	AIRWORTHINESS DIRECTIVE No F-2003-325 R1		Distribution: A	Issue date: May 12, 2004	Page : 1/3
	Direction générale de l'aviation civile France GSAC publication	This Airworthiness Directive is published by the DGAC : <input checked="" type="checkbox"/> on behalf of EASA, the Primary Airworthiness Authority for the affected product. <input type="checkbox"/> as the Registration Airworthiness Authority for the affected aircraft..		<i>Translation of « Consigne de Navigabilité » of same number. In case of difficulty, reference should be made to the French issue.</i>	
No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive, unless otherwise agreed with the Authority of the State of Registry.					
Corresponding foreign Airworthiness Directive(s): Not applicable			Airworthiness Directive(s) replaced: 2003-325 original issue		
Person in charge of airworthiness: EUROCOPTER			Type(s): EC 120 helicopters		
Type certificate(s) No. 189 TCDS No 189					
ATA chapter: 63, 05, 71		Subject: Rotor drive - Engine mount and engine-to-main gear box (MGB) coupling tube assembly			

1. EFFECTIVITY:

EC 120 B helicopters

- fitted with engine-to-MGB coupling tube assembly P/N C631A1101101,
- fitted with the engine mount comprising the parts specified in § 1.A. of referenced EUROCOPTER EC 120 Alert Service Bulletin (ASB) No. 04A005.

2. REASONS:

This Airworthiness Directive (AD) is issued following a case of cracking detected on a reinforced coupling tube, which may lead to engine-to-MGB coupling failure and subsequently to autorotation.


This AD covers the requirements of AD 2000-176-004, which is cancelled by its Revision 3.

In addition, this AD incorporates the inspection intervals and service life limit of the coupling tubes introduced by Revision 2 of ASB No. 05A003. It also renders the engine mount described in § 1 above as unfit for flight, in compliance with ASB No. 04A005.

Revision 1 of this AD takes into account Revision 3 of ASB No. 05A003 by incorporating the consequences of compliance, if applicable, with EUROCOPTER EC 120 Service Bulletins (SB) No. 71.003 (Improvement of the Engine Mount) and/or No. 71.005 (Installation of a New Spring-Loaded Engine Suspension).

3. MANDATORY ACTIONS AND COMPLIANCE TIMES:

- 3.1. Aircraft fitted with an engine mount block NOT modified as per EUROCOPTER EC 120 SB No. 71.003 and with serial numbers lower than 1170 AND which have not been modified in compliance with EUROCOPTER EC 120 Service Bulletin (SB) No. 71.005:

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3.1.1. Reminder of the actions required for compliance with AD 2000-176-004 R2:

Unless already accomplished, the following actions were rendered mandatory from the effective date of the original issue of Airworthiness Directive 2000-176-004 i.e. on receipt of the "telegraphic" AD issued on April 21, 2000:

- a) Prior to the next flight, perform a visual crack detection inspection on the cylindrical body of the coupling tube on both sides of the MGB coupling tube attachment fitting, in compliance with the instructions specified in paragraph 2.B. of referenced EUROCOPTER ASB No. 05A003.
- b) Immediately remove and replace any coupling tube which has one or more cracks.
- c) At each check after the last flight of the day, without exceeding 5 flight hours, repeat the operations described in § a) and b) above.

Note that, for aircraft not modified as per SB No. 71.003 or SB No. 71.005, the service life limit of the coupling tubes specified in § 1 above is 1,000 flight hours.

3.1.2. Actions required for compliance with the original issue of this AD:

The following actions were rendered mandatory from the effective date of the original issue of this AD:

- a) From June 30, 2004, the parts referenced in § 1.A of referenced EC 120 ASB No. 04A005 will be unfit for flight.
- b) In the next scheduled inspection and at the latest by June 30, 2004, the engine mountbase must be checked as per the instructions given in § 2.B of referenced EUROCOPTER EC 120 ASB No. 04A005.

3.2. Aircraft fitted with an engine mount block modified in compliance with EUROCOPTER EC 120 SB No. 71.003 or with serial numbers equal to or higher than 1170 AND that have not be modified in compliance with EUROCOPTER EC 120 SB No. 71.005:


The following operations were rendered mandatory from the effective date of the original issue of this AD:

- 3.2.1.** Within 25 flight hours, then at intervals of no more than 25 flight hours, visually check the condition of the coupling tube in compliance with the instructions described in § 2.B. of referenced EUROCOPTER EC 120 ASB No. 05A003 R3.
- 3.2.2.** Immediately remove and replace any coupling tube which has one or more cracks.
- 3.2.3.** In this case, the service life limit of the coupling tubes referenced in § 1 above is 20,000 flight hours.

3.3. Aircraft that have been modified in compliance with EUROCOPTER EC 120 SB No. 71.005: (Spring-Loaded Suspension Engine Mount)

From the effective date of Revision 1 of this AD:

- 3.3.1.** The service life limit for the coupling tube referenced in § 1 above is extended to 20,000 flight hours.
- 3.3.2.** The inspections of the coupling tube every 5 hours/at each flight related check or every 25 flight hours are cancelled.

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3.4. Spare Parts:

From the effective date of Revision 1 of this AD:

3.4.1. Coupling tubes specified in § 1, held as spares AND having flown on an aircraft "prior to compliance with SB No. 71.005", must undergo a dye penetrant crack detection inspection in accordance with the instructions specified in § 2.B of referenced SB No. 71.005 before they are re-installed on aircraft "after compliance with SB No. 71.005".

3.4.2. After installing on an aircraft a coupling tube specified in paragraph 1, held as spares, comply with the instructions described in § 3.1. or in 3.2. or in 3.3. above, depending on whether the aircraft has not been fitted or has been fitted with an engine mount block modified in compliance with SB No. 71.003 and depending on whether the aircraft has been modified in compliance with SB No. 71.005 for installing a spring-loaded engine suspension.

4. REFERENCE PUBLICATIONS:

EUROCOPTER EC 120 Alert Service Bulletins No. 05A003 R3 and No. 04A005,
EUROCOPTER EC 120 Service Bulletins No. 71.003 and No. 71.005.

(Any subsequent approved revision to the Alert Service Bulletins and Service Bulletins is acceptable).

5. EFFECTIVE DATES:

Original issue : Upon receipt, from September 13, 2003

Revision 1 : May 22, 2004.

6. REMARK:

For any questions concerning the technical content of the requirements in this AD, please contact:

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7. APPROVAL:

This AD is approved under EASA reference No 2004-4810 of May 05, 2004.