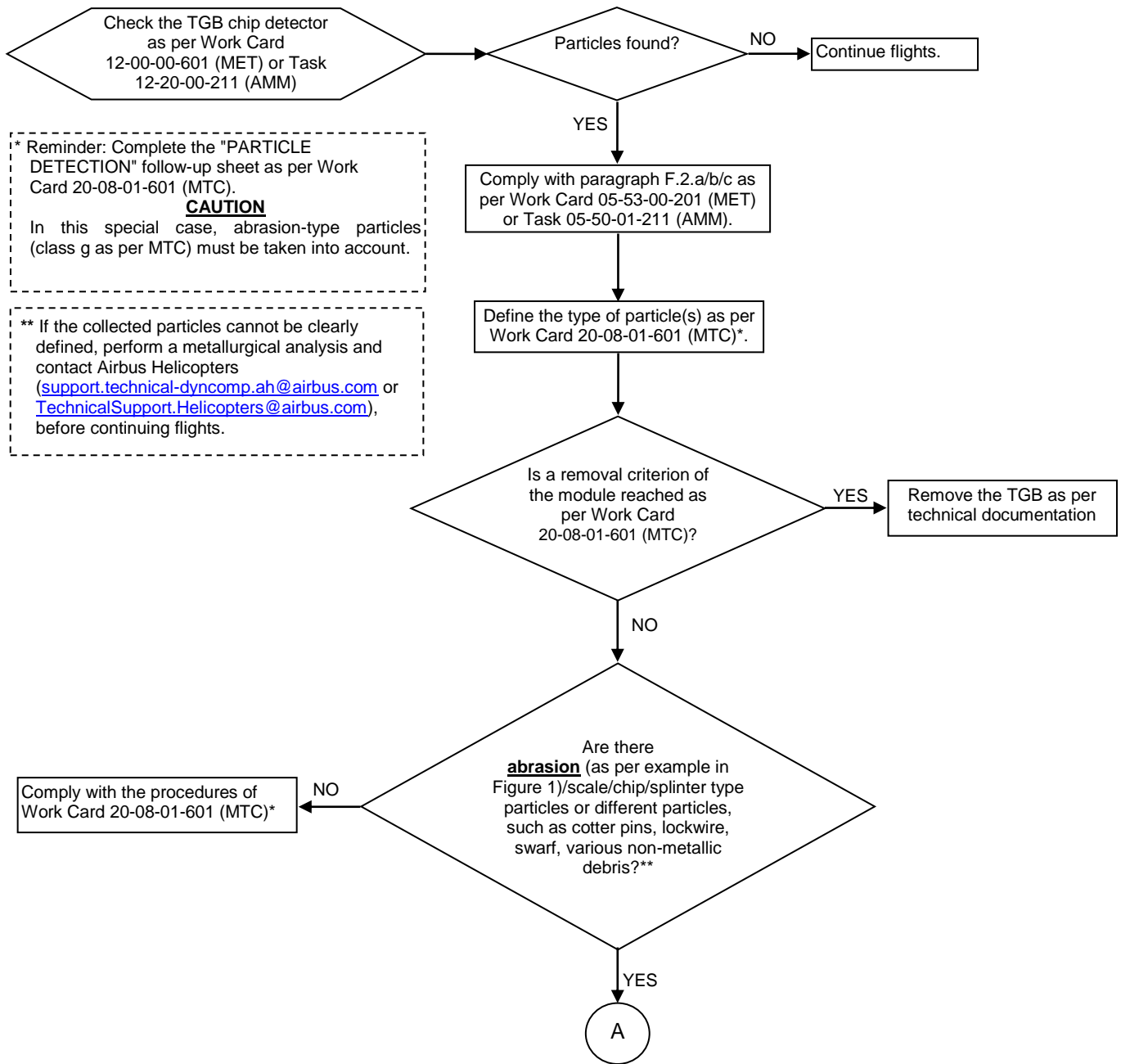
