

Airworthiness Directive

AD No.: 2023-0044

Issued: 28 February 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):

AS 350, EC 130 and AS 355 helicopters

Effective Date: 14 March 2023

TCDS Number(s): EASA.R.008 and EASA.R.146

Foreign AD: Not applicable

Supersedure: None

ATA 63 – Main Rotor Drive – Main Gearbox Planet Gear – Inspection

Manufacturer(s):

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

Applicability:

AS 350 B, AS 350 D, AS 350 B1, AS 350 B2, AS 350 BA, AS 350 BB, AS 350 B3, EC 130 B4, EC 130 T2, AS 355 E, AS 355 F, AS 355 F1, AS 355 F2, AS355 N and AS355 NP helicopters, all serial numbers.

Definitions:

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

The ASB: AH Alert Service Bulletin (ASB) EC130-05A040, ASB AS350-05.01.04 and ASB AS355-05.00.87, as applicable.

Affected MGB: A main gearbox (MGB) equipped with a planet gear bearing, having a Part Number (P/N) as specified in Appendix 1 of this AD.

Serviceable MGB: An affected MGB which has accumulated less than 330 flight hours (FH) since new (first installation on a helicopter), or since an overhaul, or since an inspection in accordance with the instructions of the ASB.

Reason:

Following a fleet design review of MGB particle detection, it has been determined that additional maintenance actions are necessary to improve the detection of particles in the MGB.

This condition, if not detected and corrected, could lead to structural failure of the MGB drive, possibly resulting in reduced control or loss of control of the helicopter.

To address this unsafe condition, AH issued the ASB, providing inspection and corrective actions instructions.

For the reason described above, this AD requires repetitive inspections of the bevel wheel of the affected MGB and, depending on findings, corrective action(s).

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

Required as indicated, unless accomplished previously:

Inspections:

- (1) Within the compliance time as specified in Table 1 of this AD, as applicable, and thereafter, at intervals not exceeding the value as specified in Table 1 of this AD, as applicable, accomplish a borescope visual inspection of the bevel wheel of the affected MGB in accordance with the instructions of the ASB.

Table 1 – MGB Bevel Wheel Inspections

Helicopter(s)	Compliance Time (after the effective date of this AD)	Interval (not to exceed)
AS 350 B3	Within 825 FH	825 FH
AS 350 B, AS 350 D, AS 350 B1, AS 350 B2, AS 350 BA and AS 350 BB	Within 660 FH	660 FH
AS 355 E, AS 355 F, AS 355 F1, AS 355 F2, AS355 N and AS355 NP		
EC 130 B4		
EC 130 T2 with MGB that have planet gear bearing P/N 350A32-1082-03	Within 330 FH	330 FH
EC 130 T2 with MGB that have planet gear bearing P/N 350A32-1114-00		

- (2) From the effective date of this AD, before next flight after any particles are detected at the MGB magnetic plug during accomplishment of Aircraft Maintenance Manual (AMM) task 60-00-00, 6-2A, or AMM task 60-00-00, 6-2, or work card 60-00-00-602, as applicable, accomplish a borescope visual inspection of the bevel wheel of the affected MGB in accordance with the instructions of the ASB.



Corrective Action(s):

- (3) If, during any inspection as required by paragraph (1) or (2) of this AD, as applicable, particles are detected, before next flight, collect and analyse the particles in accordance with the instructions of the ASB.
- (4) If the result of the analysis of the particles, as required by paragraph (3) of this AD, indicates manufacturing residuals or abrasion, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of the ASB.
- (5) If the results of analysis of the particles, as required by paragraph (3) of this AD, indicates scales, flakes or splinters, depending on the measure as specified in the ASB, accomplish the applicable corrective action(s) in accordance with, and within the compliance times specified in, the ASB. Where the ASB indicates to contact AH for corrective action(s) instructions, this AD requires, before next flight, to contact AH for corrective action(s) instructions, and within the compliance time specified therein, to accomplish those instructions accordingly.

Terminating Action(s):

- (6) None.

Part(s) Installation:

- (7) From the effective date of this AD, installation of an MGB on a helicopter is allowed, provided that it is a serviceable MGB, as defined in this AD, and that, following installation, it is inspected as required by paragraph (1) of this AD before exceeding 330 FH since new (first installation on a helicopter), or since an overhaul, or since an inspection in accordance with the instructions of the ASB, as applicable, and, thereafter, as required by this AD.

Ref. Publications:

AH ASB EC130-05A040 original issue dated 25 January 2023.

AH ASB AS350-05.01.04 original issue dated 25 January 2023.

AH ASB AS355-05.00.87 original issue dated 25 January 2023.

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 27 January 2023 as PAD 23-012 for consultation until 24 February 2023. 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 – Aéroport de Marseille Provence, 13725 Marignane Cedex, France
Telephone: +33 (4) 42 85 97 97, Fax: +33 (4) 42 85 99 66,
E-mail: support.technical-airframe.ah@airbus.com,
Web portal, Airbus World: Technical Request Management:
<https://airbusworld.helicopters.airbus.com>.



Appendix 1

Affected MGB Bearing

Helicopter	Model	P/N
EC 130	T2 and B4	P/N 350A32-1082-03 or MP/N 350A32-1114-00
AS 350	B3	P/N 350A32-1082-03 or MP/N 350A32-1114-00
	B1 and B2	P/N 350A32-1050-00 or P/N 350A32-1050-02 or P/N 350A32-1082-00 or P/N 350A32-1082-02 or P/N 350A32-1082-03 or P/N 350A32-1082-04 or P/N 350A32-3145-00 or P/N 350A32-3145-01 or P/N 350A32-3145-02 or P/N 350A32-3145-03 or P/N 350A32-1114-00
	B, BA, BB, D	P/N 350A32-1050-00 or P/N 350A32-1050-02 or P/N 350A32-1082-02 or P/N 350A32-1082-04 or P/N 350A32-3145-00 or P/N 350A32-3145-03 or P/N 350A32-1114-00
AS 355	F, F1 and F2	P/N 350A32-1050-00 or P/N 350A32-1050-02 or P/N 350A32-1082-00 or P/N 350A32-1082-02 or P/N 350A32-1082-03 or P/N 350A32-1082-04 or P/N 350A32-3145-00 or P/N 350A32-3145-01 or P/N 350A32-3145-02 or P/N 350A32-3145-03 or P/N 350A32-1114-00
	E	P/N 350A32-1050-00 or P/N 350A32-1050-02 or P/N 350A32-1082-02 or P/N 350A32-1082-04 or P/N 350A32-3145-00 or P/N 350A32-3145-03 or P/N 350A32-1114-00
	N	P/N 350A32-1082-03 or P/N 350A32-3145-02 or P/N 350A32-1114-00
	NP	P/N 350A32-1082-03 or P/N 350A32-1114-00

