



Airworthiness Directive

AD No.: 2018-0056

Issued: 14 March 2018

Note: This Airworthiness Directive (AD) 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.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:

AIRBUS HELICOPTERS DEUTSCHLAND GmbH

Type/Model designation(s):

BO105 helicopters

Effective Date: 26 March 2018

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 – 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 serial numbers (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 (TC) 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 TC of the BO105 LS A-3 was transferred to Airbus Helicopters Deutschland (AHD) and the model was added to Type Certificate Data Sheet (TCDS) 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. Transport Canada issued AD CF-1997-18R1, which cancels AD CF-97-18.

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 mast P/N installed.

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

Affected Rotor Mast P/N	Corresponding Rotor Mast Assembly P/N
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 also contain 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.

Parts 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 the above-mentioned documents is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. This AD was posted on 02 October 2017 as PAD 17-135 for consultation until 30 October 2017. No comments were received during the consultation period.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.



4. For any question concerning the technical content of the requirements in this AD, please contact:

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