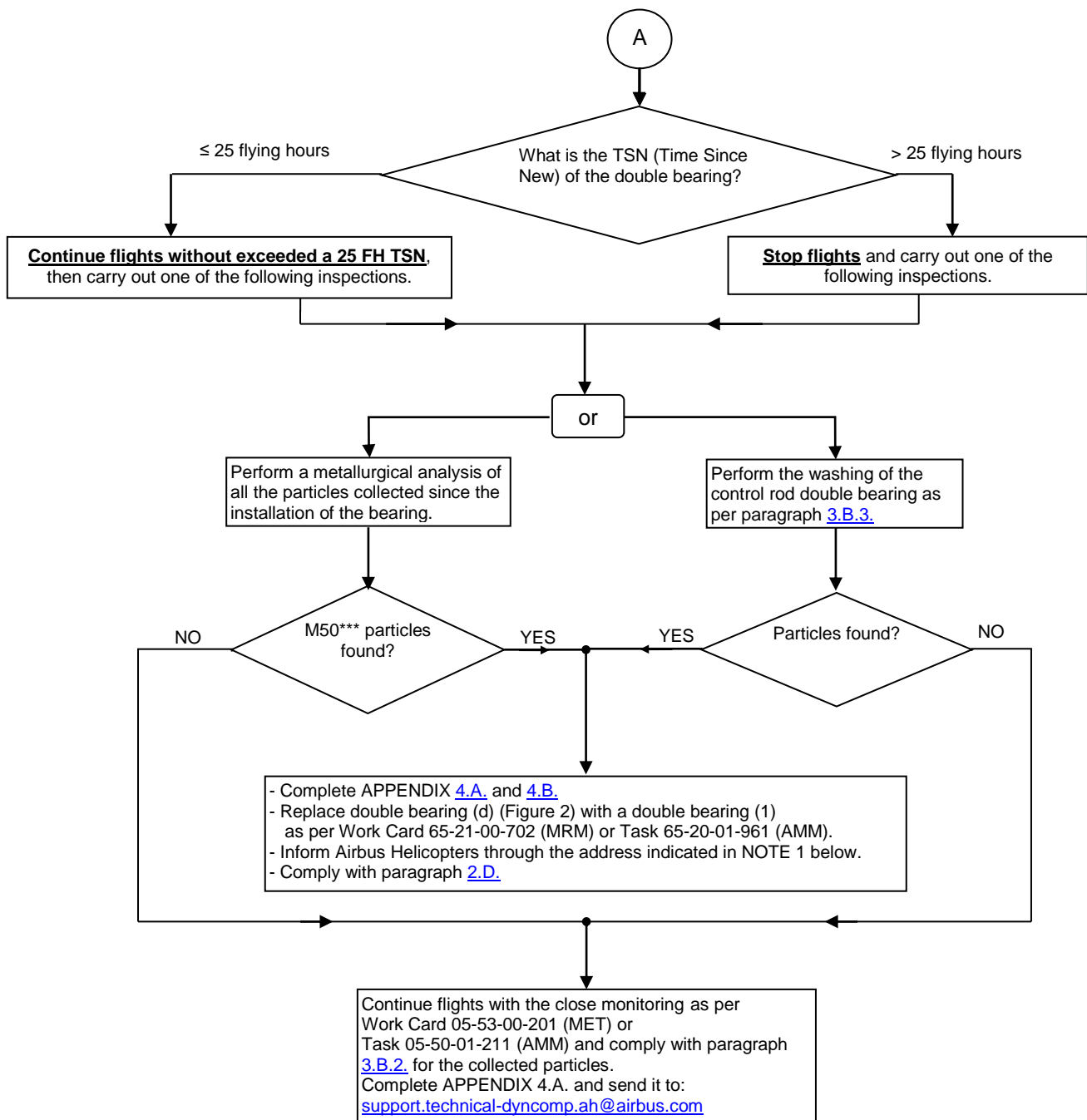


