# Airworthiness Directive

**AD No.: 2017-0189**

**Issued: 22 September 2017**

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 L2 and EC 225 LP helicopters

Effective Date: 06 October 2017

TCDS Number(s): EASA.R.002

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2017-0133 dated 27 July 2017.

## ATA 05 – Time Limits / Maintenance Checks – Main Gearbox Suspension Bar Pins / Fittings – Re-calculation of Life Limits / Replacement

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**Manufacturer(s):**

Airbus Helicopters (formerly Eurocopter, Eurocopter France, Aerospatiale)

**Applicability:**

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

**Reason:**

Following the review of data, reported after accomplishing actions as required by EASA Emergency AD 2016-0089-E, applicable to EC 225 LP helicopters, it was determined that the installation of main gearbox (MGB) upper deck fittings of the three MGB suspension bars, could lead to tightening torque loss on the attachment pins of the fittings. Due to design similarity, AS 332 L2 helicopters could also be affected by the same installation condition. Investigation identified that the current service life limits (SLL) for the affected pins and/or fittings, as published in the applicable Airworthiness Limitations Section (ALS) remain valid, provided that an add-on penalty factor is applied to the life accumulated by the affected parts in service.

This condition, if not corrected, could lead to structural failure of the MGB suspension bar attachment pins and/or fitting.

To address this potentially unsafe condition, Airbus Helicopters (AH) issued AS332 Emergency Alert Service Bulletin (ASB) 01.00.86 and EC225 Emergency ASB 04A013 to provide life re-calculation methods and replacement instructions.

Consequently, EASA issued AD 2017-0133 to require implementation of an add-on penalty factor to the flight hours (FH) accumulated by the affected parts and, before exceeding the applicable SLL, replacement.

Since that AD was issued, it was discovered that the referenced AS332 ASB contained an error, possibly resulting in installation of pins or fittings using incorrect torque values. Prompted by that finding, AH issued AS332 Emergency ASB 01.00.86 Revision 1.

For the reason described above, this AD retains the requirements of EASA AD 2017-0133, which is superseded, but requires use of the revised ASB for AS 332 L2 helicopters. This AD also requires, for AS 332 L2 helicopters, replacement of any affected pins where incorrect torque values were applied, and reporting the details to the design approval holder.

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

Required as indicated, unless accomplished previously:

Note 1: For the purpose of this AD, a front or rear attachment fitting of an MGB suspension bar is an 'affected fitting' and a front or rear attachment fitting pin is an 'affected pin'.

Note 2: AH AS332 Emergency ASB 01.00.86 Revision 1 and EC225 Emergency ASB 04A013 (any revision), are hereafter collectively referred to as 'the applicable ASB' in this AD.

**Service Life Re-calculation**:

(1) Within 30 FH after 03 August 2017 [the effective date of EASA AD 2017-0133], and, thereafter, after each flight, re-calculate the life accumulated by each affected pin (for AS 332 L2 and EC 225 LP) and fitting (for AS 332 L2 only) by applying the add-on factor, as applicable, in accordance with instructions of the applicable ASB (see Note 2 of this AD).

**Corrective Action(s)**:

(2) All helicopters: Before the re-calculated life of an affected pin, determined as required by paragraph (1) of this AD, exceeds the applicable SLL as defined in the AS 332 L2 or EC 225 LP ALS, as applicable, replace the affected part with a serviceable part in accordance with the instructions of the applicable ASB.

(3) AS 332 L2 helicopters: Before the re-calculated life of an affected fitting, determined as required by paragraph (1) of this AD, exceeds the applicable SLL as defined in the AS 332 L2 ALS, replace the affected fitting with a serviceable part in accordance with the instructions of the applicable ASB.

(4) As an alternative to the replacement as required by paragraph (3) of this AD, inspect the affected fitting in accordance with the instructions of the applicable ASB.

(5) If, during an inspection as specified by paragraph (4) of this AD, no crack is detected, within 150 FH after that inspection, replace the affected fitting with a serviceable part in accordance with the instructions of the applicable ASB. No further accumulated life recalculations (see paragraph (1) of this AD) are required, until the fitting is replaced.

(6) If, during an inspection as specified in paragraph (4) of this AD, any crack is detected, before next flight, replace the affected fitting with a serviceable part in accordance with the instructions of the applicable ASB.

**Credit**:

(7) Re-calculation(s) and inspection(s) of affected pins or fittings and replacement of affected fittings on an AS 332 L2 helicopter, accomplished before the effective date of this AD in accordance with the instructions of the original issue of AH AS332 Emergency ASB 01.00.86, are acceptable to comply with the initial requirements of this AD for that helicopter.

(8) Replacement of an affected pin on an AS 332 L2 helicopter, accomplished before the effective date of this AD in accordance with the instructions of the original issue of AH AS332 Emergency ASB 01.00.86 is acceptable to comply with the initial requirements of this AD for that helicopter, provided that the tightening torque values applied to the affected pin(s) of the MGB suspension bar fittings are those referenced in Revision 1 of AH AS332 Emergency ASB 01.00.86.

**MGB Suspension Bar Fitting Pin Replacement:**

(9) For AS 332 L2 helicopters on which, before the effective date of this AD, a replacement pin was installed and an incorrect torque value applied, within 150 FH (without applying an add on-factor) after that pin was installed, replace the affected pin with a serviceable part in accordance with the instructions Revision 1 of AH AS332 Emergency ASB 01.00.86.

**Parts Installation**:

(10) From the effective date of this AD, it is allowed to install an affected pin or affected fitting (see Note 1 of this AD) on a helicopter, provided the part is new, or has not exceeded the applicable SLL, as defined in the AS 332 L2 or EC 225 LP ALS, as applicable, and that, following installation, the life of the part is re-calculated as required by paragraph (1) of this AD.

**Terminating Action**:

(11) None.

**Reporting**:

(12) For AS 332 L2 helicopters affected by paragraph (9) of this AD, within 30 days after the effective date of this AD, report all information related to the affected MGB suspension bar fitting pin to AH in accordance with the instructions Revision 1 of AH AS332 Emergency ASB 01.00.86.

**Ref. Publications:**

AH AS332 Emergency ASB 01.00.86 original issue dated 27 July 2017, or Revision 1 dated 25 August 2017.

AH EC225 Emergency ASB 04A013 original issue dated 27 July 2017, or Revision 1 dated 25 August 2017.

AH AS332 L2 ALS Revision 004 dated 18 July 2016.

AH EC 225 LP ALS Revision 008 dated 13 February 2017.

The use of later approved revisions of these 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. For any question concerning the technical content of the requirements in this AD, please contact: Airbus Helicopters (Technical Support), Aéroport de Marseille Provence 13725 Marignane Cedex, France, Telephone +33 4 42 85 97 97, Fax +33 4 42 85 99 66, Web portal: https://keycopter.airbushelicopters.com > Technical Requests Management.