



Airworthiness Directive

AD No.: 2023-0001

Issued: 04 January 2023

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, or Annex Vb Part ML.A.301, as applicable, 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 Annex Vb Part ML.A.303, as applicable] 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 helicopters

Effective Date: 18 January 2023

TCDS Number(s): EASA.R.105

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2022-0038 dated 07 March 2022.

ATA 65 – Tail Rotor Drive – Pitch Control Rod Bearing – Inspection / Replacement

Manufacturer(s):

Eurocopter, Eurocopter France, Aérospatiale, Sud Aviation

Applicability:

SA 365 C1, SA 365 C2, SA 365 C3 and SA 365 N helicopters, all manufacturer serial numbers.

Definitions:

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

ASB 1: Airbus Helicopters (AH) Alert Service Bulletin (ASB) SA365-05.35 and AS365-05.00.83, as applicable.

ASB 2: AH ASB AS365-65.00.20.

Affected part: Dual bearings, having Part Number (P/N) 360A33-4052-00, installed on the control rod of a tail rotor gearbox (TGB) having P/N 365A33-4000-00/01/02 or P/N 365A33-5000-00, as applicable.

Serviceable part: An affected part that is new (never previously installed).



Groups: Group 1 are SA 365 C1, C2, C3 and N helicopters that have an affected part installed. Group 2 are SA 365 N helicopters with an affected part installed that has accumulated 500 flight hours (FH) or more since first installation on a helicopter. A Group 2 helicopter is also Group 1.

Reason:

Several occurrences of damaged TGB control rod dual bearings were reported on a different TGB design. EASA issued several ADs for that unsafe condition, requiring various repetitive inspections, corrective actions and modification. Since those ADs were issued, analysis has shown that degradation of the TGB control rod dual bearings cannot be excluded for the TGB design installed on SA 365 C1, C2, C3 and N helicopters.

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

To address this potential unsafe condition, AH published ASB 1, as defined in this AD, providing instructions for inspection and replacement, and EASA issued AD 2022-0038 to require, for Group 1 helicopters, repetitive inspections of the TGB magnetic plug at reduced intervals, the use of new criteria for particle assessment and, depending on findings, replacement of the TGB or of the dual bearing, as applicable.

Since that AD was issued, further investigation determined the need for an additional one-time inspection of the TGB control rod dual bearing for Group 2 helicopters, and Airbus issued ASB 2 to provide the relevant instructions.

For the reasons described above, this AD retains the requirements of EASA AD 2022-0038, which is superseded, and requires, for Group 2 helicopters, a one-time inspection of the TGB control rod dual bearing and, depending on findings, accomplishment of applicable corrective action(s).

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

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

Required as indicated, unless accomplished previously:

Magnetic Plug Inspections / Particle Assessment:

- (1) For Group 1 helicopters: Within the compliance time as specified in Table 1 of this AD and, thereafter, at intervals not to exceed 10 FH, accomplish a magnetic plug inspection in accordance with the instructions of paragraph 3.B.2 of ASB 1 (see Note 1 of this AD).

Table 1 – Next Magnetic Plug Inspection

Last Magnetic Plug Inspection	Compliance Time (after the last inspection)
Accomplished before 21 March 2022 [the effective date of EASA AD 2022-0038] in accordance with the instructions of MET 12-00-00-601 and MET 12.00.601.	Within 25 FH
Accomplished on or after 21 March 2022 [the effective date of EASA AD 2022-0038] in accordance with the instructions of ASB 1	Within 10 FH



Note 1: Helicopters that were under close monitoring on 21 March 2022 [the effective date of EASA AD 2022-0038] must continue the close monitoring procedure up to the first inspection accomplished in accordance with the instructions of ASB 1.

One-Time Inspection of TGB Control Rod Dual Bearing

- (2) For Group 2 helicopters: Within 110 FH or 4 months, whichever occurs first after the effective date of this AD, inspect the TGB control rod dual bearing in accordance with the instructions of ASB 2.

Corrective Action(s):

- (3) If, during any inspection as required by paragraph (1) of this AD, particles are found on the magnetic plug detector that are outside the limits as defined in Work Card 20-08-01-601 (MTC), before next flight, replace the TGB in accordance with the instructions of paragraph 3.B.2 of ASB 1.
- (4) If, during any inspection as required by paragraph (1) of this AD, particles (including abrasion-type particles), as defined in ASB 1, are found on the magnetic plug detector that are within the limits as defined in Work Card 20-08-01-601 (MTC), within 25 FH after that inspection, accomplish a metallurgical analysis of all particles collected in accordance with the instructions of paragraph 3.B.2 of ASB 1.
- (5) If, during the inspection as required by paragraph (2) of this AD, particles (including abrasion-type particles) are found that are outside the limits as defined in Work Card 20-08-01-601 (MTC), replace the affected part with a serviceable part in accordance with the instructions of paragraph 3.B.2.e of ASB 2.
- (6) If, during the analysis as required by paragraph (4) of this AD, material M50 (also designated AMS6490 or 80DCV40) particles are detected, before next flight, replace the affected part with a serviceable part in accordance with the instructions of paragraph 3.B.2 of ASB 1.

Terminating Action:

- (7) None.

Part(s) Installation:

- (8) From the effective date of this AD, it is allowed to install an affected part on any helicopter, provided that, following installation, the part is inspected and, depending on findings, corrected as required by this AD.

Ref. Publications:

AH ASB SA365-05.35 original issue dated 07 February 2022.

AH ASB AS365-05.00.83 original issue dated 07 February 2022.

AH ASB AS365-65.00.20 original issue dated 23 November 2022.

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. This AD was posted on 13 December 2022 as PAD 22-170 for consultation until 27 December 2022. No comments were received during the consultation period.
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](#). This may include reporting on the same or similar components, other than those covered by the design to which this AD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
5. For any question concerning the technical content of the requirements in this AD, please contact:
Airbus Helicopters (Technical Support), E-mail: TechnicalSupport.Helicopters@airbus.com,
or visit
Airbus World: Technical Request Management: <https://airbusworld.helicopters.airbus.com>