Figure 1: Example of abrasion on the chip detector





\*\*\* Other designations for material M50:  
 - AMS6490  
 - 80DCV40

### NOTE 1

Airbus Helicopters Technical Support:  
 Fax: + 33(0)4.42.85.99.66  
 E-mail: [support.technical-dyncomp.ah@airbus.com](mailto:support.technical-dyncomp.ah@airbus.com)  
 or  
[TechnicalSupport.Helicopters@airbus.com](mailto:TechnicalSupport.Helicopters@airbus.com)  
 Keycopter: Technical Request Management

### 3.B.3. Washing of the control rod double bearing (Figure 2)

- Remove the control shaft/rod assembly as per paragraph [3.B.4.a.](#)
  - Be very careful when performing the particle detection and collection in the two areas defined as per Figure 2.
  - Clean the control shaft/rod assembly using WHITE SPIRIT (2) as per Work Card 20-04-01-102 (MTC):
    - . Hold the shaft (b) in the vertical position pointing upward.
- 1) Insert WHITE SPIRIT (2) under pressure (for example using a can) in the hole (a) of the control shaft (b). **(See [DETAIL A Figure 2](#)).**
    - . Manually turn the control rod (c) several times to wash the double bearing (d) by draining the WHITE SPIRIT (2) through the bearing. **(See [Detail A Figure 2](#))**
    - . Collect the WHITE SPIRIT (2) on an absorbent paper (e.g. blotting paper):
      - .. Pass a magnet over the absorbent paper to collect the magnetic particles.
  - 2) Insert WHITE SPIRIT (2) (for example using a can) in the area of the control shaft (b) that must be cleaned. **(See [DETAIL B Figure 2](#)).**
    - . Manually turn the control rod (c) several times to wash the double bearing (d) by draining the WHITE SPIRIT (2).
    - . Collect the WHITE SPIRIT (2) on an absorbent paper (e.g. blotting paper):
      - .. Pass a magnet over the absorbent paper to collect the magnetic particles.

#### **NOTE 2**

*Make sure that the area pointed out in [DETAIL B Figure 2](#) is clean.*

- 3) Repeat operation No. 1).

#### **NOTE 3**

*As the double bearing (d) is "pre-stressed" by definition, friction points can be felt when turning the double bearing (d): they are not critical.*

#### **. If there are no magnetic particles or magnetic abrasion dust:**

- Lubricate the double bearing (d) with service oil.
- Install the control shaft/rod assembly as per paragraph [3.B.4.b.](#)

#### **. If there are magnetic particles or magnetic abrasion dust:**

- . Complete [APPENDIX 4.A.](#) and [4.B.](#)
- . Replace double bearing (d) with a double bearing (1) as per Work Card 65-21-00-702 (MRM) or as per Task 65-20-01-961 (AMM).
- . Install the control shaft/rod assembly as per paragraph [3.B.4.b.](#)
- . **Inform the Technical Support Department of the Airbus Helicopters Customer Service as per paragraph [2.B.](#)**
- . **Comply with paragraph [2.D.](#)**

### 3.B.4. Removal / Installation of the TGB control shaft/rod assembly

#### 3.B.4.a. Removal of the TGB control shaft/rod assembly



#### **CAUTION**

**BEFORE PERFORMING ANY OPERATION ON THE TAIL ROTOR HUB (TRH) ASSEMBLY, LOCK THE DRIVE SYSTEM WITH THE ROTOR BRAKE.**

Remove the TGB control shaft/rod assembly as per Work Card 65-21-00-701 (MRM) or Task 65-20-01-066 (AMM).

#### **NOTE 4**

*Work Card 65-21-00-701 (MRM) or Task 65-20-01-066 (AMM) refers to the double bearing removal procedure (if necessary) as per Work Card 65-21-00-702 (MRM) or Task 65-20-01-961 (AMM). The double bearing must only be removed if there is doubt on its integrity.*

#### **NOTE 5**

*Work Card 65-21-00-701 (MRM) or Task 65-20-01-066 (AMM) describes the check of the interchangeability dimension of the pitch control plate. Reminder: this operation must only be performed if the pitch control plate is replaced.*

#### 3.B.4.b. Installation of the TGB control shaft/rod assembly



#### **CAUTION**

**TO PREVENT CONTAMINATION, BE VERY CAREFUL WHEN CLEANING AND INSTALLING THE COMPONENTS.**

- Check that there are no particles in the lubrication hole of the TGB cover (Area No. 11, [Figure 3](#) of APPENDIX 4.B.).
- Install the TGB control shaft/rod assembly as per Work Card 65-21-00-701 (MRM) or as per Task 65-20-01-066 (AMM).

