



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 19-134

Issued: 22 July 2019

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 D-2 helicopters

Effective Date: [TBD - proposed: 7 days after AD issue date]

TCDS Number(s): EASA.R.010

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2017-0238 dated 30 November 2017 and EASA AD 2018-0230 dated 23 October 2018.

ATA 42 – Integrated Modular Avionics – Aircraft Management Computer Software – Update

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-2-42A-005 Revision 3.

Affected part: Aircraft Management Computers (AMC), having a software (SW) version installed, identified as "pre-mod SW" in Table 2 of this AD, or earlier.

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:

An occurrence was reported of erroneous low rotor revolutions per minute (RPM) indication after establishing One Engine Inoperative (OEI) condition.

This condition, if not corrected, could lead to inappropriate pilot response during operations in OEI condition, possibly resulting in damage to the helicopter and/or injury to occupants.

To address this unsafe condition, pending an AMC SW modification, Airbus Helicopters (AH) issued certain Rotorcraft Flight Manual (RFM) Temporary Revisions (TR), updating the “Emergency and malfunction procedures” section of the applicable RFM, and EASA issued AD 2017-0238 requiring amendment of the MBB-BK 117 D2 RFM.

Since that AD was issued, AH developed an upgraded AMC SW, which prevents further occurrences, and issued the ASB providing instructions to update the SW of affected parts.

For the reasons described above, this AD retains the requirements of EASA AD 2017-0238, which is superseded, and requires updating the AMC SW. This AD also supersedes EASA AD 2018-0230, requiring installation of a previous AMC SW version, which was developed to address a different unsafe condition.

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

Required as indicated, unless accomplished previously:

Restatement of Requirements of EASA AD 2017-0238**RFM Amendment:**

- (1) For Group 1 helicopters: Within 14 days after 07 December 2017 [the effective date of EASA AD 2017-0238], amend section 3 of the RFM, “Emergency and malfunction procedures”, by inserting a copy of the RFM TR as identified in Table 1 of this AD, as applicable, inform all flight crews and, thereafter, operate the helicopter accordingly.

Table 1 – RFM Temporary Revision

MBB-BK 117 D-2 Configuration	RFM Temporary Revision	RFM Revision
D-2 and D-2m (basic)	TR No. 2, dated 20 November 2017	See Note 1 of this AD
D-2 (Helionix Step 2)	TR No. 2, dated 20 November 2017	RFM Revision 16
D-2m (Helionix Step 2)	TR No. 2, dated 20 November 2017	RFM Revision 9

Note 1: On the effective date of this AD, no D-2 and D-2m (basic) helicopters are known to be in service.



- (2) Amending the “Emergency and malfunction procedures” section of the applicable RFM of a helicopter by incorporating RFM revision as identified in Table 1 of this AD, as applicable, or later revision, is an acceptable method to comply with the RFM amendment requirement of paragraph (1) of this AD for that helicopter.

Partial Restatement of Requirements of EASA AD 2018-0230

Modification:

- (3) For Group 1 helicopters that have AMC installed, having SW version V5.0.2, part number (P/N) D462C01S0502 or P/N D462C03S0502, or earlier: Within 2 months after 06 November 2018 [the effective date of EASA AD 2018-0230], update the SW of each AMC in accordance with the instructions of Section 3.B of AH ASB MBB-BK117 D-2-42A-004.

New Requirements of this AD

Modification:

- (4) For Group 1 helicopters: Within 2 months after the effective date of this AD, update the SW of each affected part to the corresponding upgraded SW, as listed in Table 2 of this AD, in accordance with the instructions of Section 3.B.2 of the ASB.

