

EUROCOPTER  
DIRECTION TECHNIQUE SUPPORT  
13725 MARGNANE CEDEX FRANCE

# EMERGENCY ALERT SERVICE BULLETIN

COLIBRI	NUMBER	VERSIONS	
<b>EC120</b>	<b>05A012</b>	Civil:	<b>B</b>

**SUBJECT: TIME LIMITS - MAINTENANCE CHECKS**

Check for crack in the main rotor hub

**ATA: 62**

REVISION No.	DATE OF APPROVAL	DATE OF ISSUE
Revision 0	On: February 15, 2010	2010.02.15
Revision 1	On: February 19, 2010	2010.02.19

**CAUTION**

**THE INFORMATION AND INSTRUCTIONS CONTAINED IN THIS ALERT SERVICE BULLETIN ARE INTENDED FOR MAINTENANCE PERSONNEL AND FLIGHT CREWS.**

**1. PLANNING INFORMATION**

**1.A. EFFECTIVITY**

**1.A.1. Helicopters/installed equipment**

Helicopters equipped with Main Rotor Head (MRH) with hub with the following part numbers:

- C622A1002103,
- C622A1002104,
- C622A1002105.

**1.A.2. Non-installed equipment**

Not applicable.

**1.B. ASSOCIATED REQUIREMENTS**

Not applicable.

**1.C. REASON**

To preclude any risk of MRH hub failure.

Revision 0 of this ALERT SERVICE BULLETIN did not form the subject of an EASA Airworthiness Directive.

The purpose of Revision 1 of this ALERT SERVICE BULLETIN is to modify paragraph 2.B.2.b. concerning the interpretation of the results by reducing the actions to be taken when you are in doubt about whether or not there is a crack.

Revision 1 of this ALERT SERVICE BULLETIN will form the subject of an EASA Airworthiness Directive.

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

## 1.D. DESCRIPTION

### Revision 0:

EUROCOPTER has been informed of an emergency landing performed with an EC120 B Colibri helicopter following the sudden occurrence of high amplitude vibrations originating from the main rotor. On the ground, it was then found that the MRH hub had failed in the attachment area of one of the three drag damper fittings.

In Safety Information Notice No. 2110-S-62 of November 5, 2009, EUROCOPTER reminded you of how important it is to carry out the scheduled maintenance actions on the rotor hub during the flight-related check.

In order to preclude any risk of a similar incident occurring on rotor hubs with part numbers listed in paragraph 1.A.1., EUROCOPTER makes compliance with the visual check, defined in this ALERT SERVICE BULLETIN, mandatory.

### Revision 1:

The purpose of Revision 1 is to modify paragraph 2.B.2.b. concerning the interpretation of the results. Indeed, considering the crack growth rate and existing safety margins, the actions to be taken when you are in doubt about whether or not there is a crack, can be reduced.

## 1.E. COMPLIANCE

EUROCOPTER renders compliance with this ALERT SERVICE BULLETIN mandatory.

### 1.E.1. Compliance at the works

#### 1.E.1.a. On helicopters

Not applicable.

#### 1.E.1.b. On non-installed equipment

Not applicable.

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

#### 1.E.2.a. On helicopters/installed equipment

- Comply with paragraph 2. at the latest within 15 flying hours following receipt of Revision 0 of this ALERT SERVICE BULLETIN, dated February 15, 2010.

Then,

- Comply with paragraph 2.B. every 15 flying hours.

#### 1.E.2.b. On non-installed equipment

Not applicable.

## **1.F. APPROVAL**

### **1.F.1. Approval of modifications**

Not applicable.

### **1.F.2. Approval of the Service Bulletin**

The technical information contained in this ALERT SERVICE BULLETIN Revision 0 was approved on February 15, 2010 under the authority of EASA Design Organisation Approval No. 21 J.056 for civil version helicopters subject to an Airworthiness Certificate.

The technical information contained in this ALERT SERVICE BULLETIN Revision 1 was approved on February 19, 2010 under the authority of EASA Design Organisation Approval No. 21 J.056 for civil version helicopters subject to an Airworthiness Certificate.

## **1.G. MANPOWER**

### **1.G.1. Qualification**

1 Mechanic

or

1 pilot with appropriate training and certification, in accordance with the local regulation in force.

### **1.G.2. Time for the operations**

Approximately 5 minutes to visually check the rotor hub.  
Approximately 6 hours to replace the rotor hub if necessary.

### **1.G.3. Estimated helicopter grounding time**

Not applicable.

## **1.H. WEIGHT AND BALANCE**

Not applicable.

## **1.I. EFFECT ON ELECTRICAL LOADS**

Not applicable.

