Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 21-094

Issued: 02 July 2021

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 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):
AS 332 and EC 225 helicopters

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

TCDS Number(s): EASA.R.002

Foreign AD: Not applicable

Supersedure: None

ATA 64 – Tail Rotor – Tail Gearbox Angular Clearance – Inspection

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Manufacturer(s):
Airbus Helicopters (AH), formerly Eurocopter (EC), Eurocopter France, Aerospatiale

Applicability:
AS 332 L2 and EC 225 LP helicopters, all serial numbers.

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

Affected part: Tail Gear Box (TGB), having a Part Number (P/N) 332A36.3001.00 or P/N 332A36.3002.00 for AS332 L2 helicopters, or having a P/N 332A36.5001.01 for EC225 LP helicopters.

The ASB: AH Alert Service Bulletin (ASB) AS332-64.00.46 or ASB EC225-64A011, as applicable.

Serviceable TGB: A part which is not an affected part; or an affected part that is new (not previously installed) or overhauled; or that, before next flight after installation, passes an inspection (angular clearance determined to be less than 0,69 mm / 0.027 in) in accordance with the instructions of the ASB.

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

Reason:

Loss of tightening torque was reported on the nut that attaches the TGB bevel wheel. Additionally, the subsequent investigation highlighted that loss of the tightening torque may lead to degradation of the splines between tail rotor shaft and TGB bevel wheel. The investigation is still on-going to identify the root cause of the tightening torque loss.

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

To address this potential unsafe condition, AH issued the ASB providing instructions to inspect the angular clearance of the affected part.

For the reasons described above, this AD requires repetitive inspections of the angular clearance of the affected part and, depending on findings, its replacement.

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:

Check(s):

(1) For Group 1 helicopters: Within 110 flight hours (FH) after the effective date of this AD and, thereafter, at intervals not to exceed the value defined in Table 1 of this AD, as applicable, inspect the angular clearance of the affected part in accordance with the instructions of the ASB.

Table 1 – Inspection Interval

Helicopter Model	Interval (FH)
AS 332 L2	825
EC 225 LP	1 320

(2) If, during any inspection as required by paragraph (1) of this AD, angular clearance of 0,34 mm (0.013 in) or more, but less than 0,69 mm (0.027 in), is detected, within 100 FH and, thereafter, at intervals not to exceed 100 FH, accomplish inspection of the angular clearance of the affected part 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, angular clearance of 0,069 mm (0,027 in) or more is detected, before next flight, replace the affected part with a serviceable TGB in accordance with the instructions of the ASB.

Terminating Action:

(4) If, during two consecutive inspections of a helicopter, as required by paragraph (2) of this AD, the value of the measured angular clearance remains unchanged, this determination constitutes terminating action for repetitive inspections as required by paragraph (2) of this AD for that helicopter.

Parts Installation:

(5) For Group 1 and Group 2 helicopters: From the effective date of this AD, it is allowed to install on any helicopter an affected part, provided it is a serviceable TGB, as defined in this AD, and that, following installation, it is inspected as required by this AD.

Ref. Publications:

AH ASB AS332-64.00.46 original issue dated 30 June 2021.

AH ASB EC225-64A011 original issue dated 30 June 2021.

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 30 July 2021.

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. This may include reporting on the same or similar components, other than those covered by the design to which this PAD 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.

4. For any question concerning the technical content of the requirements in this PAD, please contact: Airbus Helicopters (Technical Support)
   Web portal: https://keycopter.airbushelicopters.com > Technical Requests Management, or
   E-mail: TechnicalSupport.Helicopters@airbus.com.