Airworthiness Directive

AD No.: **2014-0114R2**

Issued: **08 May 2018**

Note: This Airworthiness Directive (AD) 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.

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 (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:
AIRBUS HELICOPTERS

Type/Model designation(s):
EC 130 B4 helicopters

Effective Date: Revision 2: 11 May 2018
Revision 1: 01 June 2016
Original Issue: 12 May 2014

TCDS Number(s): EASA.R.008

Foreign AD: Not applicable

Supersedure: This AD revises EASA AD 2014-0114R1 dated 01 June 2016. The original EASA Emergency AD 2014-0114-E dated 08 May 2014 superseded EASA AD 2011-0116 dated 06 July 2011.

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

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Manufacturer(s):
Airbus Helicopters (formerly Eurocopter, Eurocopter France)

Applicability:
EC 130 B4 helicopters, all serial numbers, except those that have embodied modification (mod) 073880 or mod 074609 (Reinforcement of the tail boom/Fenestron junction), or mod 074775 (Reinforcement of the Fenestron frame by installing 4 carbon patches), and those which have been repaired in accordance with Repair Design Approval Sheet No. 350 53 522 07, or 350 53 521 10, or 350 53 524 10, or 350 53 525 10, or 350 53 526 10, or 350 53 511 11, or 350 53 512 11, or 350 53 523 11, or 350 53 504 12, or AE11-0205, or AE11-0380.
Note: Tail boom assembly serial number TB 7377 is not affected by this AD.

Reason:
Several reports have been received of finding cracks in the tail boom / Fenestron junction frame. Prompted by these reports, Eurocopter published Information Notice No. 2167-I-53. Since publication of this document, new cases of cracks in the tail boom / Fenestron junction frame have been reported. The examination of the parts showed that the cracks were longer than in the

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previous cases. The cracks start to develop in the plane of the rivet head countersink on the Right Hand (RH) side of the Fenestron and spread to the web of the frame.

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 address this unsafe condition, EASA issued AD 2011-0116 to require repetitive inspections of the affected area and, depending on findings, accomplishment of corrective actions. After that AD was issued, following further investigation, Airbus Helicopters (AH) developed mod 074609, the purpose of which is to limit the risk of cracks appearing on the tail boom/Fenestron junction frame. AH issued Revision 1 of Alert Service Bulletin (ASB) 53A019 to extend the inspection to the entire circumference of the frame and provided instructions to embody mod 074609 in service through Service Bulletin (SB) 53-024.

Consequently, EASA issued Emergency AD 2014-0114-E (later revised to extend the compliance time), retaining the requirements of EASA AD 2011-0116, which was superseded, and required embodiment of that design change.

Since EASA AD 2014-0114R1 was issued, AH designed mod 074775, consisting of 4 carbon patches on the Fenestron / tail cone junction. This new mod is considered to be a more effective solution than mod 074609 to ensure long term fleet safety. Consequently, AH revised EC130 Emergency ASB 05A019 (now at R3) to provide instructions to install mod 074775 in lieu of mod 074609, and issued SB EC130-53-036 to provide modification instructions. EASA issued AD 2018-0104 to require implementation of mod 074775.

For the reasons described above, this AD revises EASA AD 2014-0114R1 to remove the requirement to implement mod 074609 and confirms that mod 074775, as required by EASA AD 2018-0104, constitutes terminating action for the repetitive inspections required by this AD. A new inspection (interval 600 flight hours with a margin of 60 FH) for post-mod 074775 helicopters has been added to the EC130 Airworthiness Limitations Section (ALS) at the last revision.

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

Required as indicated, unless accomplished previously:

(1) Within 10 flight hours (FH), or within 40 FH after the last inspection in accordance with Airbus Helicopters EC130B4 Emergency ASB No. 53A019 at original issue, whichever occurs later after 12 May 2014 [the effective date of the original issue of this AD], and, thereafter, at intervals not exceeding 40 FH, inspect the whole circumference of the tail boom / Fenestron junction frame (hereafter referred to as 'the frame' in this AD) for cracks, in accordance with the instructions of paragraph 3.B.1 and paragraph 3.B.2 of Airbus Helicopters EC130B4 Emergency ASB No. 53A019 Revision 1 (hereafter referred to as 'the ASB' in this AD).

(2) If, during any inspection as required by paragraph (1) of this AD, a crack is detected, depending on the extent of the crack(s), accomplish the action as specified in Table 1 of this AD, as applicable.