#### 3.B.5. Final steps

Not applicable.

### 3.C. RECORD OF COMPLIANCE

Compliance with this document:

- Record the first compliance with paragraph [3.B.2.](#) of this ALERT SERVICE BULLETIN in the Log Card (FM) of the TGB.
- If necessary, record the first compliance with paragraph [3.B.3.](#) of this ALERT SERVICE BULLETIN in the Log Card (FM) of the TGB.
- Record compliance with this ALERT SERVICE BULLETIN (see IN 3643-I-00 for instructions):  
QR-Code or hypertext link



#### **NOTE 6**

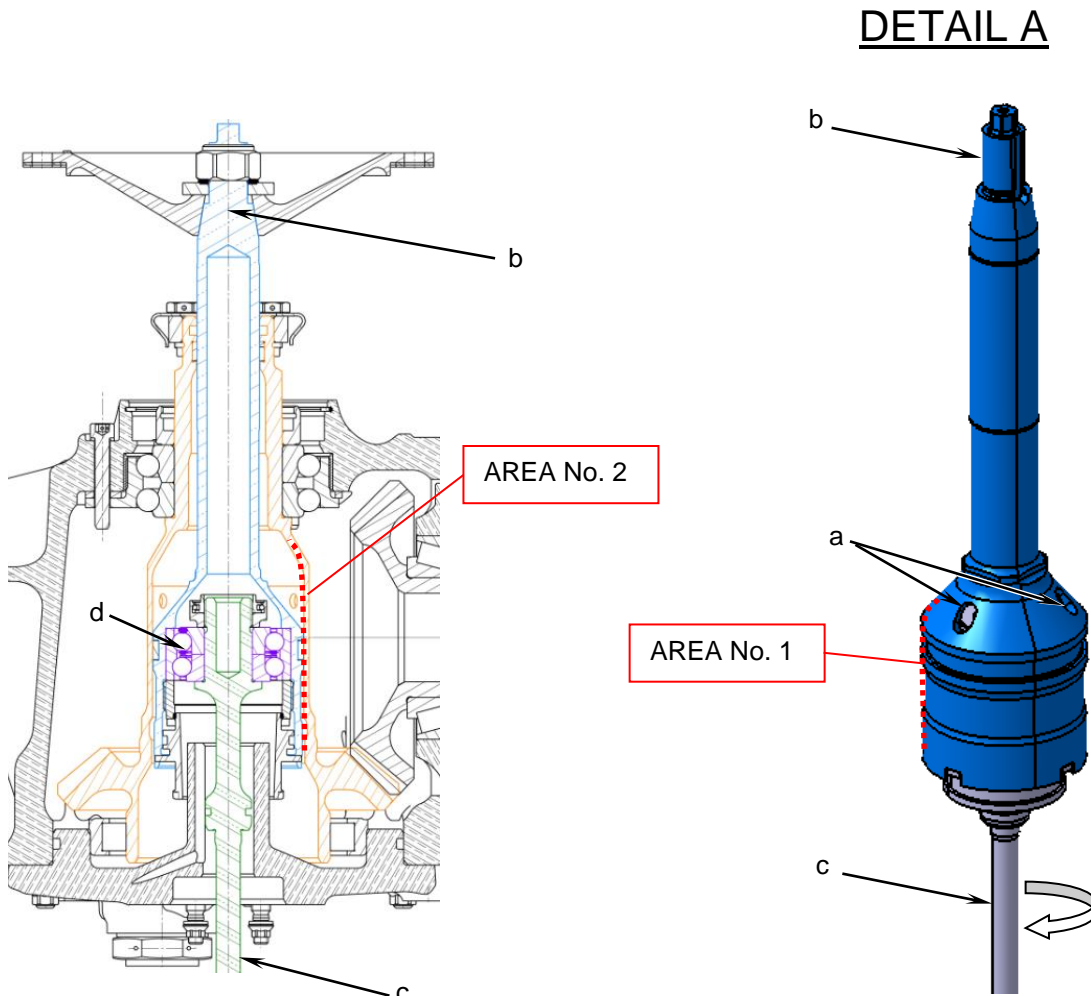
*The recording of compliance with ALERT SERVICE BULLETINS in the R-Text tool does not replace the recording in the helicopter documents.*

