



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 19-017

Issued: 05 February 2019

Note: This Proposed Airworthiness Directive (PAD) 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.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance/cancellation of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Design Approval Holder's Name:

AIRBUS HELICOPTERS

Type/Model designation(s):

SA 365, AS 365 and EC 155 helicopters

Effective Date: [TBD - standard: 14 days after AD issue date]

TCDS Number(s): EASA.R.105

Foreign AD: Not applicable

Supersedure: None

ATA 63 – Rotor Drive(s) – Tail Rotor Drive Flange – Modification

Manufacturer(s):

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

Applicability:

SA 365 N1, AS 365 N2, AS 365 N3, EC 155 B and EC 155 B1 helicopters, all serial numbers, on which AH modification (mod) 0763B64 has been embodied, except those that have AH mod 07 63C81 embodied in production.

Definitions:

For the purpose of this AD, the following definition applies:

The applicable ASB: AH Alert Service Bulletin (ASB) AS365-63.00.19 Revision 1 and ASB EC155-63A013 Revision 1, as applicable.

Reason:

Several occurrences have been reported of loss of tightening torque of the Shur-Lok nut, which serves as a retainer of the tail rotor (TR) drive flange of the main gearbox (MGB). Subsequent investigation determined that these events were the result of failure of the Shur-Lok nut locking



function, which is normally ensured by two anti-rotation tabs engaged into two slots at the end of the MGB output shaft pinion.

This condition, if not corrected, could lead to Shur-Lok nut becoming loose and, ultimately, to complete disengagement of the nut threads, possibly resulting in reduction of TR drive control, rear transmission vibrations and consequent reduced control of the helicopter.

To address this potential unsafe condition, EASA issued AD 2014-0179 (later revised) to require a one-time inspection of the radial play inside the TR rotor drive flange and the condition of the Shur-Lok nut and, depending on findings, accomplishment of applicable corrective action(s).

Since EASA AD 2014-0179R2 was issued, a further occurrence was reported of on-ground loss of synchronisation of the tail rotor, resulting from Shur-Lok disengagement.

Prompted by this new occurrence, EASA decided to make the existing AH mod 07 63C81 mandatory, consisting of installation of a rear output stop with 5 spigots on TR shaft flexible coupling, available for in-service helicopters through the applicable ASB. It is expected that AH will also develop a similar mod for in-service installation on other affected helicopters, addressed by EASA AD 2014-0179R2.

For the reasons described above, this AD requires modification of the MGB TR drive flange.

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

Required as indicated, unless accomplished previously:

Modification:

- (1) Within 600 flight hours or 12 months, whichever occurs first after the effective date of this AD, modify the MGB TR drive flange in accordance with the instructions of paragraph 3 of the applicable ASB.

Credit:

- (2) Modification of a helicopter, before the effective date of this AD in accordance with the instructions of the original issue of AH ASB AS365-63.00.19 or ASB EC155-63A013, as applicable, is an acceptable method to comply with the requirements of paragraph (1) of this AD for that helicopter.
- (3) After modification of a helicopter as required by paragraph (1), or as specified in paragraph (2) of this AD, as applicable, that helicopter is no longer affected by the requirements of EASA AD 2014-0179R2.

Ref. Publications:

AH ASB AS365-63.00.19 original issue dated 22 January 2018, or Revision 1 dated 31 January 2019.

AH ASB EC155-63A013 original issue dated 22 January 2018, or Revision 1 dated 31 January 2019.

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



Remarks:

1. This Proposed AD will be closed for consultation on 05 March 2019.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, can be reported to the [EU aviation safety reporting system](#).
4. For any question concerning the technical content of the requirements in this PAD, 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.

