



Airworthiness Directive

AD No.: 2018-0206

Issued: 20 September 2018

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):

AS 350, EC 130 and AS 355 helicopters

Effective Date: 04 October 2018

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

Foreign AD: Not applicable

Supersedure: None

ATA 62 – Main Rotor – Mast Upper Bearing Sealant Bead / Inner Race Retaining Rings – Inspection

Manufacturer(s):

Airbus Helicopters (AH), formerly Eurocopter, Eurocopter France

Applicability:

AS 350 B, AS 350 BA, AS 350 BB, AS 350 B1, AS 350 B2, AS 350 B3 and AS 350 D helicopters, all serial numbers (s/n);

EC 130 B4 and EC 130 T2 helicopters, all s/n; and

AS 355 E, AS 355 F, AS 355 F1, AS 355 F2, AS 355 N and AS 355 NP helicopters, all s/n.

Definitions:

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

The applicable ASB: AH AS 350 Alert Service Bulletin (ASB) 62.00.42, EC 130 ASB 62.00.37, and AS 355 ASB 62A017, as applicable.

Affected part: Equipped Main Rotor (M/R) shafts also named Main Rotor Mast (MRM), having Part Number (P/N) 350A37-1290-XX (where XX can be any numerical combination) and a s/n as listed in the applicable ASB, except those that have been subject to a specific inspection, confirming that the upper bearing inner race retaining rings are installed correctly.



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:

During scheduled maintenance on an AS 350 B3 helicopter, one of the two retaining rings of the inner race of the MRM upper bearing was found missing. The two retaining rings ensure that the inner race is correctly positioned with respect to the rollers. Missed installation of one or two retaining rings can lead to an unlimited shift of the inner race, thus compromising the function of the MRM upper bearing. Due to design and supply chain commonality, the same condition may exist or develop on other AS 350 model helicopters, as well as EC 130 and AS 355 helicopters.

This condition, if not detected and corrected, can lead to damage to the MRM and surrounding elements, possibly resulting in loss of control of the helicopter.

Prompted by this finding, AH developed an inspection and published the applicable ASB to check that the MRM upper and lower bearing retaining rings are present and correctly installed. Pending this check, necessary to declare the part serviceable, a periodic inspection of the MRM upper bearing sealant bead is necessary.

For the reasons described above, this AD requires a one-time inspection to verify correct installation of the MRM upper bearing retaining rings, and, pending this check, repetitive inspections of the MRM upper bearing sealant bead.

This AD is considered as an interim measure, pending further investigation results, and further AD action may follow.

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

Required as indicated, unless accomplished previously:

Inspection(s):

- (1) For Group 1 helicopters: Within the compliance time indicated in Table 1 of this AD, and, thereafter, at intervals not to exceed 165 flight hours (FH), inspect the MRM upper bearing sealant bead in accordance with the instructions of section 3.B.2.a of the applicable ASB.

Table 1 – Initial Inspection of MRM Upper Bearing Sealant Bead (see Note 1 of this AD)

FH Accumulated	Compliance time
Less than 115 FH	Before exceeding 165 FH
115 FH or more	Within 50 FH after the effective date of this AD

Note 1: Unless specified otherwise, the FH indicated in Table 1 of this AD are those accumulated on the effective date of this AD by the helicopter since first flight, or since the last check of the sealant bead on the upper bearing of MRM.



- (2) Within 660 FH or 24 months, whichever occurs first after the effective date of this AD, inspect the installation of the MRM upper bearing inner race retaining rings in accordance with the instructions of section 3.B.2.b of the applicable ASB.

Corrective Action(s):

- (3) If, during any inspection of the sealant bead as required by paragraph (1) of this AD, discrepancies are detected, before next flight, inspect the installation of the MRM upper bearing inner race retaining rings in accordance with the instructions of section 3.B.2.b of the applicable ASB.
- (4) If, during any inspection to verify correct installation of the MRM upper bearing inner race retaining rings, as required by paragraph (2) or (3) of this AD, as applicable, any discrepancies are detected, before next flight, remove the affected part, inspect the MRM inner race for degradation and replace the retaining rings in accordance with the instructions of section 3.B.2.c of the applicable ASB.
- (5) If, during the inspection of the MRM inner race, as required by paragraph (4) of this AD, degradation is found, before next flight, contact AH for repair instructions and accomplish those instructions accordingly.

Terminating Action:

- (6) Verification on a helicopter of a correct installation of the MRM upper bearing inner race retaining rings, as required by paragraph (2) or (3) of this AD, as applicable, or corrective action(s) on a helicopters as required by paragraph (4) or (5) of this AD, as applicable, constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD for that helicopter.

Parts Installation:

- (7) For Group 1 and Group 2 helicopters: From the effective date of this AD, do not install an affected part on any helicopter.

Ref. Publications:

AH AS 350 ASB 62.00.42, original issue dated 18 September 2018.

AH AS 355 ASB 62A017, original issue dated 18 September 2018.

AH EC 130 ASB 62.00.37, original issue dated 18 September 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 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](#).
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
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