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Table 1 – Crack detected

Extent of crack(s)	Action
(a) Crack on the inside crossing the web	Before next flight, contact Airbus Helicopters for approved instructions and accomplish those instructions accordingly
(b) Crack on the inside crossing part of the frame web	Contact Airbus Helicopters. Up to 10 FH are allowed to ferry the helicopter to a location where the corrective action can be accomplished in accordance with Airbus Helicopters instructions
(c) Outside of frame only - no crack in the frame web	Before next flight, strip the outside of the frame in accordance with the instructions of paragraph 3.B.3 and inspect the frame in accordance with the instructions of paragraph 3.B.4 of the ASB

(3) If, during any inspection as required by paragraph (1) of this AD, no crack is found, within 110 FH or 6 months, whichever occurs first after 12 May 2014 [the effective date of the original issue of this AD], strip the frame in accordance with the instructions of paragraph 3.B.3 of the ASB, and inspect the frame in accordance with the instructions of paragraph 3.B.4 of the ASB, and, thereafter, at intervals not exceeding 100 FH inspect the frame in accordance with the instructions of paragraph 3.B.4 of the ASB. After the initial inspection as required by paragraph (3) of this AD, the repetitive inspections of paragraph (1) of this AD are no longer required.

(4) If, during any inspection as required by paragraph (2) – Table 1 or by paragraph (3) of this AD, or during any other maintenance action, a crack is detected that reaches the radius of the frame, inspect the inside of the frame in accordance with the instructions of paragraph 3.B.1 of the ASB. Thereafter, repeat the same inspection at intervals not exceeding 40 FH.

(5) Depending on findings during any inspection as required by paragraph (4) of this AD, accomplish the corrective action(s) as specified in Table 2 of this AD, as applicable.

(6) If, during any inspection as required by paragraph (2) – Table 1 or by paragraph (3) of this AD, or during any other maintenance action, a crack is detected that does not reach the radius of the frame, inspect the frame in accordance with the instructions of paragraph 3.B.1 and 3.B.4 of the ASB. Thereafter, repeat the same inspection at intervals not exceeding 40 FH.

(7) Depending on findings during any inspection as required by paragraph (6) of this AD, accomplish the corrective action(s) as specified in Table 3 of this AD, as applicable.

(8) Deleted.

(9) Deleted

(10) Modification of a helicopter as required by EASA AD 2018-0104 constitutes terminating action for the requirements of this AD for that helicopter.

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Table 2 – Crack detected

Extent of crack(s)	Action
(a) Entirely crossing the frame web	Before next flight, contact Airbus Helicopters for approved instructions and accomplish those instructions accordingly
(b) Crossing part of the frame web	Up to 10 FH are allowed to ferry the helicopter to a location where the corrective action can be accomplished; then contact Airbus Helicopters for approved instructions and accomplish those instructions accordingly
(c) Outside of frame only - no crack in the frame web	Up to 85 FH are allowed after the previous maintenance action when the frame was inspected (i.e. the one preceding the maintenance action during which a crack reaching the radius of the frame was detected). Then, up to 10 FH are allowed to ferry the helicopter to a location where the corrective action can be accomplished; then contact Airbus Helicopters for approved instructions and accomplish those instructions accordingly. If the crack that reaches the radius of the frame was detected during the initial inspection as required by paragraph (1) of this AD, accomplish the actions required by line (b) of this Table 2

Table 3 – Crack detected

Extent of crack(s)	Action
(a) Entirely crossing the frame web	Before next flight, contact Airbus Helicopters for approved instructions and accomplish those instructions accordingly
(b) Crossing part of the frame web	Up to 10 FH are allowed to ferry the helicopter to a location where the corrective action can be accomplished; then contact Airbus Helicopters for approved instructions and accomplish those instructions accordingly
(c) Outside of frame only - no crack in the frame web	Flights are allowed within 12 months after detecting a crack that does not reach the radius of the frame. Then, up to 10 FH are allowed to ferry the helicopter to a location where the corrective action can be accomplished; then contact Airbus Helicopters for approved instructions and accomplish those instructions accordingly

Ref. Publications:

Airbus Helicopters EC130B4 ASB 53A019 Revision 1 dated 15 April 2014, Revision 2 dated 24 May 2016, or Revision 3 dated 21 March 2018.

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

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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. For any question concerning the technical content of the requirements in this AD, please contact: Airbus Helicopters (EBSESB) – Aéroport de Marseille Provence, 13725 Marignane Cedex, France, Telephone: +33 (4) 12 85 97 97, Fax: +33 (4) 85 99 66, E-mail: Directive.technical-support@airbus.com.

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