



## Airworthiness Directive

**AD No.:** 2018-0066

**Issued:** 23 March 2018

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 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 (EC) 216/2008, Article 14(4) exemption].

### Design Approval Holder's Name:

AIRBUS HELICOPTERS

### Type/Model designation(s):

AS 332 helicopters

**Effective Date:** 30 March 2018

**TCDS Number(s):** EASA.R.002

**Foreign AD:** Not applicable

**Supersedure:** None

### ATA 05 – Time Limits / Maintenance Checks – Main Gearbox / Particle Detectors – Inspection

### ATA 63 – Main Rotor Drive – Planet Gear Assemblies – Replacement

#### Manufacturer(s):

Airbus Helicopters (formerly Eurocopter, Eurocopter France, Aérospatiale)

#### Applicability:

AS 332 L, AS 332 L1, AS 332 C and AS 332 C1 helicopters, all serial numbers.

#### Definitions:

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

**The ASB:** Airbus Helicopters (AH) Alert Service Bulletin (ASB) AS332-05.01.08

**Affected MGB:** A Main Gearbox (MGB) equipped with at least one Type A second stage planet gear, identified by part number (P/N) in Appendix 4.B of the ASB.

**Serviceable MGB:** An MGB equipped with Type B second stage planet gears only, identified by P/N in Appendix 4.B of the ASB.



**Reason:**

Investigation prompted by an EC 225 helicopter accident revealed involvement of a failure of a second stage planet gear of the Main Gearbox (MGB).

It was determined that one of the two types of planet gear used in the epicyclic module of the MGB is subject to higher outer race contact pressures and therefore has a greater susceptibility to spalling and cracking.

As one of a number of measures developed to ensure safe operation of the EC 225 LP/AS 332 L2 fleet, this type of planet gear has been permanently removed from service.

AH is reviewing its entire range of helicopters in regard to this particular issue.

On AS 332 L, L1, C and C1 helicopters there are two types of planet gear part numbers used in the epicyclic module of the MGB, one of which is subject to higher outer race contact pressures. The production of this type of planet gear was stopped since 1990; nevertheless, although unlikely, few of these parts might still be in service or kept in stock.

As a precautionary measure, AH issued the ASB applicable to AS 332 L, L1, C and C1 helicopters requesting the identification of the installed planet gears and, depending on the finding, their replacement along with the prohibition to install any MGB equipped with the affected planet gears. The ASB also provides updated inspection intervals and particle assessment criteria, aligning the AS 332 L, L1, C and C1 particle inspection to the standards set for EC 225 LP/AS 332 L2 helicopters.

For the reasons described above, this AD requires repetitive inspections of the MGB magnetic plugs, identification of the affected planet gear assemblies installed in the MGB and, depending on findings, the precautionary replacement of the affected planet gear assemblies.

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

Required as indicated, unless accomplished previously:

**Inspections / Analyses:**

- (1) Within 10 flight hours (FH) after the effective date of this AD and, thereafter, at intervals not to exceed 10 FH, inspect the MGB particle detectors in accordance with the instructions of Section 3 of the ASB.
- (2) If, during any inspection as required by paragraph (1) of this AD, particles are detected, before next flight, analyse the particles in accordance with the instructions of Appendix 4.A. of the ASB.

**Corrective Action(s):**

- (3) If, during any analysis as required by paragraph (2) of this AD, particles are detected which exceed the limits specified in Appendix 4.A. of the ASB, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of Appendix 4.A. of the ASB.



**Replacement:**

- (4) Within 50 FH after the effective date of this AD, identify the P/N of each second stage planet gear assembly installed on the MGB and replace each affected MGB with a serviceable MGB in accordance with the instructions of Section 3.B.4 of the ASB.

**Terminating Action:**

- (5) None.

**Parts Installation:**

- (6) From the effective date of this AD, do not install on any helicopter an affected MGB. It is allowed to install a serviceable MGB, provided that, following installation, it is inspected as required by this AD.

**Ref. Publications:**

AH ASB AS332-05.01.08 original issue dated 20 March 2018.

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. For any question concerning the technical content of the requirements in this AD, please contact: Airbus Helicopters (EBSESB) – Aéroport de Marseille Provence, 13725 Marignane Cedex, France; Telephone +33 (4) 42 85 97 97; Fax +33 (4) 42 85 99 66; E-mail: [Directive.technical-support@airbus.com](mailto:Directive.technical-support@airbus.com).