[ASB EC155-04A016](#)

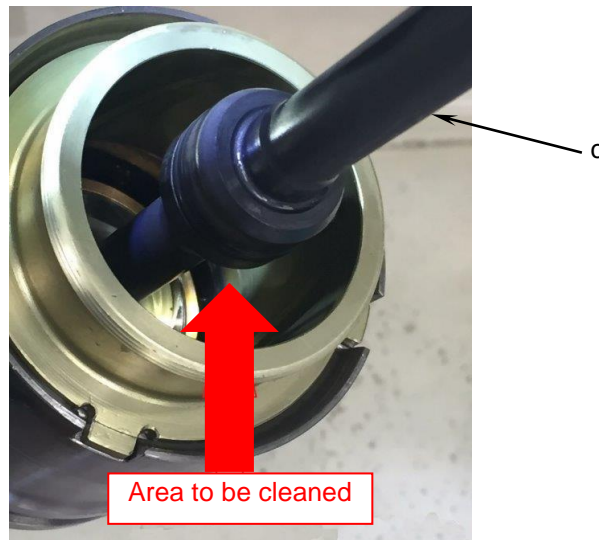
### 3.D. OPERATING AND MAINTENANCE INSTRUCTIONS

Not applicable.





### DETAIL B



Return to paragraph [3.B.3.](#)

Figure 2 (Washing of the double bearing)

### 4. APPENDIX

#### 4.A. APPENDIX 1: Bearing behavior follow-up sheet to be completed and returned

<b>Operator's name</b>

Enclose a copy of the particle detection follow-up sheet of MTC 20-08-01-601

Helicopter	
Helicopter type and version	
Helicopter S/N	
FH	
Mission type	

TGB	
P/N	
S/N	
TSN/TSO	
Oil	Brand :
	Reference:
Chip detector	Manual
	Electrical

Enclose a copy of the Log Card

TGB control rod bearing	
P/N	
S/N	
FH	
Reason for removal	Periodic replacement or Particles

### 4.B. APPENDIX 2: to be completed if particles are found

Complete APPENDIX 2 (see [Figure 3](#))

Enclose a copy of the particle detection follow-up sheet of MTC 20-08-01-601

#### TGB cover

AREA No.	Description	Particles collected		Material of particles	Type of particles (as per MTC 20-08-01-601)	Number of particles	Surface of collected particles (mm <sup>2</sup> )
		YES	NO				
11	Lubrication duct of the cover						
8	Area between the cover and the bearing						
7	Area between the cover and the control rod						

#### Control rod

AREA No.	Description	Particles collected		Material of particles	Type of particles (as per MTC 20-08-01-601)	Number of particles	Surface of collected particles (mm <sup>2</sup> )
		YES	NO				
1	External face of the control rod						
4	Internal face of the Shur-Lok nut and the spacer						
3	Internal face of the control rod						

### 4.B. APPENDIX 2: to be completed if particles are found (continued)

#### TGB

AREA No.	Description	Particles collected		Material of particles	Type of particles (as per MTC 20-08-01-601)	Number of particles	Surface of collected particles (mm <sup>2</sup> )
		YES	NO				
9	TGB main housing near the chip detector						
6	Internal face of the rotor mast, toothed wheel side						
2	Internal face of the rotor mast, center area of the mast						
5	Internal face of the rotor mast, rotor side						
10	Lubrication duct of the housing						
9a	TGB main housing near the chip detector						

