



## Airworthiness Directive

**AD No.:** 2018-0260

**Issued:** 03 December 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 332 helicopters

**Effective Date:** 17 December 2018

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

**Foreign AD:** Not applicable

**Supersedure:** None

## ATA 53 – Fuselage – Main Gearbox Suspension Bar Fittings and Screws – Life Limit / Replacement

### Manufacturer(s):

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

### Applicability:

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

### Definitions:

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

**The ASB:** AH Alert Service Bulletin (ASB) AS332-01.00.90.

**The applicable ALS:** AH Airworthiness Limitations Section (ALS) AS 332 C Revision 006 dated 05 June 2018, AH ALS AS 332 C1 Revision 006 dated 05 June 2018, AH ALS AS 332 L Revision 006 dated 05 June 2018 and AH ALS AS 332 L1 Revision 006 dated 05 June 2018 which contain the Service Life Limits (SLL) for parts subject to airworthiness limitations, as applicable.

**Affected part:** Main Gearbox (MGB) suspension bar right hand (RH) side rear attachment fitting (Part Number (P/N) 330A22-2702-07) and screws (P/N 330A22-0135-20); MGB suspension bar left hand (LH) side rear attachment fitting (P/N 330A22-2702-06) and screws (P/N 330A22-0135-20); and MGB suspension bar front attachment fitting screws (P/N 330A22-0134-20).



**Serviceable part:** MGB suspension bar RH side rear attachment fitting (P/N 330A22-2702-07) and screws (P/N 330A22-0135-20); MGB suspension bar LH side rear attachment fitting (P/N 330A22-2702-06) and screws (P/N 330A22-0135-20); and MGB suspension bar front attachment fitting screws (P/N 330A22-0134-20), that are new (never installed).

**Major inspection (G):** A maintenance check defined in AH AS 332 C, AS 332 C1, AS 332 L and AS 332 L1 Maintenance Manual (MM) instruction MET 05-29-00-601, as applicable.

**Reason:**

Review of EC 225 LP helicopter in-service data revealed installation findings of tightening torque loss of the attachment screws of the upper deck fittings of the three MGB suspension bars. Due to design similarities, AS 332 L2 helicopters could also be affected by the same findings.

This condition, if not corrected, could lead to structural failure of the affected parts on EC 225 LP and AS 332 L2 helicopters, possibly resulting in detachment of MGB suspension bars.

Investigations identified that the SLL of the affected parts on EC 225 LP and AS 332 L2 helicopters, as published in the applicable ALS of these helicopters, remain valid provided that an add-on service life penalty factor is applied.

As a result of these investigations, EASA issued AD 2017-0133 for the EC 225 LP and AS 332 L2 helicopters, later on superseded by AD 2017-0189, to provide SLL re-calculation methods and replacement instructions of the affected parts.

Since EASA AD 2017-0189 was issued, AH performed additional tests and analyses on AS 332 C, AS 332 C1, AS 332 L and AS 332 L1 helicopters due to design similarities in order to assess the SLL of the affected parts installed on these helicopters in tightened and untightened conditions.

Consequently, AH issued the ASB for the AS 332 C, AS 332 C1, AS 332 L and AS 332 L1 helicopters to provide replacement instructions of the affected parts on the basis of reduced SLL differing from those published in the applicable ALS.

For the reasons described above, this AD requires determination of the accumulated service life and introduces life limits to replace the affected parts with serviceable parts.

This AD is considered an interim measure, pending availability of a design change for improved MGB suspension bar attachment fitting screws.

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

Required as indicated, unless accomplished previously:

**Service Life Determination:**

- (1) Within 50 flight hours (FH) after the effective date of this AD, determine the FH accumulated since new (first installation on a helicopter) by the RH side and LH side rear attachment fittings of the MGB suspension bars in accordance with the instructions of the ASB.



**Replacement of MGB RH side rear attachment fitting and screws:**

- (2) Within the compliance time defined in Table 1 of this AD, as applicable, depending on the accumulated FH determined as required by paragraph (1) of this AD and, thereafter, at intervals not to exceed 1 470 FH, replace the MGB RH side rear attachment fitting and screws with serviceable parts in accordance with the instructions of the paragraph 3.B.3 of the ASB.

