Airworthiness Directive

AD No.: 2023-0175

Issued: 05 October 2023

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, or Annex Vb Part ML.A.301, as applicable, 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 Annex Vb Part ML.A.303, as applicable] 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 helicopters

Effective Date: 19 October 2023

TCDS Number(s): EASA.R.010

Foreign AD: Not applicable

Supersedure: None

ATA – Rotorcraft Flight Manual – Altitude Correction – Amendment
ATA 21 – Air Conditioning – Cooling System – Modification

Manufacturer(s):
Airbus Helicopters (AH) Deutschland GmbH; Kawasaki Heavy Industries, Ltd.; and Airbus Helicopters Inc.

Applicability:
MBB-BK117 D-2, D-2m, D-3 and D-3m helicopters, all serial numbers (s/n).

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

The ACS RFMS altitude correction procedure: Air Conditioning System (ACS) Rotorcraft Flight Manual Supplement (RFMS) 9.2-12 altitude correction procedure as defined in Appendix 1 of this AD.

The SB: AH Service Bulletin (SB) MBB-BK117 D-2-21-016 or MBB-BK117 D-3-21-001, as applicable.

Grids: Condenser outlet grids having part number (P/N) D211M1821302 or P/N D211M1822302.

Covers: Condenser outlet covers having P/N D211M1821402 or P/N D211M1822402.

Groups:
Group 1a helicopters are those that have an ACS embodied and grids installed.
Group 1b helicopters are those that have an ACS embodied and covers installed.
Group 2 helicopters are those that do not have an ACS embodied.

Reason:
Occurrences were reported of airspeed and altitude indication errors.

Investigation identified that the grids affect the static ports of the pitot-static system 1 and 2.

This condition, if not corrected, could lead to airspeed and altitude indication errors, possibly resulting in a significant increase in crew workload and reduced situational awareness.

To address this potential unsafe condition, AH developed the ACS RFMS altitude correction procedure, issued the SB to provide instructions to replace grids with covers, and published the Safety Information Notice 3657-S-34.

For the reason described above, this AD requires amendment of the applicable RFMS by incorporating the ACS RFMS altitude correction procedure, and replacement of grids with covers.

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

Required Action(s) and Compliance Time(s):
Required as indicated, unless accomplished previously:

RFMS 9.2-12 Amendment:
(1) For Group 1a helicopters: Within 30 days or 30 flight hours (FH), whichever occurs first after the effective date of this AD, amend the applicable RFMS 9.2-12 by incorporating the ACS RFMS altitude correction procedure, as defined in appendix 1 of this AD; thereafter inform all flight crews, and operate the helicopter accordingly.

(2) Amending the applicable RFMS 9.2-12 of a helicopter by incorporating the RFMS 9.2-12 revision as listed in Table 1 of this AD, as applicable (or a later revision which includes the same content as the ACS RFMS altitude correction procedure) is an acceptable method to comply with the requirements of paragraph (1) of this AD for that helicopter.

Table 1 – RFMS 9.2-12 Revisions

MBB-BK117 Model	RFMS Revision
D-2	3
D-2m	2
D-3	3
D-3m	3

Modification:

(3) For Group 1a helicopters: Within 800 FH after the effective date of this AD, replace the grids (left-hand and right-hand) with covers in accordance with the instructions of the SB.

(4) Following modification of a helicopter as required by paragraph (3) of this AD, the RFMS 9.2-12 amendment as required by paragraph (1) of this AD is no longer required and can be removed from the RFMS 9.2-12 of that helicopter.

Part(s) installation:

(5) Do not install any grid on a helicopter, as required by paragraph (5.1) or (5.2) of this AD, as applicable:

(5.1) For Group 1a helicopters: After modification of the helicopter as required by paragraph (3) of this AD.

(5.2) For Group 1b and Group 2 helicopters: From the effective date of this AD.

(6) For Group 2 helicopters: From the effective date of this AD, it is allowed to install an ACS on a helicopter, provided that, concurrently with that modification, covers are installed on that helicopter in accordance with the instructions of the SB.

Ref. Publications:

AH SB MBB-BK117 D-2-21-016 initial issue dated 27 July 2021.

AH SB MBB-BK117 D-3-21-001 initial issue dated 27 July 2021.

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 Safety 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. This may include reporting on the same or similar components, other than those covered by the design to which this AD 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.

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;
Web portal: https://airbusworld.helicopters.airbus.com
E-mail: customersupport.helicopters@airbus.com.

Appendix 1 – RFMS 9.2-12 Limitations

MBB-BK117

BK117 D-2 and BK117 D-2m:

LIMITATIONS

ALTITUDE CORRECTION

EFFECTIVITY *If ACS external outlets are NOT covered in accordance with SB MBB- BK117 D- 2- 21-016 the following applies:*

At airspeeds above 110 KIAS, 50 ft shall be subtracted from the indicated altitude to obtain the correct altitude.

EFFECTIVITY *All*

BK117 D-3 and BK117 D-3m:

LIMITATIONS

ALTITUDE CORRECTION

EFFECTIVITY *If ACS external outlets are NOT covered in accordance with SB MBB−BK117 D−3−21−001 the following applies:*

At airspeeds above 110 KIAS, 50 ft shall be subtracted from the indicated altitude to obtain the correct altitude.

EFFECTIVITY *All*