Airworthiness Directive

AD No.: 2014-0159R1

Issued: 05 February 2019

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):

SA 365 and AS 365 helicopters

Effective Date: Revision 1: 05 February 2019
Original issue: 21 July 2014

TCDS Number(s): EASA.R.105

Foreign AD: Not applicable

Revision: This AD revises EASA AD 2014-0159 dated 07 July 2014, which superseded EASA Emergency AD 2010-0064-E dated 06 April 2010.

ATA 53 – Fuselage – 9° Frame – Inspection

Manufacturer(s):

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

Applicability:

SA 365 N, SA 365 N1, AS 365 N2 and AS 365 N3 helicopters, all serial numbers, except those that have AH modification (mod) 07 53D21 embodied in production.

Note: This AD is no longer applicable to SA 366 G1 helicopters, due to surrendering its type certificate by EASA on 15 November 2017.

Definitions:

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

The inspection ASB: AH AS365 Alert Service Bulletin (ASB) 05.00.57 Revision 2 dated 07 April 2014.

The modification SB: AH Service Bulletin (SB) AS365-53.00.57.

Reason:

An occurrence was reported where, during a major inspection of an AS 365 N2 helicopter, a crack was detected on the 9° frame. The affected helicopter had accumulated 10 786 flight hours (FH) at

the time of the inspection. The crack was located 230 mm above the cabin floor and had grown over a large section of the 9° frame on the right-hand (RH) side.

This condition, if not detected and corrected, could lead to a structural failure of the 9° frame and reduced structural integrity of the helicopter.

To address this potential unsafe condition, and pending the results of analysis, EASA issued Emergency AD 2009-0125-E to require repetitive detailed visual inspections on the RH and left-hand (LH) sides of the 9° frame to detect any crack and, depending on findings, accomplishment of applicable corrective action(s). After EASA AD 2009-0125-E was issued, the results of analyses demonstrated that the flight time leading to crack initiation in the affected area varied significantly depending on the weight and balance data of the affected helicopter model. Consequently, EASA issued EASA Emergency AD 2010-0064-E, retaining the requirements of EASA AD 2009-0125-E, which was superseded, but modifying compliance times, depending on helicopter model.

After EASA Emergency AD 2010-0064-E was issued, further analysis led to an amendment of the inspection thresholds and enlargement of the area to be inspected up to the junction with the upper part of the 9° frame. Consequently, AH issued the inspection ASB on AS 365 to provide revised inspection instructions and EASA issued AD 2014-0159, retaining the requirements of EASA AD 2010-0064-E, which was superseded, modified the compliance times depending on helicopter model, and required the inspections to be accomplished in accordance with modified instructions.

Since that AD was issued, AH developed mod 0753D22, 0725C68, 0745D22, 0721C34 and 0745D09, as applicable to helicopter model, and issued the modification SB to provide instructions for structural reinforcement of the 9° frame.

This AD is revised to introduce the modification SB as a terminating action for repetitive inspections as required by this AD.

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

Required as indicated, unless accomplished previously:

Inspection(s):

(1) For helicopters which, on 21 July 2014 [the effective date of this AD at original issue], accumulated less FH and flight cycles (FC), than the threshold as defined in Table 1 of this AD, as applicable to helicopter model: Within 110 FH after exceeding the threshold as defined in Table 1 of this AD, whichever occurs first, and as applicable, and, thereafter, at intervals not to exceed 110 FH, inspect the 9° frame on the RH and LH sides in accordance with the instructions of the inspection ASB.

Table 1 – Threshold to Determine Initial Inspection

Model	**Service Life Accumulated Since First Flight** (FH or FC, whichever occurs first)
SA 365 N	22 980 FC or 11 490 FH
SA 365 N1	20 980 FC or 10 490 FH
AS 365 N2	18 280 FC or 9 140 FH
AS 365 N3	17 480 FC or 8 740 FH
[Deleted]	[Deleted]

(2) For helicopters which, on 21 July 2014 [the effective date of this AD at original issue], accumulated FH or FC equal to or more than the threshold as defined in Table 1 of this AD, as applicable to helicopter model: Within 110 FH after the last inspection of 9° frame on the RH and LH sides accomplished in accordance with paragraph 2.B.2 of AH ASB AS365 05.00.57 Revision 1, or within 110 FH after 21 July 2014 [the effective date of this AD at original issue], whichever occurs first, and, thereafter, at intervals not to exceed 110 FH, inspect the 9° frame on the RH and LH sides in accordance with the instructions of the inspection ASB.

Corrective Action(s):

(3) If, during any inspection as required by paragraph (1) or (2) of this AD, as applicable, any crack is detected having a length less than 33 mm, contact AH for approved repair instructions and accomplish actions specified in paragraphs (3.1) and (3.2) of this AD.

(3.1) Within 10 FH after detection of the crack and, thereafter, at intervals not to exceed 10 FH, inspect the area of the 9° frame in accordance with the instructions of the inspection ASB.

(3.2) Within 660 FH or 12 months, whichever occurs first after detection of the crack, accomplish the repair in accordance with AH repair instructions. Accomplishment of the repair constitutes terminating action for the repetitive inspections at reduced interval as required by paragraph (3.1) of this AD.

(4) If, during any inspection as required by paragraph (1) or (2) of this AD, as applicable, any crack is detected having a length of 33 mm or more, before next flight, contact AH for approved repair instructions and accomplish those instructions accordingly.

(5) If, during any inspection as required by paragraph (3.1) of this AD, any new crack is identified, before next flight, contact AH for approved instructions and accomplish those instructions accordingly.

Terminating Action:

(6) Accomplishment of a repair on a helicopter, as required by paragraph (3.2) or paragraph (4) of this AD, or instructions as required by paragraph (5) of this AD, does not constitute terminating action for the repetitive inspections as required by paragraph (1) or (2) of this AD for that helicopter.

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

Ref. Publications:

AH AS365 ASB 05.00.57 Revision 1 dated 31 March 2010, or Revision 2 dated 07 April 2014, or Revision 3 dated 20 December 2018.

AH SB AS365-53.00.57 original issue dated 20 December 2018.

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. 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.

5. For any question concerning the technical content of the requirements in this AD, please contact: Airbus Helicopters (Technical Support), Aéroport de Marseille Provence 13725 Marignane Cedex, France, Telephone +33 (0)4 42 85 97 97, Fax +33 (0)4 42 85 99 66, Web portal: https://keycopter.airbushelicopters.com > Technical Requests Management, E-mail: support.technical-dyncomp.ah@airbus.com, and TechnicalSupport.Helicopters@airbus.com.