



## Notification of a Proposal to issue an Airworthiness Directive

**PAD No.: 17-135**

**Issued: 02 October 2017**

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.  
All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

### Design Approval Holder's Name:

AIRBUS HELICOPTERS DEUTSCHLAND GmbH

### Type/Model designation(s):

BO105 helicopters

**Effective Date:** [TBD - standard: 14 days after AD issue date]

**TCDS Number(s):** EASA.R.011

**Foreign AD:** Not applicable

**Supersedure:** This AD supersedes Luftfahrt-Bundesamt (LBA) AD 97-275 dated 25 September 1997.

### ATA 63 – Main Rotor Drive – Main Rotor Mast – Visual Inspection

#### Manufacturer(s):

Eurocopter Deutschland GmbH, Eurocopter Hubschrauber GmbH, Messerschmitt-Bölkow-Blohm GmbH, Eurocopter Canada Ltd, Messerschmitt-Bölkow-Blohm Helicopter Canada Ltd

#### Applicability:

BO105 A, BO105 C, BO105 D, BO105 LS A-1, BO105 LS A-3 and BO105 S helicopters, all variants, all s/n.

#### Reason:

Cracks were detected in the rotor mast flange of a BO105 helicopter. Investigation determined that this defect may exist or develop on rotor masts Part Number (P/N) 4619 305 032 and P/N 4639 305 002.

This condition, if not detected, could lead to failure of the rotor mast flange, possibly resulting in loss of control of the helicopter.

To address this unsafe condition, Eurocopter Deutschland (ECD) issued Alert Service Bulletin (ASB) ASB-BO 105-10-110, providing inspections instructions, and LBA issued AD 97-275 requiring



repetitive inspections. Eurocopter Canada, at the time type certificate holder for BO105 LS-A3 helicopters, issued ASB-BO 105 LS-10-9, and Transport Canada issued AD CF-97-18, requiring repetitive inspections.

Since those ADs were issued, the type certificate of the BO105 LS A-3 was transferred to Airbus Helicopters Deutschland (AHD) and the model was added to Type Certificate Data Sheet EASA.R.011. In addition, it was determined that the reinforced rotor mast P/N 4639 305 095 (which is part of rotor mast assembly P/N 4639 205 017) is not affected by this unsafe condition, and Airbus Helicopters (AH) revised ASB-BO 105 LS-10-9 accordingly.

For the reason described above, this AD retains the requirements of LBA AD 97-275, which is superseded, takes over the requirements of Transport Canada AD CF-97-18, and requires repetitive inspections only for helicopters with specific rotor masts P/N installed.

It is expected that, when this AD is issued, Transport Canada will cancel AD CF-97-18 accordingly.

#### **Required Action(s) and Compliance Time(s):**

Required as indicated, unless accomplished previously:

Note 1: For the purpose of this AD, Group 1 helicopters have an “affected rotor mast” installed, as identified in Table 1 of this AD. Group 2 helicopters are those that do not have an “affected rotor mast” installed.

Note 2: ECD ASB-BO 105-10-110 original issue and AH ASB-BO105 LS-10-9 Revision 1 are hereafter collectively referred to as “the applicable ASB” in this AD.

Table 1 – Affected Rotor Masts and corresponding Assemblies

<b>Affected Rotor Mast P/N</b>	<b>Corresponding Rotor Mast Assembly P/N</b>
4619 305 032	4638 205 005
4639 305 002	4639 205 017 (see Note 3)

Note 3: Rotor mast assembly P/N 4639 205 017 could contain as well reinforced rotor mast P/N 4639 305 095, which is not affected.

#### **Repetitive Inspection:**

- (1) For Group 1 helicopters (see Note 1 of this AD): Within the compliance time as specified in Table 2 of this AD, as applicable, and, thereafter, at intervals not exceeding 100 flight hours, visually inspect the flange of the affected rotor mast (see Table 1 of this AD) in accordance with the instructions of the applicable ASB (see Note 2 of this AD).



Table 2 – Compliance Time

Model(s)	Compliance Time
All, except BO105 LS A-3	Before next flight after 25 September 1997 [the effective date of LBA AD 97-275]
BO105 LS A-3	Before next flight after 14 November 1997 [the effective date of TCCA AD CF-97-18]

**Corrective Action(s):**

- (2) If, during any inspection as required by paragraph (1) of this AD, any cracks are found, before next flight, contact AHD for applicable instructions and accomplish those instructions accordingly.

**Credit:**

- (3) Inspection(s) and corrective action(s) accomplished on a BO105 LS A-3 helicopter before the effective date of this AD in accordance with the instructions of the original issue of Eurocopter Canada Ltd ASB-BO105 LS-10-9 are acceptable to comply with the initial requirements of paragraphs (1) and (2) of this AD for that helicopter.

**Terminating Action:**

- (4) None.

**Part Installation:**

- (5) For Group 1 and Group 2 helicopters (see Note 1 of this AD): From the effective date of this AD, it is allowed to install (see Note 4 of this AD) on any helicopter an affected rotor mast assembly, or a main gearbox (MGB) equipped with an affected rotor mast assembly (see Table 1 of this AD), provided the rotor mast is new, or provided that, before installation, the rotor mast flange passes an inspection in accordance with the instructions of the applicable ASB (see Note 2 of this AD). Following installation, the rotor mast flange must be inspected as required by paragraph (1) of this AD.

Note 4: For the purpose of this AD, removing a rotor mast assembly or MGB from a helicopter and re-installing that rotor mast assembly or MGB on the same helicopter does not constitute “installation”.

**Ref. Publications:**

ECD ASB-BO 105-10-110 original issue dated 27 August 1997.

Eurocopter Canada ASB-BO 105 LS-10-9 original issue dated 11 September 1997, or Airbus Helicopters ASB-BO 105 LS-10-9 Revision 1 dated 28 July 2017.

The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.

**Remarks:**

1. This Proposed AD will be closed for consultation on 30 October 2017.



2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
3. For any question concerning the technical content of the requirements in this PAD, please contact: Airbus Helicopters Deutschland GmbH, Industriestrasse 4, 86607 Donauwörth, Federal Republic of Germany  
Telephone: + 49 (0)151 1422 8976; Facsimile: + 49 (0)906 71 4111.  
Web portal: <https://keycopter.airbushelicopters.com> > Technical Request Management  
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