## **1.J. SOFTWARE MODIFICATION EMBODIMENT RECORD**

Not applicable.

### **1.K. REFERENCES**

Aircraft Maintenance Manual (AMM):

- Task 20-10-00, 3-8.
- Task 20-10-00, 3-19.
- Task 20-10-00, 3-43.
- Task 62-21-00, 4-1.

### **1.L. OTHER DOCUMENTS AFFECTED**

EUROCOPTER will modify the Master Servicing Manual (MSM) and Aircraft Maintenance Manual (AMM) with respect to this ALERT SERVICE BULLETIN.

### **1.M. TOOLING AFFECTED**

Not applicable.

### **1.N. INTERCHANGEABILITY OR MIXABILITY OF PARTS**

Not applicable.

## 2. ACCOMPLISHMENT INSTRUCTIONS

### 2.A. GENERAL

#### **NOTE 1**

*Please feel free to contact EUROCOPTER should you need any further information or support when complying with the instructions described in this ALERT SERVICE BULLETIN. Contact the EUROCOPTER Customer Service Technical Support Department:  
By: Fax: +33 (0)4.42.85.99.66  
Email: [DynComp.Technical-Support@eurocopter.com](mailto:DynComp.Technical-Support@eurocopter.com)*

### 2.B. OPERATIONAL PROCEDURE

#### 2.B.1. Preliminary steps

Not applicable.

#### 2.B.2. Procedure

##### 2.B.2.a. Visual check for crack in the inspection areas (A1) and (A2) of the rotor hub

As per Figure 2:

- During the first check, if the identification plate (b) is in the inspection area (A1) or (A2), remove the plate (b):
  - . Unbond the identification plate (b) using a plastic tool or bronze knife, taking care not to damage the rotor hub. Remove the dome fairing if necessary.
  - . Locate the area (B), and then clean it as per Task 20-10-00, 3-8 (titanium part).
  - . Copy the references marked on the identification plate (b) on the area (B) with indelible ink, as per Task 20-10-00, 3-43.

As per Figure 1:

- Visually inspect the inspection areas (A1) and (A2) on the hub (a), and make sure that there is no crack.
- Comply with paragraph 2.B.2.b.

### 2.B.2.b. Interpretation of the results

- 1 - If no crack is found:
  - . Install the dome fairing if it was removed previously.
  - . Resume flights.
- 2 - If one or more cracks are found:
  - . Contact EUROCOPTER in accordance with the conditions described in NOTE 1 of paragraph 2.A:
  - . Replace the affected rotor hub (a) with a new rotor hub (1a), (1b) or (1c).
  - . Assemble the rotor hub (1a), (1b) or (1c) and install the MRH as per AMM Task 62-21-00, 4-1.
  - . Resume flights.
- 3 - If local deterioration is found, leading you to suppose that there could be a crack (scoring, paint spalling, etc.): (as per Figures 1 and 2):
  - . Sand the suspected area(s) using No. 600-grit (fine grit) abrasive paper. Remove only the finish paint until the P05 primer coat becomes visible.
  - . Once again, visually inspect the concerned area(s), and make sure that there is no crack.
  - . Interpret the results in accordance with paragraph 2.B.2.b.1. or paragraph 2.B.2.b.2.

#### **NOTE 2**

*To ease future periodic visual checks, EUROCOPTER authorizes you to resume flights without paint touch-up in the sanded areas.*

### 2.B.3. Final steps

Not applicable.

### 2.C. OPERATIONAL PROCEDURE ON NON-INSTALLED EQUIPMENT

Not applicable.

### 2.D. IDENTIFICATION

#### 2.D.1. Identification of modifications in the documentation

Record initial compliance with this ALERT SERVICE BULLETIN in the helicopter documentation.

#### 2.D.2. Identification of modifications on equipment

Not applicable.

### 2.E. OPERATING AND MAINTENANCE INSTRUCTIONS

The visual check described in paragraph 2.B. and to be carried out every 15 flying hours will be integrated into the Master Servicing Manual (MSM) and Aircraft Maintenance Manual (AMM).

