



Airworthiness Directive

AD No.: 2008-0165R1

Issued: 30 June 2017

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):

SA 365, AS 365 and SA 366 helicopters

Effective Date: Revision 1: 30 June 2017
Original issue: 11 September 2008

TCDS Number(s): EASA.R.105

Foreign AD: Not applicable

Revision: This AD revises EASA AD 2008-0165 dated 28 August 2008, which superseded EASA Emergency AD 2006-0321-E dated 18 October 2006.

ATA 62 – Rotor(s) – Starflex Star Arm Ends – Check / Replacement

Manufacturer(s):

Airbus Helicopters (formerly Eurocopter, Eurocopter France, Aerospatiale)

Applicability:

SA 365 N, SA 365 N1, AS 365 N2, AS 365 N3, SA 365 C, SA 365 C1, SA 365 C2, SA 365 C3 and SA 366 G1 helicopters, all manufacturer serial numbers (s/n), equipped with main rotor hub (MRH) Starflex stars, all Part Numbers and s/n except those that embody Airbus helicopters modification (mod) 0762C37 in production.

Reason:

Several occurrences were reported addressing deterioration of the MRH Starflex arm end. In two reported cases the failure resulted in high amplitude in-flight vibration with a consequent precautionary landing. Subsequent investigation identified presence of cracking which led to failure of Starflex arm in line with the bush or development of significant gap between the adhesive bead and the bush leading edge.

This condition if not detected and corrected, could lead to high vibration of the main rotor, resulting in reduced control of the helicopter.

To address this potentially unsafe condition, DGAC France issued AD F-2005-167 (EASA approval 2005-6347) subsequently superseded by EASA AD 2006-0245. That AD was afterwards superseded



by EASA AD 2006-0321-E, which was superseded by AD 2008-0165, requiring repetitive inspections and referring to Eurocopter AS365N Alert Service Bulletin (ASB) 05.00.51, SA366 ASB 05.35 and SA365C ASB 05.28 (single document) up to Revision 3.

Since EASA AD 2008-0165 was issued, Airbus Helicopters (AH) developed mod 0762C37, introducing Starflex stars manufactured from materials with improved mechanical characteristics, and issued Revision 4 of AH AS365N ASB 05.00.51, SA366 ASB 05.35, and SA365C ASB 05.28 (single document) specifying that Starflex stars in post-mod 0762C37 configuration are not affected by the repetitive inspections addressed by the ASB. Furthermore, the SA365, AS365 and SA366 Airworthiness Limitations Section (ALS) documents were issued by Eurocopter in September 2012 (hereafter collectively referred to as 'the applicable ALS' in this AD) incorporating repetitive inspections required by this AD.

For the reasons described above, this AD is revised to reduce the Applicability. This AD revision also introduces editorial changes for standardization and readability reasons, without changing the requirements.

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

Required as indicated, unless accomplished previously:

Repetitive inspections:

- (1) Within 10 flight hours (FH) after 01 September 2006 [the effective date of EASA AD 2006-0245] and thereafter at intervals not to exceed 10 FH, visually check the bonding of the bushes and the Starflex arm ends, in accordance with the instructions specified in AH (Eurocopter) AS 365 N ASB 05.00.51, SA 366 ASB 05.35, or SA 365 C ASB 05.28 (hereafter collectively referred to as 'the applicable ASB' in this AD).
- (2) Within 10 FH after 18 October 2006 [the effective date of EASA AD 2006-0321-E] and thereafter at intervals not to exceed 10 FH, visually check the composite material on each Starflex star arm leading and trailing edges, both sides, in the area of the horizontal centre plane, flush with the bush in accordance with the instructions the applicable ASB.

Corrective action(s):

- (3) If, during any check as required by paragraph (1) or (2) of this AD, any discrepancy is detected, as specified in the ASB, before next flight, replace the Starflex star with a serviceable part in accordance with the instructions of the ASB, as applicable to the helicopter model.

Credit:

- (4) Repetitive checks and, depending on findings, replacement(s) accomplished on a helicopter before 11 September 2008 [the effective date of this AD at original issue], in accordance with the instructions of the applicable ASB at original issue or Revision 1 or Revision 2, are acceptable to comply with the initial requirements of paragraphs (1) and (2) of this AD for that helicopter. After 11 September 2008 [the effective date of this AD at original issue], the repetitive visual checks and, depending on findings, replacement(s) must be accomplished in accordance with the ASB at Revision 3, or later approved revisions.



Ref. Publications:

Eurocopter AS365 ASB 05.00.51, SA366 ASB 05.35, and SA365 ASB 05.28 (single document), original issue dated 04 April 2006, or Revision 1 dated 12 October 2006, or Revision 2 dated 22 November 2007, or Revision 3 dated 18 August 2008, or Airbus Helicopters AS365 ASB 05.00.51, SA366 ASB 05.35, and SA365 ASB 05.28 (single document), Revision 4 dated 20 November 2014.

The use of later approved revisions of this document 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. For any question concerning the technical content of the requirements in this AD, please contact:
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