



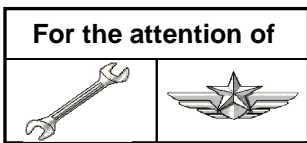
EMERGENCY ALERT SERVICE BULLETIN

PROTECTIVE MEASURE

TIME LIMITS - MAINTENANCE CHECKS - Tail Rotor Hub

Check of the tail rotor hub body

ATA 64



HELICOPTER CONCERNED	NUMBER	Version(s)	
		Civil	Military
EC120	05A020	B	

Revision No.	Date of issue
Revision 0	2019-10-29
Revision 1	2019-11-08
Revision 2	2021-02-08
Revision 3	2024-09-19

Summary:

During an inspection, Airbus Helicopters was informed of a case of loss of tightening torque on several attachment bolts of the tail rotor hub body.

Following analysis, Airbus Helicopters came to the conclusion that a non-detected case of loss of tightening torque can cause the development of cracks and lead to the loss of the tail rotor drive, which results in the loss of control of the helicopter.

Consequently, Airbus Helicopters makes it mandatory to periodically check for cracks on the tail rotor hub body and to replace components of the hub body / splined flange link every 1000 hours (+100-hour margin) to avoid checking the tightening torque during this period.

Reason for last Revision:

The purpose of revision 3 of this ALERT SERVICE BULLETIN is:

- To exclude from the effectivity the helicopters that have complied with ALERT SERVICE BULLETIN No. 64-21-0001 "Added paint lines to each side of the assembly, hub body and splined tail rotor flange for visual inspection of tightening torque" **for "Helicopters/installed equipment or parts"**
- To limit the effectivity **for "Non installed equipment or parts"**

Compliance:

Compliance with this ALERT SERVICE BULLETIN is mandatory.

Export Control:

US Export Control - No US content. This Item does not contain any U.S. origin ITAR or EAR content.

FR Export Control - Not Listed. This Item is not listed against the EC regulations in the EU/FR

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Export Control: US_EC_NoUScontent - FR_EC_NotListed

1. PLANNING INFORMATION

1.A. EFFECTIVITY

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

All EC120 helicopters which have not complied with ALERT SERVICE BULLETIN No. 64-21-0001.

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

Tail rotor hub body P/N C642A0100103 with a TSN greated than 0 flight hour and which have not complied with this ALERT SERVICE BULLETIN No. 05A020.

1.B. ASSOCIATED REQUIREMENTS

Not applicable.

1.C. REASON

Revision 0:

During an inspection, Airbus Helicopters was informed of a case of loss of tightening torque on several attachment bolts of the tail rotor hub body.

Following analysis, Airbus Helicopters came to the conclusion that a non-detected case of loss of tightening torque can cause the development of cracks and lead to the loss of the tail rotor drive, which results in the loss of control of the helicopter.

Consequently, Airbus Helicopters makes it mandatory to periodically check for cracks on the tail rotor hub body and to replace components of the hub body / splined flange link every 1000 hours (+100-hour margin) to avoid checking the tightening torque during this period.

Revision 1:

The purpose of revision 1 is to change the periodic check for cracks on the tail rotor hub body from every 15 FH without exceeding 7 days to every 15 FH.

Revision 1 of this ALERT SERVICE BULLETIN does not affect compliance with revision 0 of this ALERT SERVICE BULLETIN.

Revision 2:

The purpose of revision 2 is to:

- inform that Task 64-21-00, 6-5 (AMM) that must be complied with is the one with date code 2020.10.15 or any later date code,
- update the procedure of Task 64-21-00, 6-5 (AMM) to be complied with at intervals of 1000 flight hours (+100-hour margin) (during replacement of the bolts, washers and nuts),
- specify that a 100-hour margin is applicable to the 1000-hour inspection.

Revision 2 of this ALERT SERVICE BULLETIN does not affect compliance with the previous revisions of this ALERT SERVICE BULLETIN.

Revision 3:

The purpose of revision 3 of this ALERT SERVICE BULLETIN is:

- To exclude from the effectivity the helicopters that have complied with ALERT SERVICE BULLETIN No. 64-21-0001 "Added paint lines to each side of the assembly, hub body and splined tail rotor flange for visual inspection of tightening torque" **for "Helicopters/installed equipment or parts"**
- To limit the effectivity **for "Non installed equipment or parts"**

Revision 3 of this ALERT SERVICE BULLETIN does not affect compliance with the previous revisions of this ALERT SERVICE BULLETIN.