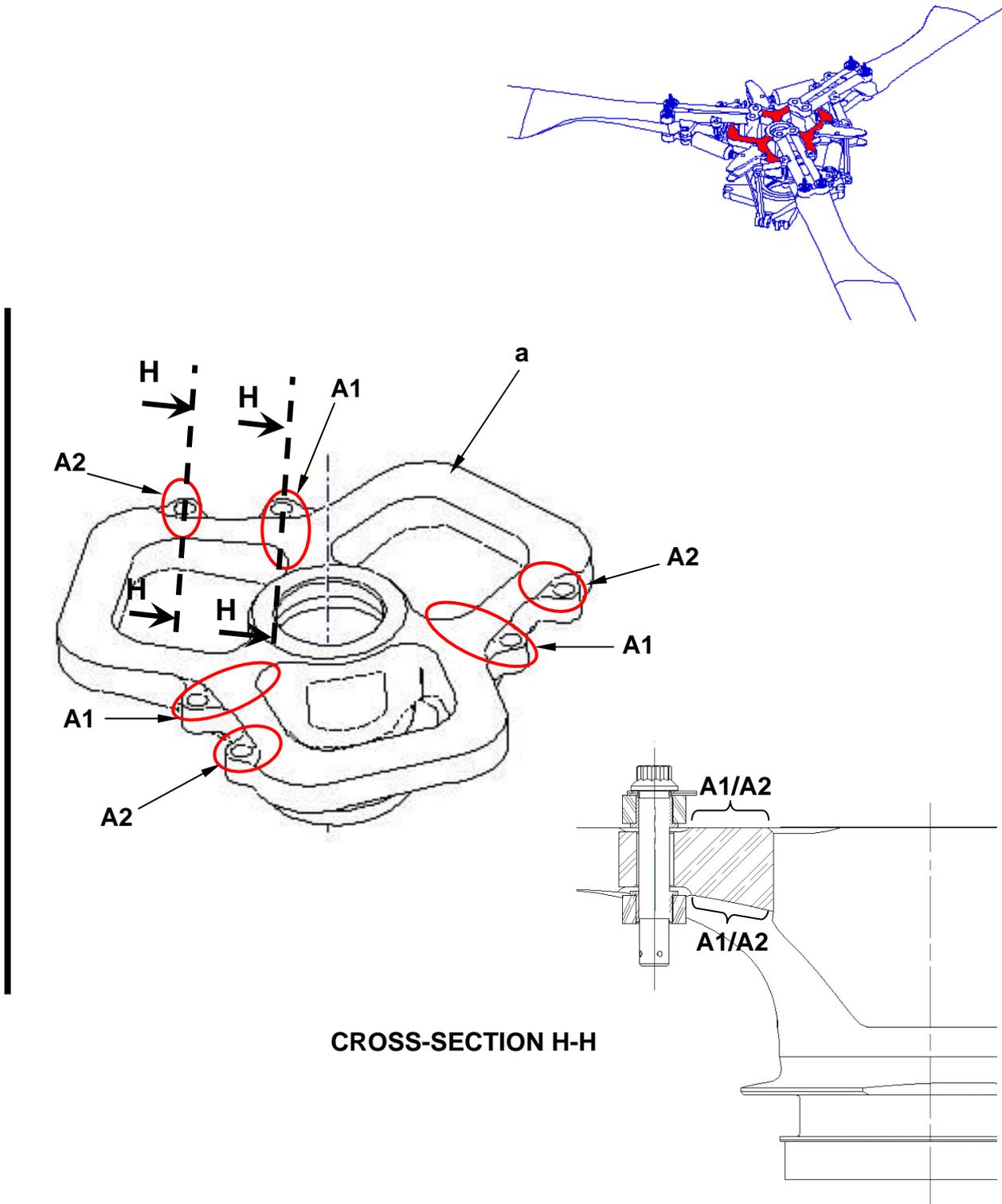


Figure 1: Visual check of the rotor hub

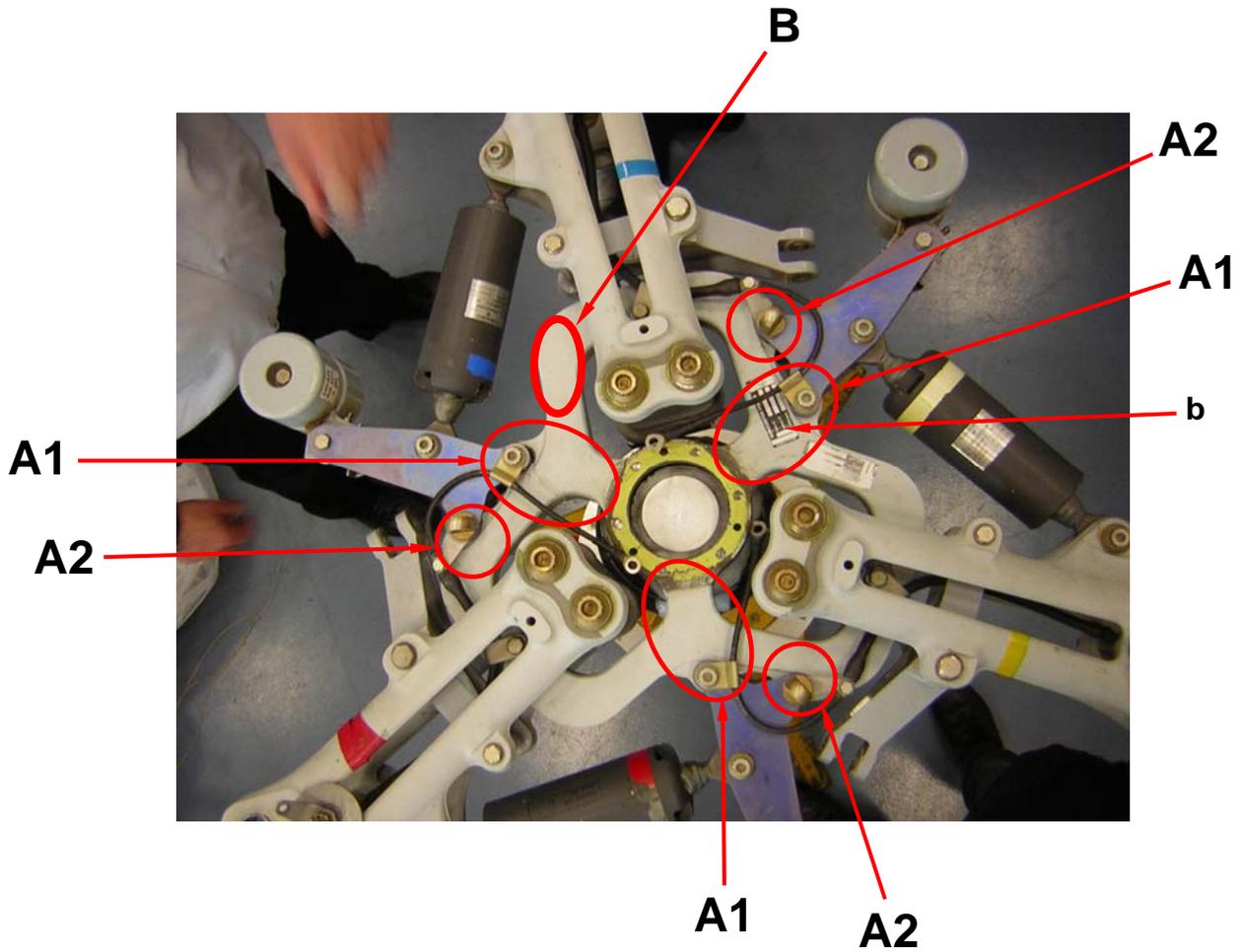


Figure 2: Rotor hub – Identification plate

### 3. MATERIAL INFORMATION

#### 3.A. MATERIAL: PRICE AND AVAILABILITY

##### 3.A.1. Cost

For all information concerning the price of kits and/or components for modifications, tools and assistance, contact the Customer Service Sales department or the EUROCOPTER Network.

##### 3.A.2. Availability

The kits or components or tools will be delivered on the operator's order.

#### 3.B. INFORMATION CONCERNING INDUSTRIAL SUPPORT

Not applicable.

#### 3.C. MATERIAL REQUIRED FOR EACH HELICOPTER / ENGINE / COMPONENT

##### 3.C.1. Kits or components to be ordered for one helicopter or one assembly

<u>Material Part Number</u> <u>Manufacturer Part Number</u>	<u>Qty.</u>	<u>Item</u>	<u>Key Word</u>	<u>Instructions</u>
C622A1002103 or C622A1002104 or C622A1002105	1	1a	Rotor hub	
	1	1b	Rotor hub	
	1	1c	Rotor hub	

Routine replacement parts required for compliance with the Tasks listed in paragraph 1.K., can be ordered in accordance with paragraph 3.D.

##### 3.C.2. Material to be ordered separately

The products required for compliance with the Tasks listed in paragraph 1.K., can be ordered from the INTERTURBINE company.

Website: <http://www.itlogistics.de>

Phone: +49.41.91.809.300

AOG: +49.41.91.809.444

**3.C.3. Material to be modified at the Manufacturer's or to be returned**

Not applicable.

**3.C.4. Products to be ordered separately**

Not applicable.

**3.C.5. Tools**

Not applicable.

**3.C.6. Material supplied by the User**

Not applicable.

**3.D. PROCUREMENT CONDITIONS**

Order the required quantity (unless otherwise specified)

from

EUROCOPTER  
Etablissement de Marignane  
Direction Ventes et Relation Client  
ECR  
13725 MARIIGNANE CEDEX  
FRANCE

**NOTE 1**

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

**NOTE 2**

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

**3.E. PROCEDURE: MATERIAL RETURN**

Not applicable.

**4. APENDIX**

Not applicable.