



Airworthiness Directive

AD No.: 2012-0227R1

Issued: 08 March 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 155, SA 365 and AS 365 helicopters

Effective Date: Revision 1: 08 March 2018
Original issue: 05 November 2012

TCDS Number(s): EASA.R.105

Foreign AD: Not applicable

Revision: This AD revises EASA AD 2012-0227 dated 29 October 2012, which superseded EASA AD 2011-0144 dated 26 July 2011.

ATA 64 – Tail Rotor – Tail Rotor Hub – Inspection / Replacement

Manufacturer(s):

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

Applicability:

EC 155 B, EC 155 B1, SA 365 N1, AS 365 N2 and AS 365 N3 helicopters, all manufacturer serial numbers (MSN), if equipped with a 10-blade Tail Rotor Hub (TRH) with Part number (P/N) 365A33351100, P/N 365A33351101 or P/N 365A33351102 installed on the quiet fenestron tail rotor, except helicopters modified in production in accordance with Airbus Helicopters (AH) modification (mod) 0764B51; and

AS 365 N3 helicopters, all MSN, if equipped with an 11-blade TRH with P/N 365A33216001 or P/N 365A33216003 installed on the quiet fenestron tail rotor.

Reason:

Two occurrences were reported of cracked 10-blade TRH.

This condition, if not detected and corrected, could lead to a tail rotor jam, possibly resulting in reduced control, or loss of control, of the helicopter.



To address this unsafe condition, Eurocopter (EC) issued EC155 Alert Service Bulletin (ASB) 05A021 and ASB AS365-05.00.60, providing inspection instructions, and EASA issued AD 2011-0144, to require repetitive inspections of the 10-blade TRH, and depending on findings, replacement. After that AD was issued, based on further analysis, it was determined that AS 365 N3 helicopters equipped with an 11-blade TRH were also affected by the unsafe condition. Prompted by that determination, EASA issued AD 2012-0227, retaining the requirements of EASA AD 2011-0144, which was superseded, and making the repetitive inspections also applicable to AS 365 N3 helicopters equipped with an 11-blade TRH.

Since EASA AD 2012-0227 was issued, AH developed mod 0764B51, available for in service application through AH Service Bulletin (SB) EC155-64-006 and AS365-64.00.30, introducing reinforced 10-blades TRH housings which are not affected anymore by the unsafe condition addressed by this AD.

For the reasons described above, this AD is revised to introduce an optional 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):

- (1) **For EC 155 B, EC 155 B1, SA 365 N1, AS 365 N2 and AS 365 N3 helicopters with a 10-blade TRH:** Within 55 flight hours (FH) after 09 August 2011 [the effective date of EASA AD 2011-0144], accomplish a detailed visual inspection of the 10-blade TRH hub in accordance with the instructions of Eurocopter (currently AH) EC 155 ASB 05A021 Revision 1, or ASB AS365-05.00.60 Revision 2, as applicable to the helicopter version.
- (2) **For AS 365 N3 helicopters with an 11-blade TRH:** Within 55 FH after 05 November 2012 [the effective date of this AD at original issue], accomplish a detailed visual inspection of the 11-blade TRH hub in accordance with the instructions of Eurocopter (currently AH) ASB AS365-05.00.60 Revision 2.
- (3) Within 55 FH after the initial inspection as required by paragraph (1) or (2) of this AD, as applicable, and, thereafter, at intervals not to exceed 55 FH, repeat the inspection of the TRH in accordance with the instructions of Eurocopter (currently AH) EC 155 ASB 05A021 Revision 1 or ASB AS365-05.00.60 Revision 2, as applicable to helicopter model.

Corrective Action(s):

- (4) If, during any inspection as required by paragraph (1), (2) or (3) of this AD, any crack is found in the TRH, before next flight, replace the TRH with a serviceable part, in accordance with the instructions of Eurocopter (currently AH) EC 155 ASB 05A021 Revision 1, or ASB AS365-05.00.60 Revision 2, as applicable to helicopter model.

Credit:

- (5) Inspections and TRH replacements, accomplished before 05 November 2012 [the effective date of this AD at original issue] in accordance with the instructions of Eurocopter (currently AH) EC 155 ASB 05A021 at original issue, or ASB AS365-05.00.60 at original issue or Revision 1, as



applicable to helicopter model, is acceptable to comply with the initial requirements of paragraph (1), (2) and (3) of this AD, as applicable. After 05 November 2012 [the effective date of this AD at original issue], the instructions of Eurocopter (currently AH) EC 155 ASB 05A021 Revision 1 or ASB AS365-05.00.60 Revision 2 (or later approved revisions) must be used, as applicable to helicopter model.

Terminating Action:

- (6) Replacement of a TRH hub on a helicopter, as required by paragraph (4) or specified in paragraph (5) of this AD, does not constitute terminating action for the repetitive inspections required by paragraph (3) of this AD for that helicopter.
- (7) Modification of a helicopter in accordance with the instructions of AH SB EC155-64-006 or AS365-64.00.30, as applicable, constitutes terminating action for all inspections required by this AD for that helicopter.

Ref. Publications:

Eurocopter EC 155 ASB 05A021 Revision 1 dated 20 July 2011.

Eurocopter ASB AS365-05.00.60 Revision 2 dated 09 October 2012.

AH Service Bulletin EC155-64-006 original issue dated 13 February 2018.

AH Service Bulletin AS365-64.00.30 original issue dated 13 February 2018.

The use of later approved revisions of 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. For any question concerning the technical content of the requirements in this AD, please contact: Aéroport de Marseille Provence 13725 Marignane Cedex, France, Telephone +33 (0) 4 42 85 97 97, Fax +33 (0) 4 42 85 99 66, E-mail: Directive.technical-support@eurocopter.com.