1.D. DESCRIPTION

This ALERT SERVICE BULLETIN consists in:

- performing a check for cracks on the tail rotor hub body, in the zones defined in [Figure 1](#),
- replacing the attachment bolts, washers and nuts of the tail rotor hub body,
- performing a check of the interface between the splined flange and the tail rotor hub body.

1.E. COMPLIANCE

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

Not applicable.

1.E.2. Compliance in service

The work on the helicopter and on non-installed equipment must be performed by the operator.

Helicopters/installed equipment or parts:

Comply with paragraphs [3.B.1.](#) and [3.B.2.](#) of this ALERT SERVICE BULLETIN **within 15 flight hours (FH) without exceeding 7 days** from receipt of revision 0 of this ALERT SERVICE BULLETIN issued on October 29, 2019.

And, interpret the results:

a) **For helicopters with strictly less than 9000 FH**

1) **If no cracks are found:**

- Continue flights, then,
- Comply with paragraphs [3.B.1.](#) and [3.B.2.](#) of this ALERT SERVICE BULLETIN **at intervals that do not exceed 15 FH.**

And,

- **during the next 1000-hour (+100-hour margin) inspection** (detailed check after disassembly of the torsion spider assembly) **without exceeding 9000 FH:**

- . replace the bolts, washers and nuts as per Task 64-21-00, 6-8 (AMM),
- . perform the detailed check of the splined flange at the interface between the splined flange and the tail rotor hub body as per Task 64-21-00, 6-5 (AMM) and, if necessary, replace the splined flange as per paragraph [3.B.4.](#),

Then,

- **during each 1000-hour (+100-hour margin) inspection** (detailed check after disassembly of the torsion spider assembly) :

- . replace the bolts, washers and nuts as per Task 64-21-00, 6-8 (AMM),
- . perform the detailed check of the splined flange at the interface between the splined flange and the tail rotor hub body as per Task 64-21-00, 6-5 (AMM) and, if necessary, replace the splined flange as per paragraph [3.B.4.](#)

2) If a crack is found:



CAUTION

DURING REPLACEMENT OF THE TAIL ROTOR HUB BODY OR DURING THE DETAILED CHECK AFTER DISASSEMBLY OF THE TORSION SPIDER ASSEMBLY, THE BOLTS, WASHERS AND NUTS OF THE TAIL ROTOR HUB BODY MUST BE REPLACED WITH NEW BOLTS, WASHERS AND NUTS.

- replace the tail rotor hub body and the bolts, washers and nuts as per paragraph [3.B.3.](#),
- perform the detailed check of the splined flange at the interface between the splined flange and the tail rotor hub body as per Task 64-21-00, 6-5 (AMM) and, if necessary, replace the splined flange as per paragraph [3.B.4.](#),
Then,
- comply with paragraphs [3.B.1.](#) and [3.B.2.](#) of this ALERT SERVICE BULLETIN **at intervals that do not exceed 15 FH.**

And,

- **during each 1000-hour (+100-hour margin) inspection** (detailed check after disassembly of the torsion spider assembly):
 - . replace the bolts, washers and nuts as per Task 64-21-00, 6-8 (AMM),
 - . perform the detailed check of the splined flange at the interface between the splined flange and the tail rotor hub body as per Task 64-21-00, 6-5 (AMM) and, if necessary, replace the splined flange as per paragraph [3.B.4.](#)

b) For helicopters with 9000 FH or more

1) If no cracks are found:

If you know the number of flight hours of the attachment bolts (b) of the Tail Rotor Hub

If the bolts (b) have strictly less than 9000 FH

- **during the next 1000-hour (+100-hour margin) inspection** (detailed check after disassembly of the torsion spider assembly) **without exceeding 9000 FH:**
 - . replace the bolts, washers and nuts as per Task 64-21-00, 6-8 (AMM),
 - . perform the detailed check of the splined flange at the interface between the splined flange and the tail rotor hub body as per Task 64-21-00, 6-5 (AMM) and, if necessary, replace the splined flange as per paragraph [3.B.4.](#),

