



**Airworthiness
Directive
2003-161**

Luftfahrt-Bundesamt
Airworthiness Directive Section
Hermann-Blenk-Str. 26
38108 Braunschweig
Federal Republic of Germany

Eurocopter Deutschland

Effective Date: April 29, 2003

Affected:

Kind of aeronautical product: Helicopter
Manufacturer: Eurocopter Deutschland, Ottobrunn, Germany
Type: MBB-BK117
Models affected: MBB-BK117 A-1 up to C-1
Serial numbers affected: all, equipped with
– Tail rotor transmissions 4639003001 or 4639003007 with serial number 900 up to and including 932
– Intermediate gearboxes 4639002001 or 4639002005 with serial number 902 up to and including 928.
– all tail rotor transmissions 4639003001 and 4639003007 as well as all intermediate gearboxes 4639002001 and 4639002005 which have been overhauled or repaired on and since 16.07.2001 or which are being overhauled or repaired right at the moment the Alert Service Bulletin is issued
– bearings 4639310006 with serial number 3246 up to and including 3598 and all spare parts on stock
German Type Certificate No.: 3061

Subject:

Tail Rotor Drive – Replacement of bearings in tail rotor transmission and intermediate gearbox, reduction of the inspection interval for magnetic plug

Reason:

ECD has been informed by the manufacturer of the tail rotor transmission and intermediate gearbox, that production-related cracks were found on the cage cover of a bearing. These cracks could lead to parts of the cage cover separating from the cage cover itself and entering the tail rotor transmission/intermediate gearbox. Therefore, it is no longer permitted to use these bearings and they are to be replaced in the affected tail rotor transmission and intermediate gearbox. Until this replacement has been accomplished, a reduced inspection interval is valid for the inspection of the magnetic plug on helicopters in which tail rotor transmission and intermediate gearbox are not equipped with an electrical chip detector.

Action / Compliance:

Check spare parts in stores. Have inspection, and if necessary, replacement of bearings in tail rotor transmission and/or intermediate gearbox accomplished. Inspect magnetic plug.

The actions must be done in accordance with the instructions of the referenced Alert Service Bulletin.

1.D.1. Bearings in stores are not allowed to be installed and have to be sent to ZF Luftfahrttechnik by 30.04.2003 at the latest.

1.D.2. The serial numbers of tail rotor transmissions and intermediate gearboxes which have been overhauled or repaired on and since 16.07.2001 or which are being overhauled or repaired right at the moment the Alert Service Bulletin is issued, are to be sent to ZF Luftfahrttechnik by 30.04.2003 together with the address of the approved service station which has accomplished the overhaul or repair or which is accomplishing an overhaul or repair at the present moment.

1.D.3. Tail rotor transmissions and intermediate gearboxes in stores are not allowed to be used until
– their bearings have been inspected and, if necessary, have been replaced or
– evidence shows that none of the affected bearings is installed in the corresponding tail rotor transmission/intermediate gearbox.

1.D.4. The inspection and, if necessary, the replacement of the bearing or the replacement of the tail rotor transmission with a tail rotor transmission having a faultless bearing installed, has to be accomplished by 30.09.2003 at the latest.

Enquiries regarding this Airworthiness Directive should be referred to Mr. Olaf Schneider, Airworthiness Directive Section at the above address, fax-no. 0049 531/2355-720. Please note, that in case of any difficulty, reference should be made to the German issue!

1.D.5. After receipt of this AD, the magnetic plug of the tail rotor transmission has to be inspected before every first flight of the day. The reduced inspection interval is valid until

- the bearing has been inspected and, if necessary, has been replaced, or
- the tail rotor transmission has been replaced with a tail rotor transmission having a faultless bearing installed, or
- evidence shows that none of the affected bearings is installed in the tail rotor transmission.

1.D.6. The inspection and, if necessary, the replacement of the bearings or the replacement of the intermediate gearbox with an intermediate gearbox having faultless bearings installed, has to be accomplished by 30.09.2003 at the latest.

1.D.7. After receipt of this AD, the magnetic plug of the intermediate gearbox has to be inspected before every first flight of the day. The reduced inspection interval is valid until

- the bearings have been inspected and, if necessary, have been replaced, or
- the intermediate gearbox has been replaced with an intermediate gearbox having faultless bearings installed or
- evidence shows that none of the affected bearings is installed in the intermediate gearbox.

NOTE The inspection and, if necessary, replacement of bearings is accomplished by ZF Luftfahrttechnik or by an approved service station which is authorized for this case by ZF Luftfahrttechnik. Thus, to arrange for the necessary actions to be accomplished, it is absolutely necessary that the customer contacts ZF Luftfahrttechnik and provides information on affected tail rotor transmissions and/or intermediate gearboxes.

Address of ZF Luftfahrttechnik: ZF LUFTFAHRTECHNIK GMBH, Abt. LV
Flugplatzstraße
34379 Calden / Germany
Phone: ++49 (05674) 701-700 Fax: ++49 (05674) 701-606
E-mail: frank.mergler@zf.com

Technical publication of the manufacturer:

Eurocopter Deutschland MBB-BK117 Alert Service Bulletin No. ASB-MBB-BK117-30-108 dated April 14, 2003 which becomes herewith part of this AD and must be obtained from Messrs.:

Eurocopter Deutschland
P.O. Box
81663 München
Federal Republic of Germany

Phone: + 49 (0) 89 6000-9137 Fax: + 49 (0) 89 6000 6060

Holders of affected aircraft registered in Germany have to observe the following:

Action has to be accomplished by the owner of the aircraft or an approved service station and to be checked and entered in the log book by a licensed inspector.

As a result of the a.m. deficiencies, the airworthiness of the aircraft is affected to such an extent that after the expiry of the a.m. dates the aircraft may be operated only after proper accomplishment of the prescribed actions. In the interest of aviation safety outweighing the interest of the receiver in a postponement of the prescribed actions, the immediate compliance with this AD is to be directed.

An appeal to this notice may be raised within a period of one month following notification. Appeals are to be raised with the Luftfahrt-Bundesamt, Hermann-Blenk-Str. 26, 38108 Braunschweig, in writing or for the purpose of drawing up minutes.