



# Notification of a Proposal to issue an Airworthiness Directive

**PAD No.: 21-126**

**Issued: 20 August 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 L2 and EC 225 LP helicopters

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

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

**Foreign AD:** Not applicable

**Supersedure:** This AD supersedes EASA AD 2017-0189 dated 22 September 2017.

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

### Manufacturer(s):

Airbus Helicopters (AH), formerly Eurocopter, Eurocopter France, Aerospatiale

### Applicability:

AS 332 L2 and EC 225 LP helicopters, all manufacturer serial numbers, except helicopters on which AH modification (mod) 0728521, mod 0728904, mod 0728496 and mod 0729044 have been embodied concurrently in production.

### Definitions:

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

**Affected pin(s):** Front and rear attachment fitting pins of Main Gearbox (MGB) suspension bars.

**Affected fitting(s):** Front and rear attachment fittings of MGB suspension bars.

**Serviceable part:** An affected pin(s) or affected fitting(s) that is new (not previously installed), or has not exceeded the applicable service life limit (SLL) as defined in the AS 332 L2 or EC 225 LP Airworthiness Limitations Section (ALS).



**The ASB:** AH AS332 Emergency Alert Service Bulletin (ASB) 01.00.86 Revision 1 or EC225 Emergency ASB 04A013, as applicable.

**The modification SB:** AH Service Bulletin (SB) AS332-53.02.03 or SB EC225-53-065, as applicable.

#### 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 MGB upper deck fittings of the three MGB suspension bars could lead to tightening torque loss on the affected pin(s) and fitting(s), as defined in this AD. Due to design similarity, AS 332 L2 helicopters could also be affected by the same installation condition. Investigation identified that the current SLL for the affected pin(s) and/or fitting(s), as published in the applicable ALS, remain valid provided that an add-on penalty factor is applied to the life accumulated by the affected pin(s) and fitting(s) in service.

This condition, if not corrected, could lead to structural failure of the affected pin(s) and fitting(s).

To address this potentially unsafe condition, AH issued original issue of AS332 Emergency 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 pin(s) and fitting(s) and, before exceeding the applicable SLL, replacement. Subsequently, it was discovered that the original issue of AS332 Emergency ASB 01.00.86 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. Prompted by this development, EASA issued AD 2017-0189, retaining the requirements of EASA AD 2017-0133, which was superseded, but required use of the revised ASB for AS 332 L2 helicopters. That AD also required, for AS 332 L2 helicopters, replacement of any affected pin(s) where incorrect torque values were applied, and reporting the details to the design approval holder.

Since AD 2017-0189 was issued, AH developed a design improvement, installing new links on the attachment fittings of the MGB suspension bars through mods 0728521, 0728904, 0728496 and 0729044 and issued the modification SB, providing in-service modification instructions.

For the reasons described above, this AD retains the requirements of EASA AD 2017-0189, which is superseded, and additionally requires modification.

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

Required as indicated, unless accomplished previously:

#### Service Life Re-calculation(s):

- (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 affected fitting (for AS 332 L2 only) by applying the add-on factor, as applicable, in accordance with instructions of the ASB.



**Corrective Action(s):**

- (2) For 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 pin with a serviceable part in accordance with the instructions of the ASB.
- (3) For 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 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 ASB.
- (5) If, during an inspection as specified in 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 ASB. No further accumulated life re-calculations (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 ASB.

**Credit:**

- (7) Re-calculation(s) and inspection(s) of affected pin(s) or fitting(s) and replacement of affected fitting(s) on an AS 332 L2 helicopter, accomplished before 06 October 2017 [the effective date of EASA AD 2017-0189] 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 06 October 2017 [the effective date of EASA AD 2017-0189] 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 were 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 06 October 2017 [the effective date of EASA AD 2017-0189], 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 of Revision 1 of AH AS332 Emergency ASB 01.00.86.

**Parts Installation:**

- (10) From 06 October 2017 [the effective date of EASA AD 2017-0189], it is allowed to install an affected pin or an affected fitting on a helicopter, provided the part is a serviceable part, as



defined in this AD, and that, following installation, the life of the part is re-calculated as required by paragraph (1) of this AD.

**Modification:**

- (11) Within 825 FH, or within the applicable calendar compliance time specified in Table 1 of this AD, whichever occurs first after the effective date of this AD, modify the helicopter in accordance with the instructions of the modification SB.

Table 1 – Modification

Model	Calendar Compliance Time
AS 332 L2	27 months
EC 225 LP	40 months

**Terminating Action:**

- (12) Replacement of an affected fitting or affected pin on a helicopter, as required by paragraph (2), (3), (5) or (6) of this AD, as applicable, does not constitute terminating action for the repetitive service life re-calculation(s) as required by paragraph (1) of this AD for that helicopter.
- (13) Modification of a helicopter as required by paragraph (11) of this AD constitutes terminating action for all requirements of this AD for that helicopter.

**Reporting:**

- (14) For AS 332 L2 helicopters affected by paragraph (9) of this AD, within 30 days after 06 October 2017 [the effective date of EASA AD 2017-0189], report all information related to the affected pin(s) to AH in accordance with the instructions of 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, or Revision 2 dated 02 March 2020, or Revision 3 dated 19 August 2021.

AH EC225 Emergency ASB 04A013 original issue dated 27 July 2017, or Revision 1 dated 25 August 2017, or Revision 2 dated 02 March 2020, or Revision 3 dated 19 August 2021.

AH SB AS332-53.02.03 original issue dated 19 August 2021.

AH SB EC225-53-065 original issue dated 19 August 2021.

AH AS332 L2 ALS Revision 008 dated 28 September 2018.

AH EC 225 LP ALS Revision 013 dated 08 March 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 17 September 2021.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto: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), Aéroport de Marseille Provence 13725 Marignane Cedex, France, Telephone +33 (0)4 42 85 97 97, Fax +33 (0)4 42 85 99 66, Web portal: <https://keycopter.airbushelicopters.com> > Technical Requests Management, E-mail: [support.technical-dyncomp.ah@airbus.com](mailto:support.technical-dyncomp.ah@airbus.com), and [TechnicalSupport.Helicopters@airbus.com](mailto:TechnicalSupport.Helicopters@airbus.com).

