Airworthiness Directive

AD No.: 2022-0051

Issued: 22 March 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.301, 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

Type/Model designation(s):
AS 350 and AS 355 helicopters

Effective Date: 05 April 2022

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

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2014-0076R3 dated 30 November 2021.

ATA 53 – Fuselage – Rear Structure Junction Frame Reinforcement Angles – Inspection

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

Applicability:
AS 350 B, BA, BB, B1, B2, B3 and D helicopters, and AS 355 E, F, F1, F2 and N helicopters, all serial numbers (s/n), if an affected part, as defined in this AD, is installed, except helicopters on which AH modification (MOD) 073232 has been embodied in production, or AH AS350 Service Bulletin (SB) No. 53.00.58 and AS355 SB No. 53.00.34, as applicable, have been embodied in service.

AS 355 NP helicopters, s/n 5747, and s/n 5749 to 5766 inclusive, except helicopters on which AH AS355 SB No. 53.00.34 has been embodied in service.

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

Affected part: Junction frames, reinforced in accordance with AH MOD 073215, or equipped with at least one reinforcement angle, having Part Number (P/N) 350A08.2493.21 or P/N 350A08.2493.23, following the repair carried out in accordance with MRM (Mechanical Maintenance and Repair Manual) Work Card 53.10.22.772 or Aircraft Maintenance Manual (AMM) Task 53-31-00, 8-5.

The ASB: AH AS350 Emergency Alert Service Bulletin (ASB) No. 05.00.70 and AS355 ASB No. 05.00.62, as applicable.

The modification SB: AH AS350 SB No. 53.00.58 and AS355 SB No. 53.00.34, as applicable.

Reason:

During the inspection of several AS 355 helicopters, cracks were found in the reinforcement angles of the rear structure/tail boom junction frame. Subsequent investigation revealed that cracks were initiated on the non-visible surface of the angle (surface in contact with the frame).

This condition, if not detected and corrected, could lead to further crack propagation and subsequent loss of the tail boom, resulting in loss of the helicopter.

To address this potential unsafe condition, AH issued the ASB, as defined in this AD, to provide inspection instructions. Consequently, EASA issued Emergency AD 2014-0076-E (later revised) to require repetitive inspections of the affected area and, depending on findings, replacement of affected parts.

After EASA AD 2014-0076R1 was issued, AH developed an optional modification and issued the modification SB for in-service modification, which allowed to cancel the repetitive inspections. Consequently, EASA published AD 2014-0076R2 to introduce an optional modification which constituted terminating action for the repetitive inspections as required by that AD.

After EASA AD 2014-0076R2 was issued, it was determined that AS 355 NP helicopters on which MOD 073922 has been embodied in production should be excluded from the Applicability, and AH issued ASB No. 05.00.62 Revision 2 to reflect this development. Consequently, EASA published AD 2014-0073R3.

Since that AD was issued, it was identified that some AS 355 NP helicopters, on which MOD 073922 has been recorded as embodied in production, have an affected part installed, therefore, they are still affected by the unsafe condition.

For the reason described above, this AD retains the requirements of EASA AD 2014-0073R3, which is superseded, and requires repetitive inspections for additional helicopters.

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

Required as indicated, unless accomplished previously:

Inspection(s):

(1) For all helicopters, except AS 355 NP helicopters: Within the compliance time as defined in Table 1 of this AD, and, thereafter, at intervals not to exceed 10 flight hours (FH), inspect the affected part in accordance with the instructions of paragraph 3.B.1 of the ASB.

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

FH accumulated	Compliance Time
Less than 640 FH	Before exceeding 650 FH, but not before accumulating 640 FH
640 FH or more	Within 10 FH after 27 March 2014 [the effective date of EASA AD 2014-0076-E]

Note 1: Unless specified otherwise, the FH indicated in Table 1 of this AD are those accumulated by the helicopter on 27 March 2014 [the effective date of the EASA AD 2014-0076-E], since installation of AH MOD 073215, or since installation of a reinforcement angle, as applicable.

(2) Within the compliance times specified in Table 2 of this AD, and, thereafter, at intervals not to exceed 165 FH, inspect the affected part in accordance with the instructions of paragraph 3.B.2 of the ASB.

Table 2 – Inspection Threshold

Helicopter	Compliance Time
All helicopters, except AS 355 NP helicopters	Within 165 FH after the initial inspection as required by paragraph (1) of this AD
AS 355 NP helicopters which accumulated less than 640 FH	Before exceeding 650 FH, but not before accumulating 640 FH
AS 355 NP helicopters which accumulated 640 FH or more	Within 165 FH after accomplishment of an inspection of an affected part in accordance with the instructions of paragraph 3.B.2 of the ASB, or within 15 FH after the effective date of this AD, whichever occurs later

Note 2: For AS 355 NP helicopters, unless specified otherwise, the FH indicated in Table 2 of this AD are those accumulated by the helicopter on the effective date of this AD, since installation of AH MOD 073215.

(3) Accomplishment of the first inspection as required by paragraph (2) of this AD constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD.

Corrective Action(s):

(4) If, during any inspection as required by paragraph (1) or (2) of this AD, cracks are detected, before next flight, contact AH for approved instructions for corrective action(s) and accomplish those instructions accordingly.

Terminating Action(s):

(5) Modification of a helicopter in accordance with the instructions of the modification SB, as defined in this AD, constitutes terminating action for the repetitive inspections as required by paragraph (2) of this AD for that helicopter.

(6) Modification of a helicopter in accordance with the instructions of the modification SB also constitutes terminating action for the inspections as required by DGAC France AD F-2004-035 (EASA approval number 2004-2107) or DGAC France AD F-2004-036 (EASA approval number 2004-2108), as applicable, for that helicopter.

(7) Accomplishment of the corrective action(s) on a helicopter, as required by paragraph (4) of this AD, does not constitute terminating action for the repetitive inspections as required by paragraph (1) and (2) of this AD for that helicopter, unless stated otherwise in the instructions provided by AH.

Ref. Publications:

AH AS350 Emergency ASB No. 05.00.70 dated 24 March 2014, or Revision 1 dated 27 July 2020 or Revision 2 dated 24 November 2021.

AH AS355 Emergency ASB No. 05.00.62 dated 24 March 2014, or Revision 1 dated 27 July 2020, or Revision 2 dated 24 November 2021, or Revision 3 dated 18 March 2022.

AH AS350 SB No. 53.00.58 Revision 1 dated 27 July 2020.

AH AS355 SB No. 53.00.34 dated 27 July 2020.

The use of later approved revisions of these 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: Airbus Helicopters Customer Support, Telephone +33 (0)4.42.85.97.89, Fax + 33 (0)4.42.85.99.66, E-mail: Airframe.Technical-Support@airbus.com, Keycopter Technical Request Management: TechnicalSupport.Helicopters@airbus.com.