

## Airworthiness Directive

**AD No.:** 2021-0046

**Issued:** 12 February 2021

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, 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 agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

**Design Approval Holder's Name:**

AIRBUS HELICOPTERS

**Type/Model designation(s):**

EC 120 B helicopters

**Effective Date:** 26 February 2021

**TCDS Number(s):** EASA.R.508

**Foreign AD:** Not applicable

**Supersedure:** This AD supersedes EASA AD 2019-0139 dated 12 June 2019.

### ATA 62 – Main Rotor – Hub Scissors / Attachment Bolts – Inspection / Replacement

**Manufacturer(s):**

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

**Applicability:**

EC 120 B helicopters, all serial numbers.

**Definitions:**

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

**Affected part:** Main rotor (MR) hub scissors attachment bolts, installed on an MR hub scissors assembly Part Number C623A21101.

**Serviceable part:** MR hub scissors attachment bolts that are new (never installed before), or have passed an inspection (no defects found) in accordance with the instructions of the ASBs.

**The markings ASB:** AH Alert Service Bulletin (ASB) EC120-05A019 Revision 1.

**The inspection ASB:** AH ASB EC120-62A020.

**Reason:**

An occurrence was reported where, during a pre-flight inspection, a broken MR hub scissors attachment bolt was found, and another bolt was found bent. The preliminary result of the technical investigation revealed that the event might be due to exceedance of acceptable criteria of corrosion and some other efforts applied to the affected MR hub scissors attachment bolts.

This condition, if not detected and corrected, could lead to detachment of an MR hub scissors attachment bolt, possibly resulting in complete loss of control of the helicopter.

To address this unsafe condition, AH issued the inspection ASB to provide inspection instructions, and consequently, EASA issued AD 2018-0186 to require a one-time inspection of the affected parts and, depending on findings, accomplishment of applicable corrective action(s).

After that AD was issued, AH issued ASB EC120-05A019 (original issue) to provide instructions to apply red line markings on the bolt head, washer, the scissor branch and the mast ring, followed by repetitive inspections. Consequently, EASA issued AD 2019-0139, retaining the requirements of EASA AD 2018-0186, which was superseded, to require applications of red line markings and, following that action, repetitive inspections to detect rotation and, depending on findings, accomplishment of applicable corrective action(s).

Since that AD was issued, AH issued the markings ASB (as defined in this AD) to provide instructions to apply additional (red line) markings on the corresponding nut side, washer, the scissor branch and the mast ring, and to control the integrity of the pin to make sure that is not sheared.

For the reason described above, this AD retains the requirements of EASA AD 2019-0139, which is superseded, requires additional (red line) marking of affected parts to support detection of any rotation, and requires that the integrity of the pin is controlled.

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

Required as indicated, unless accomplished previously:

**Inspection(s) / Markings:**

- (1) Within 50 flight hours (FH) after 05 September 2018 [the effective date of EASA AD 2018-0186], inspect each affected part in accordance with the instructions of the inspection ASB.
- (2) Within 50 FH after the effective date of this AD, apply markings on each affected part (red lines, on the bolt head side and on the nut side) in accordance with the instructions of the markings ASB, and, thereafter, during each "15 FH / 7 D check" as defined in the Aircraft Maintenance Manual (AMM), inspect each affected part in accordance with the instructions of the markings ASB.

**Corrective Action(s):**

- (3) If, during the inspection as required by paragraph (1) of this AD, any discrepancies are detected as defined in the inspection ASB, before next flight, remove the affected bolts from service in accordance with the instructions of the inspection ASB, contact AH for approved repair instructions and accomplish those instructions accordingly.



- (4) If, during any inspection as required by paragraph (2) of this AD, any discrepancies are detected as defined in the markings ASB, before next flight, contact AH for approved repair instructions and accomplish those instructions accordingly.

#### Reporting:

- (5) Within 30 days after the inspection as required by paragraph (1) of this AD, report the inspection results (including no findings) to AH.

#### Parts Installation:

- (6) From 05 September 2018 [the effective date of EASA AD 2018-0186], it is allowed to install on any helicopter an affected part, provided it is a serviceable part, as defined in this AD.

#### Ref. Publications:

AH ASB EC120-62A020 original issue dated 23 August 2018.

AH ASB EC120-05A019 original issue dated 11 June 2019 and Revision 1 dated 5 October 2020.

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. This AD was posted on 27 January 2021 as PAD 21-004 for consultation until 10 February 2021. No comments were received during the consultation period.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto: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 – Aéroport de Marseille Provence, 13725 Marignane CEDEX, France  
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