

## Airworthiness Directive

**AD No.:** 2023-0190R1

**Issued:** 20 February 2024

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 the 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):**

EC 130 helicopters

**Effective Date:** Revision 1: 27 February 2024  
 Original issue: 06 November 2023

**TCDS Number(s):** EASA.R.008

**Foreign AD:** Not applicable

**Revision:** This AD revises EASA AD 2023-0190R1 dated 02 November 2023, which superseded EASA AD 2022-0257R1 dated 14 December 2022.

### ATA 65 – Tail Rotor Drive – Shaft Line – Check / Measurement

**Manufacturer(s):**

Airbus Helicopters (AH), formerly Eurocopter

**Applicability:**

EC 130 T2 helicopters, all serial numbers in which AH modification 079809 has been embodied in production.

**Definitions:**

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

**Affected part:** Rotor drive shafts, having Part Number (P/N) 350A34-5010-00 or P/N 350A34-5020-00.

**The ASB:** AH Emergency Alert Service Bulletin (ASB) EC130-05A042 Revision 1.

**The maintenance task:** AH EC130 Aircraft Maintenance Manual (AMM) Task 65-11-01,5-1A ("Balancing of the tail rotor drive line").

**The maintenance task B:** AH EC130 AMM Task 65-11-01,5-1B ("Balancing of the tail rotor drive shaft").

**Groups:** Group 1 helicopters are those that have an affected part installed. Group 2 helicopters are those that do not have an affected part installed.

**Reason:**

An occurrence was reported where, during an inspection by ASB EC130-05A042 (ref. EASA AD 2021-0283R1), a crack was found on the tailboom of an EC130 T2 helicopter. During the preceding flight, the pilot experienced a humming sound and vibrations in the pedals. A subsequent balancing of the tail rotor drive shaft revealed a high vibration level.

This condition, if not detected and corrected, could lead to failure of the tail rotor drive shaft and subsequent loss of yaw control of the helicopter.

To address this potential unsafe condition, as a precautionary, protective measure, AH issued the ASB to provide measurement instructions. Consequently, EASA issued AD 2022-0251-E to require repetitive checks of the balancing of the tail rotor drive shaft by means of measurement of the vibration level. That AD also required the reporting of inspection results to AH.

After that AD was issued, it was identified that one of the vibration measurement tool, mentioned in maintenance task B, was providing different results than expected and the threshold must be changed. Consequently, AH published the ASB as defined in this AD, providing amended checks instructions, and EASA issued AD 2023-0190-E retaining the requirements of AD 2022-0251-E, which was superseded, requiring additional work and introducing balance correction prohibition.

Since that AD was issued, it has been determined that used spline sleeve equipped and sliding flange may be installed provided certain conditions are met. Subsequently, AH published ASB EC130-05A042 Revision 2 to specify the type of part to be used in case of replacement.

For the reason described above, this AD is revised accordingly.

This AD is still considered a preliminary action and further AD action may follow.

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

Required as indicated by this AD, unless the actions required by this AD have been already accomplished:

**Repetitive Checks:**

- (1) For Group 1 helicopters: Within the compliance times specified in Table 1 of this AD and, thereafter, at intervals not to exceed 50 flight hours (FH), measure the vibration level of the tail rotor drive shaft in accordance with the instructions of the ASB.



Table 1 – Tail Rotor Drive Shaft Check (see Note 1 of this AD)

<b>Maintenance Task Status</b> (on 16 December 2022 [the effective date of EASA AD 2022-0251-E])	<b>FH Accumulated</b> (on 16 December 2022 [the effective date of EASA AD 2022-0251-E])	<b>Compliance Time</b> (see Note 2 of this AD)
The maintenance task A or B has <u>not</u> been accomplished	50 FH or more	Before next flight after 16 December 2022 [the effective date of EASA AD 2022-0251-E]
	Less than 50 FH	Before exceeding 50 FH, without exceeding 3 months after 16 December 2022 [the effective date of EASA AD 2022-0251-E]
The maintenance task A and B has been accomplished	50 FH or more after last accomplishment of the maintenance task	Before next flight after 16 December 2022 [the effective date of EASA AD 2022-0251-E]
	Less than 50 FH since last accomplishment of the maintenance task	Within 50 FH after last accomplishment of the task, without exceeding 3 months after 16 December 2022 [the effective date of EASA AD 2022-0251-E]

