



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 18-045

Issued: 27 March 2018

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 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):

EC 130 B4 and T2 helicopters

Effective Date: [planned: 7 days after AD issue date]

TCDS Number(s): EASA.R.008

Foreign AD: Not Applicable

Supersedure: This AD supersedes EASA AD 2017-0080 dated 05 May 2017.

ATA 53 – Fuselage – Tail Boom / Fenestron Junction Frame – Inspection

Manufacturer(s):

Airbus Helicopters (formerly Eurocopter, Eurocopter France)

Applicability:

EC 130 B4 and EC 130 T2 helicopters, all serial numbers, except those on which Airbus modification (mod) 074775 has been embodied.

Definitions:

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

The ASB: Airbus Helicopters (AH) issued EC130 Emergency Alert Service Bulletin (ASB) 05A017 Revision 6, or later approved revision.

The modification SB: AH Service Bulletin (SB) EC130-53-036.

Groups: Group 1 helicopters are those in pre-mod AH 350A087421 or pre-SB EC130-53-029 configuration. Group 2 helicopters are those in post-mod AH 350A087421 or post-SB EC130-53-029 configuration. Group 3 helicopters are those in post-mod 074609 (SB 53-024), or on which the skin in the Fenestron/tail boom junction area was repaired.



Reason:

Following inspection of EC 130 helicopters, two events were reported of finding crack propagation through the junction frame of the tail boom / Fenestron. The investigation revealed that the cracks initiated in the lower right hand part of the frame between the web and the flange where the lower spar of the tail boom is joined. Although the cracks were of significant length, no deterioration was visible from the outside of the helicopter.

This condition, if not detected and corrected, could lead to structural failure, possibly resulting in Fenestron detachment and consequent loss of control of the helicopter.

To initially address this potential unsafe condition, Airbus Helicopters (AH) issued the ASB to provide instructions for detailed visual inspections on the inside of the tail boom. Prompted by these findings, EASA issued Emergency AD 2014-0145-E (later revised) to require repetitive inspections of the affected area and, depending on findings, accomplishment of applicable corrective action(s).

Following new developments involving multiple revisions of the ASB, EASA AD 2014-0145R1 was superseded by EASA Emergency AD 2015-0033-E (later revised), EASA AD 2015-0033R1 was superseded by EASA AD 2016-0240, subsequently superseded by EASA Emergency AD 2017-0066-E, each time retaining the previous AD requirements. EASA then issued AD 2017-0080, retaining the requirements of EASA AD 2017-0066-E, which was superseded, and additionally requiring removal of the stabilizer before the cleaning and visual inspection of the frame during each 660 flight hour (FH) inspection of Group 2 helicopters.

Since EASA AD 2017-0080 was issued, in parallel to the protective measures developed over time, AH designed a new modification, mod 074775, consisting of 4 carbon patches on the EC130 Fenestron / tail cone junction, and published the modification SB accordingly. After implementation of this design change, either in production or in service through a retrofit (the modification SB) the inspections are no longer necessary. Based on the latest available information, EASA determined that continued inspections may not be sufficient to adequately address the risk and this modification is necessary to ensure long-term fleet safety.

For the reasons described above, this AD retains the requirements of EASA AD 2017-0080, which is superseded, and requires modification of the affected helicopters as terminating action for the repetitive inspections required by this AD.

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

Required as indicated, unless accomplished previously:

Inspection(s) / Cleaning:

- (1) For Group 1 helicopters: Within the compliance time as specified in Table 1 of this AD, as applicable, accomplish the cleaning and detailed visual inspection of the frame web in the radius between the web and the flange on the tail cone side in accordance with the instructions of paragraphs 3.B.5 and 3.B.1 of the ASB.



Table 1 – Inspection Threshold

FH accumulated (see Note 1)	Compliance Time
Less than 325 FH	Before exceeding 350 FH
325 FH or more, but less than 675 FH	Within 25 FH after 25 April 2017 [the effective date of EASA AD 2017-0066-E]
675 FH or more, but less than 690 FH	Before exceeding 700 FH
690 FH or more	Within 10 FH after 25 April 2017 [the effective date of EASA AD 2017-0066-E]

Note 1: Unless specified otherwise, the FH referenced in Table 1 of this AD are those accumulated by the junction frame since first installation on a helicopter.