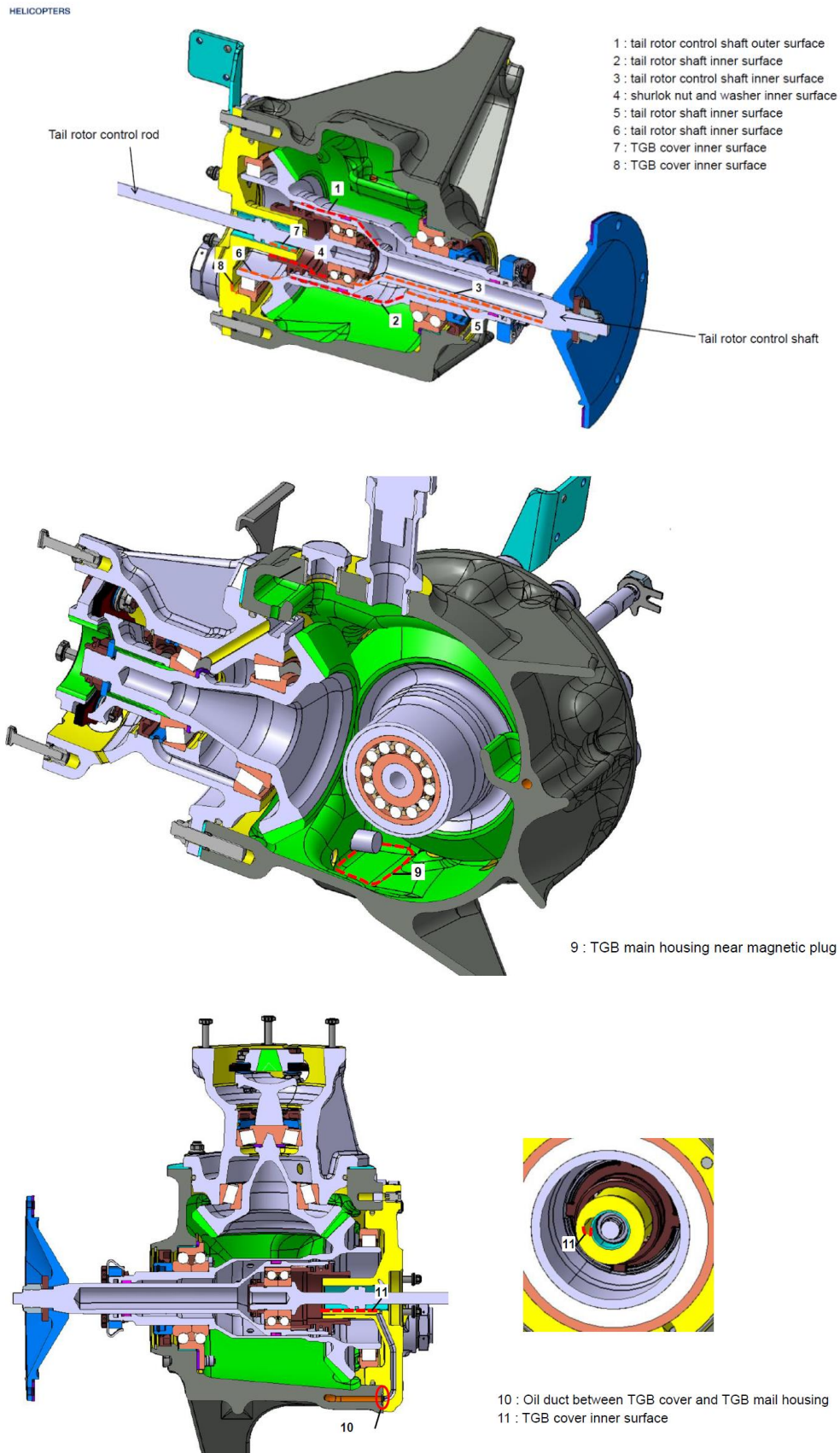


Figure 3