

Emergency Airworthiness Directive

AD No.: 2019-0267-E

Issued: 25 October 2019

Note: This Emergency 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, AS 365, EC155 helicopters

Effective Date: 28 October 2019

TCDS Number(s): EASA.R.105

Foreign AD: Not applicable

Supersedure: None

ATA 65 – Tail Rotor – Double Bearing – Inspection / Replacement

Manufacturer(s):

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

Applicability:

SA 365 N1, AS 365 N2, AS 365 N3, EC155 B and EC155 B1 helicopters, all serial numbers (s/n).

Definitions:

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

The applicable EASB: AH Emergency Alert Service Bulletins (ASB), single publication, applicable to the different helicopter types and models as identified in Table 1 of this AD.

Table 1 – Applicable ASB

Type / Model	ASB Number (original issue)
SA 365 N1, AS 365 N1, N2 and N3	01.00.71
EC155 B and B1	04A016

Affected part: Double bearing Part Number (P/N) 704A33-651-245 or P/N 704A33-651-246, installed on a tail rotor gearbox (TGB) P/N 365A33-6005-09.

Serviceable part: Double bearing P/N 704A33-651-245 or P/N 704A33-651-246 which is new (never previously installed).

Groups: Group 1 are helicopters having an affected part which has accumulated less than 500 flight hours (FH) since its first installation on a helicopter. Group 2 are helicopters having an affected part which has accumulated 500 FH or more since its first installation on a helicopter.

Close monitoring: Close monitoring procedure in accordance with Work Card 05-53-00-201 (MET) or Aircraft Maintenance Manual (AMM) Task 05-50-01-211.

Reason:

Following a regular TGB chip detector check on an AS 365 N2, equipped with a TGB P/N 365A33-6005-09 (Terminating action for EASA AD 2017-0125), a certain quantity of abrasion particles and non-critical scale particles have been found, triggering the close monitoring procedure according to the applicable maintenance instructions. Since no anomaly has been reported during the close monitoring regime, the helicopter has returned to the normal inspection program, but after a few flight hours, during an unscheduled check, a large amount of critical scale particles has been found on the chip detector's plug. The particles belong to the double bearing (pitch control rod bearing) installed inside the TGB. The reported event showed a speed of degradation faster than expected.

This condition, if not detected and corrected, could lead to loss of yaw control of the helicopter.

To address this unsafe condition, AH issued the applicable EASB, providing inspection and replacement instructions.

For the reasons described above, this AD requires repetitive inspection for particles of the TGB chip detector and replacement of the double bearing.

This AD is considered an interim action and further AD action may follow.

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

Required as indicated, unless accomplished previously:

Inspection(s):

- (1) For Group 1 helicopters under close monitoring on the effective date of this AD: within the applicable compliance time as identified in the close monitoring and until completion of the close monitoring, assess any particles collected during the close monitoring in accordance with the instructions of paragraph 3.B.2 of the applicable EASB.
- (2) For Group 1 helicopters under close monitoring on the effective date of this AD: Upon completion of the close monitoring regime, and, thereafter, at intervals not exceeding 25 Flight Hours (FH), accomplish TGB chip detector inspection in accordance with the instructions of paragraph 3.B.2 of the applicable EASB.
- (3) For Group 1 helicopters not under close monitoring on the effective date of this AD: within 25 FH after the effective date of this AD, and thereafter at intervals not exceeding 25 FH,



accomplish TGB chip detector inspection in accordance with the instructions of paragraph 3.B.2 of the applicable EASB.

- (4) For Group 2 helicopters under close monitoring on the effective date of this AD: before next flight, after the effective date of this AD, assess any particles collected during the close monitoring in accordance with the instructions of paragraph 3.B.2 of the applicable EASB or accomplish a double bearing washing in accordance with the instructions of paragraph 3.B.3 of the applicable EASB.
- (5) For Group 2 helicopters (all), unless already accomplished as required by paragraph (4) of this AD, within 15 FH after the effective date of this AD, accomplish a double bearing washing in accordance with the instructions of paragraph 3.B.3 of the applicable EASB.
- (6) For Group 2 helicopters: after accomplishment of the double bearing washing as specified in paragraph (4) or as required by paragraph (5) of this AD, accomplish the inspections as required by paragraph (6.1) or (6.2) of this AD (see Note 1 of this AD):
 - (6.1) Accomplish a TGB chip detector inspection in accordance with the instructions of paragraph 3.B.2 of the applicable EASB at intervals not exceeding 10 FH and a double bearing washing in accordance with the instructions of paragraph 3.B.3 of the applicable EASB at intervals not exceeding 30 FH.
 - or
 - (6.2) Accomplish a TGB chip detector inspection in accordance with the instructions of paragraph 3.B.2 of the applicable EASB after every last flight of the day or at intervals not exceeding 5 FH, whichever occurs first.

Note 1: After accomplishment of a double bearing washing in accordance with the instructions of paragraph 3.B.3 of the applicable EASB, subsequent inspections can be accomplished as required by paragraph (6.1) or (6.2) of this AD.

Corrective Action(s):

- (7) If, during any action as required by paragraph (1) to (6) of this AD, as applicable, any discrepancy, as identified in the applicable EASB, is detected, accomplish the applicable corrective action in accordance with the instructions of, and within the compliance time as identified in, the applicable EASB.

Part(s) replacement:

- (8) For Group 1 helicopters: before an affected part exceeds 500 FH since first installation on a helicopter or within 110 FH, whichever occurs later and, thereafter, at intervals not to exceed 500 FH, replace that affected part with a serviceable part. This can be accomplished in accordance with the instructions of the applicable AMM.
- (9) For Group 2 helicopters: within 110 FH after the effective date of this AD and, thereafter, at intervals not to exceed 500 FH, replace the affected part with a serviceable part. This can be accomplished in accordance with the instructions of the applicable AMM.



Terminating actions:

(10) None.

Parts Installation:

(11) From the effective date of this AD, it is allowed to install a double bearing on a helicopter, provided it is a serviceable part, as defined in this AD.

(12) From the effective date of this AD, it is allowed to install a TGB P/N 365A33-6005-09 provided it is equipped with a serviceable part, as defined in this AD.

Ref. Publications:

AH AS365 EASB 01.00.71 original issue dated 24 October 2019.

AH EC155 EASB 04A016 original issue dated 24 October 2019.

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. The results of the safety assessment have indicated the need for immediate publication and notification, without the full consultation process.
3. Enquiries regarding this AD should be referred to the EASA Programming and Continued Airworthiness 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)
Web portal: <https://keycopter.airbushelicopters.com> Technical Requests Management, or TechnicalSupport.Helicopters@airbus.com.