Table 1 – MGB RH side rear attachment fitting/screws replacement (see Note 1 of this AD)

Accumulated Service Life	Compliance time
Less than 1 370 FH	Before exceeding 1 470 FH
1 370 FH or more	Within 100 FH after the effective date of this AD

Note 1: Unless specified otherwise, the FH indicated in Tables 1 and 2 of this AD are those accumulated by an affected part since first installation on a helicopter.

- (3) For MGB RH side rear attachment fittings which accumulated 1 370 FH or more, determined as required by paragraph (1) of this AD: As an alternative to the first replacement as required by paragraph (2) of this AD, if no attachment screw replacement or re-tightening torque occurred since first installation of the attachment fitting, as applicable, measure the tightening torque of each attachment screw in accordance with the instructions of the paragraph 3.B.4 of the ASB.
- (4) If, during the measurement, as required by paragraph (3) of this AD, it is determined that the tightening torque of any attachment screw is less than 80 % of the minimum torque value of 3.4 daN·m / 301 lbf·in (i.e. 2.72 daN·m / 240.8 lbf·in), within 100 FH after the effective date of this AD and, thereafter, at intervals not to exceed 1 470 FH, replace the MGB RH side rear attachment fitting and screws with serviceable parts in accordance with the instructions of the paragraph 3.B.3 of the ASB.
- (5) If, during the measurement, as required by paragraph (3) of this AD, it is determined that the tightening torque of each attachment screw is 80 % of the minimum torque value of 3.4 daN·m / 301 lbf·in (i.e. 2.72 daN·m / 240.8 lbf·in) or more, before exceeding the applicable SLL of MGB RH side rear attachment fitting and screws as defined in the applicable ALS, and, thereafter, at intervals not to exceed 1 470 FH, replace the MGB RH side rear attachment fitting and screws with serviceable parts in accordance with the instructions of the paragraph 3.B.3 of the ASB.

**Replacement of MGB LH side rear attachment fitting and screws:**

- (6) If, during the determination as required by paragraph (1) of this AD, the MGB LH side rear attachment fitting is found to have accumulated 13 500 FH or more, within 100 FH after the effective date of this AD, and, thereafter, at intervals not exceeding the applicable value defined in Table 2 of this AD, replace the MGB LH side rear attachment fitting and screws with serviceable parts in accordance with the instructions of the paragraph 3.B.3 of the ASB.

Table 2 – MGB LH side rear attachment fitting/screws replacement (see Note 1 of this AD)

Attachment Part	Interval (not to exceed)
Attachment fitting	13 600 FH
Attachment screws	During each major inspection (G)



- (7) If, during the determination as required by paragraph (1) of this AD, the MGB LH side rear attachment fitting is found to have accumulated less than 13 500 FH, within the compliance time defined in Table 3 of this AD, as applicable, and, thereafter, during each major inspection (G), replace the MGB LH side rear attachment screws with serviceable parts in accordance with the instructions of the paragraph 3.B.2 of the ASB.

Table 3 – MGB LH side rear attachment screw replacement (see Note 1 of this AD)

<b>Major inspection (G) accomplished before the effective date of this AD</b>	<b>Compliance Time</b> (after the effective date of this AD)
Yes	Within 100 FH
No	During the next major inspection (G)

- (8) If, during the determination as required by paragraph (1) of this AD, the MGB LH side rear attachment fitting is found to have accumulated less than 13 500 FH, before exceeding 13 600 FH since first installation of the fitting on a helicopter, and, thereafter, at intervals not to exceed 13 600 FH, replace the MGB LH side rear attachment fitting with a serviceable part in accordance with the instructions of the paragraph 3.B.3 of the ASB.

**Replacement of MGB front attachment fitting screws:**

- (9) During the next major inspection (G) after the effective date of this AD and, thereafter, during each major inspection (G) replace each MGB front attachment fitting screw with serviceable parts in accordance with the instructions of the paragraph 3.B.2 of the ASB.

**Terminating Action:**

- (10) None.

**Ref. Publications:**

AH ASB AS332-01.00.90 original issue dated 21 November 2018.

AH ALS AS 332 C Revision 006 dated 05 June 2018.

AH ALS AS 332 C1 Revision 006 dated 05 June 2018.

AH ALS AS 332 L Revision 006 dated 05 June 2018.

AH ALS AS 332 L1 Revision 006 dated 05 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 Safety 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](#).
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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