



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 22-003

Issued: 19 January 2022

Note: This Proposed Airworthiness Directive (PAD) 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.

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):

MBB-BK117 C-2 helicopters

Effective Date: [TBD – standard: 14 days after AD publication]

TCDS Number(s): EASA.R.010

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2019-0313 dated 20 December 2019.

ATA 67 – Rotors Flight Control – Tail Rotor Actuator – Inspection

Manufacturer(s):

Airbus Helicopters Deutschland GmbH (AHD), formerly Eurocopter Deutschland GmbH; and Airbus Helicopters Inc., formerly American Eurocopter LLC

Applicability:

MBB-BK117 C-2 helicopters, all serial numbers

Definitions:

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

The ASB: Airbus Helicopters (AH) Alert Service Bulletin (ASB) MBB-BK117 C-2-67A-027 Revision 2.

The bolt: Bolts, having Part Number (P/N) 5038-0010, connecting the cardan-pivot joint with the piston rod of the tail rotor actuator (TRA).

Affected part: TRA assemblies, having P/N B673M40A1002 (Liebherr P/N 5038A0000-01), except those that have passed an inspection (minimum measured diameter of the bolt: 7.9 mm or more) in accordance with the instructions of section 3.B.2 of the ASB; and except those on which the bolt and the laminated washers have been replaced in accordance with the instructions of section 3.B.4



of the ASB; and except those on which Liebherr Service Bulletin 5038A-67-01 Revision 02 has been embodied.

Groups: Group 1 helicopters are those that have an affected part installed. Group 2 helicopters are those that do not have an affected part installed.

Reason:

Occurrences have been reported of finding a heavily worn bolt connecting the cardan-pivot joint with the piston rod of the TRA assembly.

This condition, if not detected and corrected, could lead to bolt failure, possibly resulting in loss of control of the helicopter.

To address this potential unsafe condition, AH issued ASB MBB-BK117 C-2-67A-027 original issue, later revised, providing inspection instructions, and EASA issued AD 2019-0319 to require repetitive inspections of the affected parts and, depending on findings, accomplishment of the applicable corrective action(s).

Since that AD was issued, improved assembly procedures have been developed for the affected parts, and AH issued the ASB, as defined in this AD, providing updated instructions for inspections and (re)assembly of affected parts.

For the reason described above, this AD requires repetitive inspections of the affected parts and, depending on findings, accomplishment of the applicable corrective action(s), and includes reference to an optional terminating action.

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

Required as indicated, unless accomplished previously:

Repetitive Inspections:

- (1) For Group 1 helicopters: Before an affected part accumulates 330 flight hours (FH) since first installation on a helicopter, or since last repair, or since last inspection accomplished in accordance with the instruction of AH ASB MBB-BK117 C-2-67A-027 original issue or Revision 1, or before next flight after the effective date of this AD, whichever occurs later, and, thereafter, at intervals not exceeding 300 FH (see Note 1 of this AD), inspect the affected part in accordance with the instructions of section 3.B.2 of the ASB.

Note 1: A non-cumulative tolerance of 10% may be applied to the repetitive inspection intervals specified in paragraphs (1), (2.2) and (5.2) of this AD to allow synchronization of the required inspections with other maintenance tasks, for which a non-cumulative tolerance is already granted in the applicable Maintenance Manual.

Corrective Action(s):

- (2) If, during any inspection as required by paragraph (1) of this AD, the minimum measured diameter of the bolt is found to be less than 7.9 mm, but equal or more than 7.85 mm, accomplish the actions as specified in paragraph (2.1) or (2.2) of this AD:



- (2.1) Before next flight, replace the bolt and the laminated washers of that affected part in accordance with the instructions of section 3.B.4 of the ASB.
- (2.2) Accomplish subsequent inspections of that affected part at intervals not exceeding 150 FH (see Note 1 of this AD).
- (3) If, during any inspection as required by paragraph (1) of this AD, the minimum measured diameter of the bolt is found to be less than 7.85 mm, before next flight, accomplish the actions as specified in paragraph (3.1) or (3.2):
- (3.1) Contact AHD for approved repair instructions and, within the compliance time specified therein, accomplish those instruction accordingly.
- (3.2) Inspect the bore hole of the piston rod of that affected part in accordance with the instructions of section 3.B.3 of the ASB.
- (4) If, during the inspection as required by paragraph (3.2) of this AD, the maximum measured diameter of the bore hole of the piston rod of the affected part is found to be 8.05 mm or less, before next flight, replace the bolt and the laminated washers of that affected part in accordance with the instructions of section 3.B.4 of the ASB.
- (5) If, during the inspection as required by paragraph (3.2) of this AD, the maximum measured diameter of the bore hole of the piston rod of the affected part is found to be more than 8.05 mm, accomplish the actions as specified in paragraph (5.1) or (5.2):
- (5.1) Before next flight, contact AHD for approved repair instructions and, within the compliance time specified therein, accomplish those instruction accordingly.
- (5.2) Accomplish subsequent inspections of the affected part at intervals not exceeding 50 FH (see Note 1 of this AD).

Parts Installation:

- (6) Group 1 and Group 2 helicopters: From the effective date of this AD, it is allowed to install on any helicopter an affected part, provided that, after that installation, the affected part is inspected as required by this AD.

Terminating Action:

- (7) Accomplishment of an inspection of an affect part, where the minimum measured diameter of the bolt is found to be 7.9 mm or more, constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD for that affected part (see Note 2 of this AD).
- (8) Replacement of the bolt and the laminated washers of an affected part in accordance with the instructions of section 3.B.4 of the ASB, as required in paragraph (2.1) or (4) of this AD, constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD for that affected part (see Note 2 of this AD).



- (9) Accomplishment of the corrective action on an affected part in accordance with AHD approved repair instructions, as required by paragraph (3.1) or (5.1) of this AD, does not constitute terminating action for the repetitive inspections as required by paragraph (1) of this AD for that affected part, unless otherwise stated in those repair instructions (see Note 2 of this AD).

Note 2: The action(s) referenced in paragraphs (7), (8) and (9) of this AD do not constitute terminating action for other applicable repetitive inspections as referenced in the applicable Aircraft Maintenance Manual.

Ref. Publications:

AH ASB MBB-BK117 C-2-67A-027 original issue dated 09 December 2019, Revision 1 dated 17 December 2019, or Revision 2 dated 15 December 2021.

The use of later approved revisions of the above-mentioned document is acceptable for compliance with the requirements of this AD.

Remarks:

1. This Proposed AD will be closed for consultation 16 February 2022.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other than those covered by the design to which this PAD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
4. For any question concerning the technical content of the requirements in this PAD, 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://airbusworld.helicopters.airbus.com>
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