Then,

- Comply with paragraphs [3.B.1.](#) and [3.B.2.](#) of this ALERT SERVICE BULLETIN **at intervals that do not exceed 15 FH.**

And,

- **at intervals that do not exceed 1000 FH (+100-hour margin):**
 - . replace the bolts, washers and nuts as per Task 64-21-00, 6-8 (AMM),
 - . perform the detailed check of the splined flange at the interface between the splined flange and the tail rotor hub body as per Task 64-21-00, 6-5 (AMM) and, if necessary, replace the splined flange as per paragraph [3.B.4.](#)

If you do not know the number of flight hours of the attachment bolts (b) of the TRH or if the bolts (b) have 9000 FH or more

- Replace the attachment bolts, washers and nuts of the tail rotor hub body **within 15 flight hours (FH) without exceeding 7 days** from receipt of revision 0 of this ALERT SERVICE BULLETIN issued on October 29, 2019.

Then,

- Comply with paragraphs [3.B.1.](#) and [3.B.2.](#) of this ALERT SERVICE BULLETIN **at intervals that do not exceed 15 FH.**

And,

- **at intervals that do not exceed 1000 FH (+100-hour margin)** from the first replacement of the bolts, washers and nuts:
 - . replace the bolts, washers and nuts as per Task 64-21-00, 6-8 (AMM),
 - . perform the detailed check of the splined flange at the interface between the splined flange and the tail rotor hub body as per Task 64-21-00, 6-5 (AMM) and, if necessary, replace the splined flange as per paragraph [3.B.4.](#)

2) If a crack is found:



CAUTION

DURING REPLACEMENT OF THE TAIL ROTOR HUB BODY OR DURING THE DETAILED CHECK AFTER DISASSEMBLY OF THE TORSION SPIDER ASSEMBLY, THE BOLTS, WASHERS AND NUTS OF THE TAIL ROTOR HUB BODY MUST BE REPLACED WITH NEW BOLTS, WASHERS AND NUTS.

- replace the tail rotor hub body and the bolts, washers and nuts as per paragraph [3.B.3.](#),
- perform the detailed check of the splined flange at the interface between the splined flange and the tail rotor hub body as per Task 64-21-00, 6-5 (AMM) and, if necessary, replace the splined flange as per paragraph [3.B.4.](#),

Then,

- comply with paragraphs [3.B.1.](#) and [3.B.2.](#) of this ALERT SERVICE BULLETIN **at intervals that do not exceed 15 FH.**

And,

- **at intervals that do not exceed 1000 FH (+100-hour margin):**
 - . replace the bolts, washers and nuts as per Task 64-21-00, 6-8 (AMM),
 - . perform the detailed check of the splined flange at the interface between the splined flange and the tail rotor hub body as per Task 64-21-00, 6-5 (AMM) and, if necessary, replace the splined flange as per paragraph [3.B.4.](#)

Non-installed equipment or parts:

Comply with paragraph [3.B.2.](#) at the latest before installation on the helicopter.

1.F. APPROVAL



The technical content of this document is approved under the authority of the Design Organization Approval ref. EASA. 21J.700.

1.G. MANPOWER



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

Qualification: - 1 Mechanical Technician.
Or
- 1 Pilot appropriately trained and certified as per the local regulations in force.



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

Estimated Man-hours: approximately 15 minutes to perform a visual check for cracks.

1.H. WEIGHT AND BALANCE

There is no change in weight and moment.

1.I. POWER CONSUMPTION

Not changed.

1.J. SOFTWARE UPGRADES/UPDATES

Not applicable.

1.K. REFERENCES

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

Aircraft Maintenance Manual (AMM):

AMM: 64-21-00, 4-3: Tail Rotor Hub - Disassembly - Tail Rotor Hub

AMM: 64-21-00, 4-4: Tail Rotor Hub - Assembly - Tail Rotor Hub

AMM: 64-21-00, 6-4: Tail Rotor Hub - Detailed Check - Hub Body Assembly

AMM: 64-21-00, 6-8: Tail Rotor Hub - Detailed Check - Torsion Spider Assembly

Aircraft Maintenance Manual (AMM) issued with date code 2020.10.15 or any later date code:

AMM: 64-21-00, 6-5: Tail Rotor Hub - Detailed Check - Splined Flange

Information Notice (IN):

IN: 3481-I-00: The Marketplace: an AirbusWorld eOrdering service

IN: 3785-I-00: Introduction of the digital Service Bulletin reporting service SB Insight

Safety Promotion Notice (SPN):

SPN: 3703-P-00: GENERAL - Foreign Object Damage prevention

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 information about the price of the modification kits and/or components, or for aid, contact the Airbus Helicopters Network Sales and Customer Relations Department.

