

## Airworthiness Directive

**AD No.:** 2020-0171

**Issued:** 28 July 2020

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, 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 (EU) 2018/1139, Article 71 exemption].

**Design Approval Holder's Name:**

AIRBUS HELICOPTERS

**Type/Model designation(s):**

SA 330 helicopters

**Effective Date:** 11 August 2020

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

**Foreign AD:** Not applicable

**Supersedure:** This AD supersedes EASA AD 2010-0147-E dated 14 July 2010.

### ATA 65 – Rotors – Main Gearbox Oil Cooling Fan – Inspection / Replacement

**Manufacturer(s):**

Eurocopter, Eurocopter France, Aérospatiale, Sud Aviation

**Applicability:**

SA 330 J helicopters, all serial numbers.

**Definitions:**

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

**Affected parts:** Main Gearbox (MGB) oil cooling fan rotor shaft bearings (both rear and front), having Part Number (P/N) 704A33651114 (manufacturer P/N (MP/N) 205FFTX74K6-G33).

**Serviceable parts:** MGB oil cooling fan rotor shaft bearings (both rear and front), having P/N 704A33651268 (MP/N 594918).

**The ASB:** Airbus Helicopters (AH) SA330 Emergency Alert Service Bulletin (ASB) 05.96 Revision 1.

**The replacement SB:** AH Service Bulletin (SB) SA330-65.127.

**Reason:**

Occurrences were reported of MGB oil cooling fan assembly rotor burst on SA 330 helicopters. The subsequent investigation determined that some MGB oil cooling fan rotor blades interfered with



the upper area of the guide vane bearing housing of the MGB oil cooling fan assembly. The blades detached from the rotor, impacting the MGB compartment area and causing puncture holes in the transmission deck. This interference was due to internal degradation of the affected parts.

This condition, if not detected and corrected, could lead to MGB oil cooling fan assembly rotor burst and consequent damage to hydraulic pipes and flight controls located near the MGB oil cooling fan, possibly resulting in reduced control of the helicopter.

To address this potential unsafe condition, Eurocopter issued the SA330 Emergency ASB No. 05.96 at original issue to provide inspection instructions, and EASA issued the Emergency AD 2010-0147-E to require repetitive inspections of the play between an MGB oil cooling fan blade and the upper section of the guide vane bearing housing of the MGB oil cooling fan and, depending on findings, replacement of the affected parts.

Since that AD was issued, AH developed an improved MGB oil cooling fan rotor shaft bearing design and issued the ASB and the replacement SB, as defined in this AD.

For the reasons described above, this AD retains the requirements of EASA AD 2010-0147-E, which is superseded, and additionally requires replacement of the affected parts with serviceable parts, as defined in this AD. This AD also requires repetitive inspections of the serviceable parts.

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

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

Required as indicated, unless accomplished previously:

#### Inspection(s):

- (1) Within 10 flight hours (FH) after the effective date of this AD and, thereafter, at intervals not to exceed 10 FH, measure, with a feeler gauge at the bottom of the fan guide vane bearing, the play between a fan rotor blade and the upper section of the guide vane bearing housing of the MGB oil cooling fan assembly in accordance with the instructions of the ASB.

#### Corrective Action(s):

- (2) If, during any measurement as required by paragraph (1) of this AD, the play measured over the entire width of the fan blade is less than 0.2 mm, before next flight, replace the MGB oil cooling fan rotor shaft bearings with serviceable parts in accordance with the instructions of the ASB.

#### Replacement:

- (3) Within the compliance time defined in Table 1 of this AD, replace the affected parts with serviceable parts in accordance with the instructions of the replacement SB.

Table 1 – Replacement of the affected parts

Service life of the affected parts	Compliance time
200 FH or less	Before exceeding 300 FH
More than 200 FH	Within 100 FH after the effective date of this AD



Note 1: Unless specified otherwise, the FH in Table 1 of this AD are those accumulated by the affected parts since new (first installation on a helicopter).

**Terminating Action:**

(4) None.

**Parts Installation:**

(5) From the effective date of this AD, it is allowed to install on any helicopter MGB oil cooling fan rotor shaft bearings, provided that they are serviceable parts, as defined in this AD.

**Ref. Publications:**

AH SA330 Emergency ASB 05.96 Revision 1 dated 24 July 2020.

AH SB SA330-65.127 original issue dated 25 June 2018.

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. 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 Programming and Continued Airworthiness 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 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), web portal: <https://keycopter.airbushelicopters.com> > Technical Requests Management, or e-mail: [support.technical-airframe.ah@airbus.com](mailto:support.technical-airframe.ah@airbus.com) and [TechnicalSupport.Helicopters@airbus.com](mailto:TechnicalSupport.Helicopters@airbus.com).

