



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 22-071

Issued: 31 May 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

Type/Model designation(s):

AS 350, EC 130 and AS 355 helicopters

Effective Date: [TBD - standard: 14 days after AD issue date]

TCDS Number(s): EASA.R.008 and EASA.R.146

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2018-0152 dated 18 July 2018.

ATA 53 – Fuselage – Main Gearbox Bracket Bolts – Inspection

Manufacturer(s):

Airbus Helicopters (AH), formerly Eurocopter, Eurocopter France, Aérospatiale

Applicability:

AS 350 B, AS 350 D, AS 350 B1, AS 350 B2, AS 350 BA, AS 350 BB, AS 350 B3, EC 130 B4, EC 130 T2, AS 355 E, AS355 F, AS355 F1, AS355 F2, AS355 N and AS355 NP helicopters, all serial numbers.

Definitions:

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

Affected bolt: Main gearbox (MGB) bracket installation bolts, having Part Number (P/N) 22201BC080020L, P/N 22201BC080021L and P/N 22201BC080022L.

Modified bolt: MGB bracket installation bolts, having P/N 22201BE080025L, P/N 22201BE080026L and P/N 22201BE080027L.

The ASB: AH Alert Service Bulletin (ASB) EC130-05A028, AH ASB AS350-05.00.92 and AH ASB AS355-05.00.79, as applicable.



The modification SB: AH Service Bulletin (SB) EC130-53-045, AH SB AS350-53.00.65 and AH SB AS355-53.00.36, as applicable.

Groups: Group 1 helicopters are those having an affected bolt installed. Group 2 helicopters are those that do not have an affected bolt installed. A helicopter on which AH modification (mod) 0720049 and AH mod 0720164 has been embodied in production is a Group 2 helicopter, provided that no affected bolt has been installed on that helicopter.

Reason:

An occurrence was reported of finding the head of one affected bolt missing from one of the suspension-bar fittings.

This condition, if not detected and corrected, could lead to separation of the suspension-bar fitting and the MGB suspension bar, possibly resulting in loss of the main rotor assembly and, consequently, loss of power transmission of the helicopter.

As an interim measure to address this potential unsafe condition, AH issued the ASB, providing inspection instructions. Consequently, EASA published AD 2018-0152 to require a one-time inspection of the affected bolts and, depending on findings, accomplishment of applicable corrective action(s). That AD also required reporting of inspection results.

After that AD was published, investigations were concluded and showed that the bolt head was not parallel to the washer. This installation caused an increased stress in the screw head leading to crack initiation, which propagated until the separation of the bolt head was complete. To address this condition, AH developed mod 0720049 (new convex/concave washers and modified bolts) for an improved MGB suspension bar-fitting assembly. In addition, for certain helicopters, AH developed mod 0720164 for shims installation for the LH rear-suspension-bar fitting. AH also issued the modification SB, as defined in this AD, to make these mods available to in-service helicopters.

For the reason described above, this AD retains the requirements of EASA AD 2018-0152, which is superseded, specifies that the one-time inspection is only required for certain helicopters and provides specific requirements for affected bolt installation. This AD also prohibits concurrent installation of affected bolts and modified bolts on one helicopter.

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

Required as indicated, unless accomplished previously:

Inspection(s):

- (1) For Group 1 helicopters: Within the compliance time as specified in Table 1 of this AD, as applicable, inspect each affected bolt in accordance with the instructions of paragraph 3.B.2.a of the ASB.



Table 1 – Inspection (see Note 1 of this AD)

Flight Hours (FH)	Compliance Time
Less than 1 035	Before exceeding 1 200 FH
1 035 or more	Within 165 FH or 12 months, whichever occurs first after 01 August 2018 [the effective date of EASA AD 2018-0152]

Note 1: Unless specified otherwise, the FH indicated in Table 1 of this AD are those accumulated by the helicopter on 01 August 2018 [the effective date of EASA AD 2018-0152], since its first flight.

Corrective Action(s):

- (2) If, during the inspection as required by paragraph (1) this AD, the screw head of only one affected bolt is found missing on an MGB bracket, before next flight, replace all affected bolts of that MGB bracket in accordance with the instructions of paragraph 3.B.2.b of the ASB, or modify that helicopter in accordance with the instructions of the modification SB.
- (3) If, during the inspection as required by paragraph (1) of this AD, more than one screw head of affected bolts are found missing on a helicopter, before next flight, contact AH for approved repair instructions and accomplish those instructions accordingly.

Modification:

- (4) Modification of a Group 1 helicopter in accordance with the instructions of the modification SB cancels the requirements of paragraph (1) of this AD for that helicopter.

Part(s) Installation:

- (5) For Group 1 helicopters: From the effective date of this AD, do not install modified bolt(s) on a helicopter, unless the helicopter has been modified as specified in paragraph (2) or (4) of this AD.
- (6) Do not install an affected bolt on any helicopter, as required by paragraph (6.1) or (6.2) of this AD, as applicable.
 - (6.1) For Group 1 helicopters: After modification of the helicopter in accordance with the modification SB, as specified in paragraph (2) or (4) of this AD.
 - (6.2) For Group 2 helicopters: From the effective date of this AD.

Ref. Publications:

AH EC 130 ASB No. EC130-05A028 original issue dated 16 July 2018, or Revision 1 dated 30 May 2022.

AH AS 350 ASB No. AS350-05.00.92 original issue dated 16 July 2018, or Revision 1 dated 30 May 2022.

AH AS 355 ASB No. AS355-05.00.79 original issue dated 16 July 2018, or Revision 1 dated 30 May 2022.



AH SB EC130-53-045 original issue dated 30 May 2022.

AH SB AS350-53.00.65 original issue dated 30 May 2022.

AH SB AS355-53.00.36 original issue dated 30 May 2022.

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

Remarks:

1. This Proposed AD will be closed for consultation on 28 June 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 – Aéroport de Marseille Provence, 13725 Marignane Cedex, France
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