

Airworthiness Directive

AD No.: 2022-0143
Issued: 08 July 2022

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
 AIRBUS HELICOPTERS

Type/Model designation(s):

EC135, EC635 and MBB-BK117 helicopters
 EC 175 B and H160-B helicopters

Effective Date: 15 July 2022

TCDS Number(s): EASA.R.009, EASA.R.010, EASA.R.150 and EASA.R.516

Foreign AD: Not applicable

Supersedure: None

ATA 42 – Integrated Modular Avionics – Ethernet Network – Inspection

Manufacturer(s):

Airbus Helicopters Deutschland (AHD) GmbH, formerly Eurocopter Deutschland GmbH; Eurocopter España S.A.; Kawasaki Heavy Industries, Ltd.; and Airbus Helicopters (AH), formerly Eurocopter, Eurocopter France

Applicability:

AHD EC135 P3H, EC135 T3H, EC635 P3H and EC635 T3H helicopters, all serial numbers (s/n);

AHD MBB-BK117 D-2, MBB-BK117 D-3 and MBB-BK117 D-3m helicopters, all variants, all s/n;

AH EC 175 B helicopters, all s/n; and

AH H160-B helicopters, all s/n.

Definitions:

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

The ASB: AH Alert Service Bulletin (ASB) EC135H-05A-001, ASB MBB-BK117 D-2-05A-003, ASB MBB-BK117 D-3-05A-001, ASB EC175-05-00-0003 and ASB H160-46-31-0001, as applicable.

Maintenance mode test procedure: in accordance with the instructions of section 3.B.1 of the ASB (EC135 and MBB-BK117 helicopters) or section 'Accomplishment Procedure - 4.2' of the ASB (EC 175 and H160 helicopters), as applicable.

Operational mode test procedure: in accordance with the instructions of section 3.B.3 of the ASB (EC135 and MBB-BK117 helicopters) or section 'Accomplishment Procedure - 4.4' of the ASB (EC 175 and H160 helicopters), as applicable.

Troubleshooting instructions: in accordance with the instructions of sections 3.B.2 and 3.B.4 of the ASB (EC135 and MBB-BK117 helicopters) or sections 'Accomplishment Procedure - 4.3' and 'Accomplishment Procedure - 4.5' of the ASB (EC 175 and H160 helicopters), as applicable.

Operational limitation: Prohibition to operate a helicopter in Instrument Meteorological Conditions (IMC) and Night Visual Meteorological Conditions (VMC); and installation of a placard in the cockpit in accordance with the instructions of the ASB.

Reason:

Occurrences have been reported of multiple Multi-Function Display (MFD) failures. Investigations identified design deficiencies in the Ethernet network management of the Integrated Modular Avionics suite (IMA), which caused MFD failures after damage to an Ethernet wiring connector and/or an avionics equipment.

This condition, if not detected and corrected, could lead to reduced situational awareness of the pilot, possibly resulting in reduced control of the helicopter.

Due to similarity of design, several types may be affected by similar failures. To address this potential unsafe condition, AH issued the ASB, as defined in this AD, providing instructions for inspections. For the reason described above, this AD requires repetitive checks of the functional status of the IMA Ethernet network and, depending on findings, accomplishment of applicable corrective action(s), which may include an operational limitation.

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:

Inspection(s):

- (1) Within 55 flight hours (FH) after the effective date of this AD, and, thereafter, at intervals not to exceed 110 FH, accomplish a check in accordance with the maintenance mode test procedure, and in accordance with the operational mode test procedure, as defined in this AD.

Corrective Action(s):

- (2) If, during any check as required by paragraph (1) of this AD, any discrepancy, as identified in the ASB, is detected, before next flight, accomplish the applicable corrective action(s) in accordance with the troubleshooting instructions, as defined in this AD.



Additional Maintenance Requirements:

- (3) From the effective date of this AD, following accomplishment of any maintenance task on a helicopter that includes disconnection and subsequent re-connection of any connector of the IMA Ethernet network, or following any MFD failure, before next flight, accomplish a check in accordance with the maintenance mode test procedure, and in accordance with the operational mode test procedure, and, depending on findings, accomplish applicable corrective action(s) in accordance with the troubleshooting instructions.

Operational Limitation:

- (4) If, after accomplishment of troubleshooting instructions as required by paragraph (2) or (3) of this AD, as applicable, any discrepancy cannot be removed or corrected, before next flight, implement the operational limitation, as defined in this AD, inform all flight crew and, thereafter, operate the helicopter accordingly.

Alternative Method:

- (5) Implementing the operational limitation on a helicopter as specified in paragraph (4) of this AD is an acceptable alternative method to defer compliance with the requirements of paragraphs (1) and (2) of this AD for that helicopter. Following accomplishment of the checks and corrective action(s), as applicable, as required by paragraph (1) and (2) of this AD, the operational limitation can be removed, provided any discrepancy has been removed or corrected, as applicable.

Terminating Action(s):

- (6) None.

Ref. Publications:

AH ASB EC135H-05A-001 original issue dated 07 July 2022.

AH ASB MBB-BK117 D-2-05A-003 original issue dated 07 July 2022.

AH ASB MBB-BK117 D-3-05A-001 original issue dated 07 July 2022.

AH ASB EC175-05-00-0003 original issue dated 07 July 2022.

AH ASB H160-46-31-0001 original issue dated 07 July 2022.

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:
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