



Airworthiness Directive

AD No.: 2019-0275

Issued: 07 November 2019

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 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 (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

AIRBUS HELICOPTERS DEUTSCHLAND GmbH

Type/Model designation(s):

MBB-BK117 D-2 helicopters

Effective Date: 21 November 2019

TCDS Number(s): EASA.R.010

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2019-0030 dated 13 February 2019.

ATA 71 – Power Plant – Engine Mount Bushings – Inspection / Replacement

Manufacturer(s):

Airbus Helicopters Deutschland GmbH (AHD), formerly Eurocopter Deutschland GmbH

Applicability:

MBB-BK117 D-2 helicopters, all serial numbers (s/n).

Definitions:

For the purpose of this AD, the following definitions apply:

The ASB: Airbus Helicopters (AH) Alert Service Bulletin (ASB) MBB-BK117 D-2-71A-002 Revision 1.

The second ASB: AH ASB MBB-BK117 D-2-71A-011.

Elastomeric bushing: Engine mount elastomeric bushings, having Part Number (P/N) 105-60386.

Metal bushing: Engine mount metal bushings, having P/N B712M10X1001.

Groups: Group 1 helicopters are those that have elastomeric bushings installed. Group 2 helicopters are those that have metal bushings installed. A helicopter having s/n 20261 or higher is Group 2, provided no engine mount bushing has been replaced on that helicopter since its manufacturing date.



Reason:

During a pre-flight check of an MBB-BK117 D-2 helicopter, an engine mount elastomeric bushing of one engine was found delaminated. During additional investigation, further cases of delaminated elastomeric bushings were detected.

This condition, if not detected and corrected, may lead to cracks and, eventually, failure of the engine mount front support pins, possibly resulting in loss of control of the helicopter.

To address this potential unsafe condition, AHD issued ASB MBB-BK117 D-2-71A-002 to provide instructions to inspect the engine mount elastomeric bushings, and EASA issued AD 2015-0198 to require repetitive inspections of elastomeric bushing and, depending on findings, accomplishment of applicable corrective action(s).

After that AD was issued, AH designed an improved engine mount bushing, and issued the ASB to provide instructions to replace elastomeric bushings with metal bushings, and EASA issued AD 2019-0030, retaining the requirements of EASA AD 2015-0198, which was superseded, and additionally requiring replacement of elastomeric bushings and prohibiting (re)installation thereof.

Since that AD was issued, occurrences have been reported of finding damaged metal bushings, the root cause of which is still under investigation. As a precautionary measure, AH issued the second ASB to provide instructions for repetitive inspections.

For the reason stated above, this AD retains the requirements of EASA AD 2019-0030, which is superseded, and requires repetitive inspections of the metal bushings.

This AD is considered an interim action and further AD action may follow.

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

Required as indicated, unless accomplished previously:

Repetitive Inspection:

- (1) For Group 1 helicopters: Within 50 flight hours (FH) after 14 October 2015 [the effective date of EASA AD 2015-0198], and, thereafter, at intervals not to exceed 50 FH (see Note 1 of this AD), inspect the bushings of the inner and outer forward trusses of both engines, in accordance with the instructions of paragraph 3.B.2 of the ASB.

Note 1: A non-cumulative tolerance of 10 FH may be applied to the compliance times specified in paragraph (1) of this AD to allow synchronization of the required inspections with other maintenance tasks, for which a noncumulative tolerance is already granted in the applicable Maintenance Manual.

- (2) For Group 2 helicopters: Within the compliance time as identified in Table 1 of this AD, and, thereafter, at intervals not to exceed 100 FH (see Note 2 of this AD), inspect the metal bushings of the inner and outer forward trusses of both engines, in accordance with the instructions of paragraph 3.B.2 of the second ASB.



Table 1 - Initial Inspection – A or B, whichever occurs later

A	Within 100 FH or 3 months, whichever occurs first after the effective date of this AD
B	Within 100 FH since first installation on a helicopters

Note 2: A non-cumulative tolerance of 30 FH may be applied to the compliance times specified in paragraph (2) of this AD to allow synchronization of the required inspections with other maintenance tasks, for which a noncumulative tolerance is already granted in the applicable Maintenance Manual.

Corrective Action(s):

- (3) If, during any inspection as required by paragraph (1) of this AD, any defective elastomeric bushing is found, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of section 3.B.2 of the ASB.
- (4) If, during any inspection as required by paragraph (2) of this AD, any worn metal bushing is found, as identified in the second ASB, within 50 FH after that inspection, replace that metal bushing in accordance with the instructions of section 3.B.2 of the second ASB.
- (5) If, during any inspection as required by paragraph (2) of this AD, any heavily worn metal bushing is found, as identified in the second ASB, before next flight replace that metal bushing in accordance with the instructions of section 3.B.2 of the second ASB.

Modification:

- (6) For Group 1 helicopters: Within 12 months after 27 February 2019 [the effective date of EASA AD 2019-0030], replace each elastomeric bushing with a metal bushing in accordance with the instructions of section 3.B.4 of the ASB (see Note 3 of this AD).

Note 3: After replacement of each elastomeric bushing with a metal bushing, a Group 1 helicopter is a Group 2 helicopter.

Terminating Action(s):

- (7) Accomplishment of corrective action(s) on a helicopter, as required by paragraphs (3), (4) or (5) of this AD, as applicable, does not constitute terminating action for the repetitive inspections as required by paragraphs (1) or (2) of this AD, as applicable, for that helicopter.
- (8) Modification of a helicopter as required by paragraph (6) of this AD constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD for that helicopter.

Credit:

- (9) Inspection and corrective action(s), accomplished on a helicopter before 27 February 2019 [the effective date of EASA AD 2019-0030] in accordance with the instructions of AHD ASB MBB-BK117 D-2-71A-002 original issue, are acceptable to comply with the initial requirements of paragraphs (1) and (3) of this AD for that helicopter.



Part(s) Installation:

- (10) Do not install on any helicopter an elastomeric bushing, as required by paragraph (10.1) or (10.2) of this AD, as applicable.
- (10.1) For Group 1 helicopters: After modification of that helicopter as required by paragraph (6) of this AD, as applicable.
- (10.2) For Group 2 helicopters: From 27 February 2019 [the effective date of EASA AD 2019-0030].

Reporting:

- (11) If, during any inspection as required by paragraph (2) of this AD, any worn or heavily worn metal bushing is found, within 30 days after that inspection or after the effective date of this AD, whichever occurs later, report the inspection results to AHD. This action can be accomplished in accordance with the instruction of section 3.B.4 of the second ASB.

Ref. Publications:

AHD ASB MBB-BK117 D-2-71A-002 original issue dated 28 September 2015, or AH ASB MBB-BK117 D-2-71A-002 Revision 01 dated 14 December 2018.

AH ASB MBB-BK117 D-2-71A-011 original issue dated 16 October 2019.

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. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.
3. Enquiries regarding this AD should be referred to the EASA Programming and Continued Airworthiness Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the [EU aviation safety reporting system](#).
5. For any question concerning the technical content of the requirements in this AD, please contact: Airbus Helicopters Deutschland GmbH, Industriestrasse 4, 86609 Donauwörth, Federal Republic of Germany, Telephone: + 33 (0)4 42 85 97 97;
Web portal: <https://keycopter.airbushelicopters.com> > Technical Request Management
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