

Airworthiness Directive

AD No.: 2024-0100

Issued: 10 May 2024

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, or Annex Vb Part ML.A.301, as applicable, 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 Annex Vb Part ML.A.303, as applicable] 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: 24 May 2024

TCDS Number(s): EASA.R.002

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2018-0142R1 dated 09 December 2019.

ATA 25, 30, 53 – Equipment and Furnishings / Ice and Rain Protection / Fuselage – Dual Hoist Removable Parts or De-icing System – Removal

Manufacturer(s):

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

Applicability:

AS 332 C, AS 332 C1, AS 332 L, AS 332 L1 helicopters, all manufacturer serial numbers, if equipped with dual hoist installation and de-icing system.

Definitions:

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

The ASB 1: AH AS332 Emergency Alert Service Bulletin (ASB) 01.00.91.

The ASB 2: AH AS332 ASB 01.00.96.

The ASB 3: AH ASB AS332-04-00-0001.

Groups: Group 1 helicopters are those in pre-modification (MOD) 0722907 configuration.

Group 2 helicopters are those in post-MOD 0722907 configuration.

Reason:

During the first flight of an AS 332 L helicopter after a retrofit re-installing the de-icing system, a phenomenon involving vibrations around the 12 Hz frequency was observed. Subsequent flight tests determined that this vibration was due to the specific helicopter configuration, involving riveted main frames X3855 and X5295 (pre-MOD 0722907), additional weight created by parts of the rotor de-icing system on the main rotor head (the distributor and de-icing harnesses) and removable parts (hoist arm and hoists) of the dual hoist installation.

This condition, if not corrected, could potentially generate divergent aeromechanic coupling between the helicopter structure and the rotor, possibly resulting in mechanical failure of structural parts and/or loss of control of the helicopter.

To address this potential unsafe condition, AH issued the ASB 1, along with the Safety Information Notice No. 3234-S-67, and EASA issued Emergency AD 2018-0142-E to require removal of removable parts of the dual hoist installation, or removal of the de-icing system.

After that AD was issued, AH accomplished additional flight tests and demonstrated that AS 332 L and AS 332 L1 helicopters are free from 12 Hz vibratory phenomenon, when limiting the operational flight envelope and Vne (never-exceed speed). Consequently, AH issued the ASB 2, applicable to AS 332 L and AS 332 L1 helicopters only, retaining the requirements of the ASB 1 and providing, as an alternative method to removal of the parts of the dual hoist installation or of the de-icing system, instructions for specific Rotorcraft Flight Manual (RFM) limitations of the operational flight envelope and Vne of these two helicopter models. AH also revised the ASB 1 to remove from the applicability AS 332 L and AS 332 L1 helicopters which are now addressed by the ASB 2.

Consequently, EASA issued AD 2018-0142R1 to introduce RFM amendment and locally made placard installation as an optional alternative method for AS 332 L or AS 332 L1 helicopters.

After EASA AD 2018-0142R1 was issued, the occurrence of 12 Hz vibratory phenomenon was reported on an post-MOD 0722907 AS 332 L1 helicopter. In consequence, AH issued the ASB 3 to provide a procedure for post-MOD 0722907 helicopters in order to measure vibrations in flight, to interpret the results and to modify the helicopter configuration in case of findings.

For the reasons described above, this AD retains the requirements of EASA AD 2018-0142R1, which is superseded, extends the Applicability to post-MOD 0722907 helicopters and requires, for post-MOD 0722907 helicopters, measurement of vibration level and, depending on findings, removal of the dual hoist installation, or removal of the de-icing system.

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

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

Required as indicated by this AD, unless the action(s) required by this AD have been already accomplished:

Removal:

- (1) For Group 1 helicopters: Before next flight after 06 July 2018 [the effective date of EASA AD 2018-0142-E], remove the removable parts of the dual hoist installation, or remove the de-icing



system in accordance with the instructions of paragraph 3 of the ASB 1 or the ASB 2, as applicable to helicopter model.

Alternative Method of Compliance:

- (2) For Group 1 helicopters: Amendment of the RFM of an AS 332 L or AS 332 L1 helicopter by inserting Appendix 4A, 4B or 4C of the ASB 2, as applicable to helicopter model and configuration, and installation of locally made placard on the instrument panel, in accordance with the instructions of the ASB 2, is an acceptable alternative method to comply with the requirements of paragraph (1) of this AD for that helicopter.

Initial Determination of Vibration Level:

- (3) For Group 2 helicopters: Within 110 flight hours after the effective date of this AD, measure the vibrations in flight and interpret the results in accordance with the instructions of the ASB 3.

Configuration Change(s):

- (4) For Group 2 helicopters: Depending on findings of the initial determination of vibration level, as required by paragraph (3) of this AD, before next flight, remove the dual hoist system in accordance with the instructions of paragraph 4.5.1.1 of the ASB 3, or remove the blade de-icing harnesses in accordance with the instructions of paragraph 4.5.2.1 of the ASB 3.
- (5) For Group 2 helicopters: From the effective date of this AD, it is allowed to re-install a dual hoist system on a helicopter, if previously removed as required by paragraph (4) or (6) of this AD, provided that the blade de-icing harnesses are removed from the helicopter in accordance with the instructions of paragraph 4.5.2.1 of the ASB 3.
- (6) For Group 2 helicopters: From the effective date of this AD, it is allowed to re-install the blade de-icing harnesses on a helicopter, if previously removed as required by paragraph (4) or (5) of this AD, provided that the dual hoist system is removed from the helicopter in accordance with the instructions of paragraph 4.5.1.1 of the ASB 3.

Determination of Vibration Level after a Configuration Change:

- (7) For Group 2 helicopters: From the effective date of this AD, during the first flight after re-installation of a dual hoist system as described in paragraph (5) of this AD, or during the first flight after removal of the blade de-icing harnesses as required by paragraph (4) or (5) of this AD, measure the vibrations in flight and interpret the results in accordance with the instructions of the ASB 3.
- (8) For Group 2 helicopters: If, during any measure of the vibrations, as required by paragraph (7) of this AD, any discrepancy is identified, as defined in the ASB 3, before next flight, contact AH for applicable instructions and accomplish those instructions accordingly.

Ref. Publications:

AH AS332 Emergency ASB 01.00.91 original issue dated 03 July 2018, or Revision 1 dated 04 December 2019.

AH AS332 Emergency ASB 01.00.96 original issue dated 04 December 2019.



AH ASB AS332-04-00-0001 original issue dated 27 March 2024.

The use of later approved revisions of 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. This AD was posted on 09 April 2024 as PAD 24-042 for consultation until 07 May 2024. No comments were received during the consultation period.
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](#). 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), 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: TechnicalSupport.Helicopters@airbus.com.