Note 1: Unless indicated otherwise, the FH specified in Table 1 of this AD are those accumulated by the helicopter since first flight, or since the installation of the new spline sleeve equipped and sliding flange.

Note 2: For the initial check, a single ferry flight without passengers is allowed to a maintenance location, where the actions required by this AD can be accomplished.

#### Corrective Action(s):

- (2) If, during any check as required by paragraph (1) of this AD, the measured vibration level is more than 1,4 IPS for the maintenance task A, or more than 0,7 IPS for the maintenance task B, within the compliance times specified in the ASB, remove the parts, as specified in the ASB, and install the parts in accordance with the instructions of the ASB (see Note 3 of this AD).

Note 3: Revision 2 of the ASB introduces relaxed criteria for installation of parts.

#### Additional Work:

- (3) If, during the last check as required by paragraph (1) of this AD, accomplished before 06 November 2023 [the effective date of the original issue of this AD], the measured vibration level was more than 0.7 IPS for the maintenance task B, within the compliance times specified in the ASB, remove the parts, as specified in the ASB, and install the parts in accordance with the instructions of the ASB (see Note 3 of this AD).



- (4) For helicopters that, before 06 November 2023 [the effective date of the original issue of this AD], accomplished a balance correction in accordance with the instructions of the applicable AMM, except if this balance correction was accomplished before next flight after replacing the sliding flange and the splined sleeve equipped, before next flight after 06 November 2023 [the effective date of the original issue of this AD], contact AH to obtain approved instructions, and within the compliance time(s) specified therein, accomplish those instructions accordingly.

#### **Balance Correction Prohibition:**

- (5) From 06 November 2023 [the effective date of the original issue of this AD] it is prohibited to perform a balance correction, except if it is accomplished during parts replacement as specified in paragraph (2) or (3) of this AD.

#### **Reporting:**

- (6) Within 30 days after any vibration measurement as required by paragraph (1) of this AD, report the results to AH.

#### **Credit:**

- (7) Vibration measurements accomplished on a helicopter before 06 November 2023 [the effective date of the original issue of this AD] in accordance with the instructions of AH ASB EC130-05A042 at original issue, are acceptable to comply with the initial requirements of paragraph (1) of this AD for that helicopter.
- (8) Accomplishment of the additional work on a helicopter as required by paragraph (3) of this AD, is acceptable to comply with the initial requirements of paragraph (2) of this AD, as applicable, for that helicopter.

#### **Terminating Action:**

- (9) None.

#### **Part(s) Installation:**

- (10) For Group 1 and Group 2 helicopters: From 16 December 2022 [the effective date of EASA AD 2022-0251-E], it is allowed to install on any helicopter an affected part, provided that, following installation, it is inspected as required by this AD.

#### **Ref. Publications:**

AH Emergency ASB EC130-05A042 original issue dated 14 December 2022, Revision 1 dated 02 November 2023, or Revision 2 dated 13 February 2024.

The use of later approved revisions of the above-mentioned 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](mailto: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 or may not 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 of this AD, please contact: Airbus Helicopters Customer Support, Telephone +33 (0)4.42.85.97.89, Fax + 33 (0)4.42.85.99.66, E-mail: [Airframe.Technical-Support@airbus.com](mailto:Airframe.Technical-Support@airbus.com), Keycopter Technical Request Management: [TechnicalSupport.Helicopters@airbus.com](mailto:TechnicalSupport.Helicopters@airbus.com).

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