Table 2 – AMC SW update

Helicopter Configuration	Pre-mod SW	Upgraded SW
D-2 and D-2m (basic)	See Note 1 of this AD	
D-2 and D-2m (Helionix Step 2)	V5.0.1 P/N D462C01S0501	V5.0.4 P/N D462C01S0504
	V5.0.2 P/N D462C01S0502	V5.0.4 P/N D462C01S0504
	V5.0.2 P/N D462C03S0502	V5.0.4 P/N D462C03S0504
D-2 and D-2m (Helionix Step 2.0.1)	V5.0.3 P/N D462C01S0503	V5.0.4 P/N D462C01S0504
	V5.0.3 P/N D462C03S0503	V5.0.4 P/N D462C03S0504
D-2 and D-2m (Helionix Step 3)	V6.0 P/N D462C01S0600	V6.0.2 P/N D462C01S0602
	V6.0 P/N D462C03S0600	V6.0.2 P/N D462C03S0602

- (5) Replacement on a helicopter of an affected part with an AMC having installed the corresponding upgraded SW as listed in Table 2 of this AD, or later SW upgrade, in accordance with instructions provided by AH, is an acceptable alternative method to comply with the requirements of paragraph (4) of this AD for that helicopter.
- (6) Modification of a helicopter as required by paragraph (4) of this AD constitutes compliance with the requirements of paragraph (3) of this AD for that helicopter.



Parts Installation:

- (7) Do not install on any helicopter an affected part, and do not upload any SW identified as “pre-mod SW” in Table 2 of this AD, or earlier SW version, on any AMC, as required by paragraph (7.1) or (7.2.) of this AD, as applicable.

(7.1) For Group 1 helicopters: After modification of that helicopter as required by paragraph (4) of this AD.

(7.2) For Group 2 helicopters: From the effective date of this AD.

- (8) From the effective date of this AD, do not install on any helicopter an AMC, having installed SW version V5.0.2, P/N D462C01S0502 or P/N D462C03S0502, or earlier SW version, and do not upload on any AMC a SW version earlier than V5.0.3.

RFM Amendment:

- (9) After modification of a Group 1 helicopter as required by paragraph (3) of this AD, it is allowed to remove the RFM TR listed in Table 3 of this AD, as applicable, previously inserted as required by paragraph (1) of EASA AD 2018-0230, from the RFM of that helicopter. This can be accomplished by incorporating RFM revision as identified in Table 3 of this AD, as applicable, or later revision in the applicable RFM.

Table 3 – RFM Temporary Revision

MBB-BK117 D-2 Configuration	RFM Temporary Revision	RFM Revision
D-2 (basic)	TR No. 1, dated 28 March 2017	See Note 1 of this AD
D-2m	TR No. 2, dated 28 March 2017	See Note 1 of this AD
D-2 (Helionix Step 2)	TR No. 1, dated 28 March 2017	RFM revision 10
D-2m (Helionix Step 2)	TR No. 1, dated 28 March 2017	RFM Revision 7

- (10) Before next flight after modification of a Group 1 helicopter as required by paragraph (4) of this AD, remove the RFM TR listed in Table 1 of this AD, previously inserted as required by paragraph (1) of this AD, from the RFM of that helicopter, inform all flight crews and, thereafter, operate the helicopter accordingly.
- (11) Amending the “Emergency and malfunction procedures” section of the applicable RFM of a helicopter by incorporating RFM revision as identified in Table 1 of this AD, as applicable, or later revision, is an acceptable method to comply with the RFM amendment requirement of paragraph (10) of this AD for that helicopter



Ref. Publications:

AH Flight Manual BK117 D-2, TR 2, dated 20 November 2017.

AH Flight Manual BK117 D-2 (Helionix Step 2), TR 2, dated 20 November 2017.

AH Flight Manual BK117 D-2m (Helionix Step 2), TR 2, dated 20 November 2017.

AH ASB MBB-BK117 D-2-42A-004 original issue dated 04 September 2018.

AH ASB MBB-BK117 D-2-42A-005 revision 3 dated 06 June 2019.

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 on 05 August 2019.
2. Enquiries regarding this PAD should be referred to the EASA Programming and Continued Airworthiness 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](#).
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://keycopter.airbushelicopters.com> > Technical Request Management
E-mail: customersupport.helicopters@airbus.com.