Availability

Contact the Sales and Customer Relations Department to know the delivery lead times.

Procurement

Send an order for the necessary quantities to the Airbus Helicopters Network Sales and Customer Relations Department:

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

In the purchase order, write the information that follows:

- The mode of transport
- The destination
- The serial numbers of the helicopters to change.

2.B. LOGISTIC INFORMATION

Not applicable.

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
Hub body	A/R	C642A0100103	1	C642A0100103	/
Splined flange	A/R	C642A0104202	2	C642A0104202	/

Equipment or parts to be ordered separately:

Designation	Qty	New P/N	Item	Old P/N →	Instruction
Hexagonal head bolt	A/R	22201BE060008L	3	22201BE060008L	/
Washer	A/R	ASNA0265-060	4	ASNA0265-060	/
Washer	A/R	EN2138-06005	5	EN2138-06005	/
Nut	A/R	ASN52320BH060N	6	ASN52320BH060N	/

Consumables to be ordered separately:

As per the Tasks indicated in this ALERT SERVICE BULLETIN.

You can order the consumables from the AirbusWorld Marketplace through e-ordering (IN No. 3481-I-00).
If you can't get access to e-ordering, please contact your Logistic Focal Point.

Special tools:

<u>Designation</u>	<u>Qty</u>	<u>Tool P/N or equivalent</u>	<u>Item</u>
Mirror	A/R	Commercial	zz

2.D. EQUIPMENT OR PARTS TO BE RETURNED

Not applicable.

3. ACCOMPLISHMENT INSTRUCTIONS

3.A. GENERAL

Not applicable.

3.B. WORK STEPS



CAUTION

MAKE SURE THAT YOU PREVENT ALL POSSIBLE FOREIGN OBJECT DAMAGE (FOD). REFER TO SAFETY PROMOTION NOTICE (SPN) NO. 3703-P-00.

3.B.1. Preliminary steps

- Remove the fairing plug (h).
- Remove the fairing (g) (Detail A, Figure 1).
- If necessary, release the rotor brake.

3.B.2. Inspection of the hub body (a) (Figure 1)

- Perform a visual inspection of the hub body (a), (Figure 1).
 - . Using a light source and, if necessary, a mirror (zz) (e.g. dentist's mirror), make sure that there are no cracks in the hub body, in the inspection area defined as per [Figure 1](#).
- Turn the tail rotor by hand to check the entire inspection area defined as per Figure 1.
- Interpret the results as per [paragraph 1.E.2](#).

3.B.3. Replacement of the hub body (a) (Figure 1)

- Remove and discard the hub body (a), ([Figure 1](#)) as per Task 64-21-00, 4-3 (AMM).
- Discard the bolts (b), the washers (c) and (d) and the nuts (e).
- Install the hub body (1) as per Task 64-21-00, 4-4 (AMM) with bolts (3), washers (4) and (5) and nuts (6).

3.B.4. Replacement of the splined flange (f) (Figure 1)

- Remove the splined flange (f) ([Figure 1](#)) as per Task 64-21-00, 4-3 (AMM).
- Install the splined flange (2) as per Task 64-21-00, 4-4 (AMM).

3.B.5. Final steps

- Install the fairing (g).
- Install the fairing plug (h).
- If necessary, apply the rotor brake.