- (2) Within 25 FH or 390 sling cycles (see Note 2 of this AD), whichever occurs first after the inspection as required by paragraph (1) of this AD, and, thereafter, at intervals not to exceed 25 FH or 390 sling cycles, whichever occurs first, inspect the frame web in the radius between the web and the flange on the tail cone side in accordance with the instructions of paragraph 3.B.1 or 3.B.2 of the ASB.
- (3) Within 150 FH after the inspection as required by paragraph (1) of this AD and, thereafter, at intervals not to exceed 150 FH, accomplish the cleaning and detailed visual inspection of the frame web in the radius between the web and the flange on the tail cone side in accordance with the instructions of paragraphs 3.B.5 and 3.B.1 of the ASB.

Note 2: The definition of sling cycles can be found in paragraph 1.E.2 (b) of AH EC130 Emergency ASB 05A017 Revision 4.

- (4) For Group 2 helicopters: Before exceeding 350 FH accumulated by the junction frame since first installation on a helicopter, or within 10 FH after modification (SB EC130-53-029 installation in-service), whichever occurs later, accomplish a visual inspection of the tailboom from outside in accordance with the instructions of paragraph 3.B.3 of the ASB.
- (5) Within 10 FH or 250 sling cycles, whichever occurs first after the inspection as required by paragraph (4) of this AD, and, thereafter, at intervals not to exceed 10 FH or 250 sling cycles, whichever occurs first, accomplish a visual inspection (see Note 3 of this AD) of the tailboom from outside in accordance with the instructions of paragraph 3.B.3 of the ASB.

Note 3: The visual inspection as specified in paragraph 3.B.3 (a) of the ASB may be carried out by the pilot.

- (6) Within 660 FH after the inspection as required by paragraph (4) of this AD, and, thereafter, at intervals not to exceed 660 FH, remove the stabilizer and accomplish the cleaning and detailed visual inspection of the frame web in the radius between the web and the flange on the tail cone side in accordance with the instructions of paragraphs 3.B.5 and 3.B.1 of the ASB.



Credit:

- (7) Accomplishment of a cleaning and detailed visual inspection on a helicopter, as required by paragraph (3) of this AD, is acceptable for compliance with an inspection as required by paragraph (2) of this AD for that helicopter.
- (8) Accomplishment of a cleaning and detailed visual inspection on a helicopter, as required by paragraph (6) of this AD, is acceptable for compliance with an inspection as required by paragraph (5) of this AD for that helicopter.

Corrective Action(s):

- (9) If, during any inspection as required by this AD, any crack is detected, before next flight, contact AH for approved repair instructions and accomplish those instructions accordingly.

Modification:

- (10) For Group 1 and Group 2 helicopters: Within 56 months after the effective date of this AD, modify the Tail Boom / Fenestron Junction (mod 074775) in accordance with the instructions of the modification SB.
- (11) For Group 3 helicopters, contact Airbus Helicopters to define the conditions for embodiment of modification 074775 and, within 56 months after the effective date of this AD, modify the helicopter accordingly.

Terminating Action(s):

- (12) Repair of a helicopter, as required by paragraph (9) of this AD, does not constitute terminating action for the repetitive inspections as required by this AD for that helicopter, unless explicitly indicated in those repair instructions.
- (13) Modification of a helicopter as required by paragraph (10) or (11) of this AD, as applicable, constitutes terminating action for the repetitive inspections as required by this AD for that helicopter.

Part Installation:

- (14) Installation of a replacement (new) junction frame on a helicopter is allowed, provided that, before exceeding 350 FH after installation, cleaning and a detailed visual inspection of the frame web in the radius between the web and the flange on the tail cone side is accomplished, in accordance with the instructions of paragraph 3.B.5 and 3.B.1 of the ASB, and, following installation, the helicopter is inspected as required by paragraph (2) and (3), or (5) and (6) of this AD, as applicable.

Ref. Publications:

AH EC130 Emergency ASB No. 05A017 Revision 2 dated 20 February 2015, or Revision 3 dated 07 March 2016, or Revision 4 dated 30 November 2016, or Revision 5 dated 21 April 2017, or Revision 6 dated 03 May 2017, and Revision 7 dated 21 March 2018.

AH SB EC130-53-029 original issue dated 20 February 2015, or Revision 1 dated 27 January 2016.

AH SB EC130-53-036 Revision 01 dated 21 March 2018.



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 10 April 2018.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. 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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