3.C. RECORD OF COMPLIANCE

Compliance with this document:

- Record full compliance with this ALERT SERVICE BULLETIN, with the revision number, in the helicopter documents.
- Record compliance with this ALERT SERVICE BULLETIN (see IN 3785-I-00 for instructions):
QR code or hypertext link



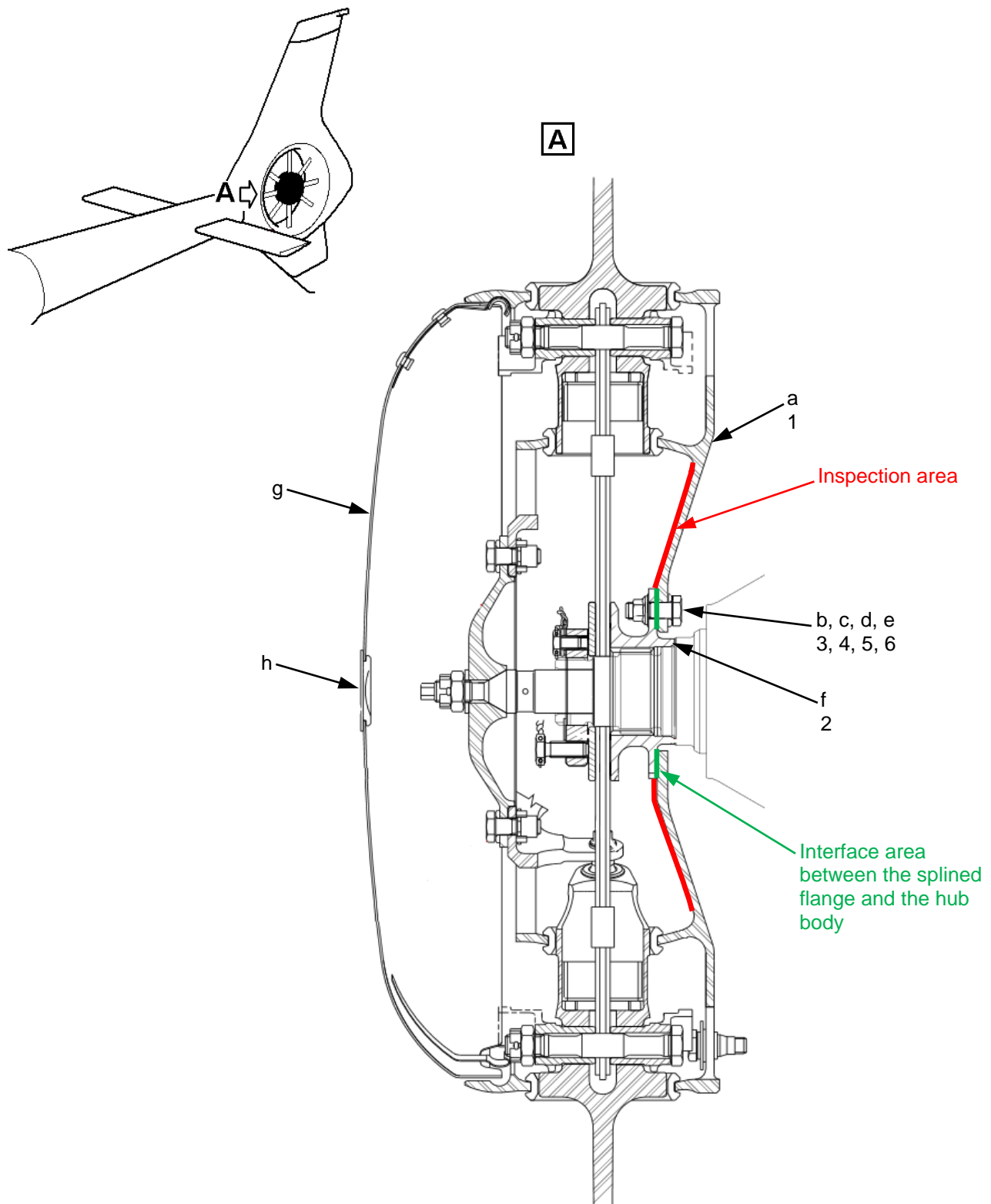
NOTE

*The recording of compliance with
ALERT SERVICE BULLETINS in the SB Insight tool does
not replace the recording in the helicopter documents.*

[ASB EC120-05A020](#)

3.D. OPERATING AND MAINTENANCE INSTRUCTIONS

Not applicable.



Return to [paragraph 3.B.2.](#)
Return to [paragraph 3.B.3.](#)
Return to [paragraph 3.B.4.](#)

Figure 1