



Airworthiness Directive

AD No.: 2019-0021

Issued: 15 February 2019

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 C1 and AS 332 L1 helicopters

Effective Date: 15 February 2019

TCDS Number(s): EASA.R.002

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2017-0077 dated 03 May 2017.

ATA – Rotorcraft Flight Manual / Emergency Procedures – Amendment

ATA 34 – Navigation – Attitude and Heading Reference System – Modification

Manufacturer(s):

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

Applicability:

AS 332 C1 and AS 332 L1 helicopters, all manufacturer serial numbers, if equipped with Advanced Helicopter Cockpit & Avionics System (AHCAS), as defined in paragraph 1.A.1 of the ASB (see Definitions below), **except** those that have AH modification (mod) 07 28576 embodied in production or AH Alert Service Bulletin (ASB) AS332-34.00.60 (mod 07 28620) embodied in service.

Definitions:

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

The ASB: AH Alert Service Bulletin AS332-34.00.60 (corresponding to retrofit mod 07 28620).

AHRS: Attitude Heading and Reference Systems (AHRS) 1 and AHRS2.

AS 332 C1e and AS 332 L1e helicopters: AS 332 C1 and AS 332 L1 helicopters equipped with AHCAS.



Reason:

AH identified that the AHRS1 and AHRS2 installed on AS 332 C1e and AS 332 L1e helicopters use the same 'flight/ground' logic signal, instead of independent redundant signals, as required by the original design specification. If both AHRS receive wrong 'ground' status in flight, as a result for instance of a single failure, this will generate consistent erroneous computation of the attitudes and vertical speed during helicopter manoeuvres with consequent incorrect flight data indications to the flight crew on both primary displays.

This condition, if not corrected, could lead to increased workload for the flight crew when the upper modes of Automatic Flight Control System are not engaged, possibly resulting in reduced control of the helicopter during high speed manoeuvres in instrumental meteorological conditions.

To address this potentially unsafe condition, AH issued Rush Revision (RR) No 6A of the AS 332 C1e and AS 332 L1e Rotorcraft Flight Manuals (RFM), providing applicable emergency operational procedures and EASA issued AD 2017-0077 to require amendment of the applicable RFM.

Since that AD was issued, AH published AS 332 C1e RFM RR 7A and AS 332 L1e RFM RR 7A, superseding AS 332 C1e RFM RR 6A and AS 332 L1e RFM RR 6A with the same information that these originally contained. AH also designed production mod 07 28576, introducing wiring harness modification to ensure independent sources of 'flight/ground' logic signal for both AHRS, and issued the ASB (corresponding to equivalent mod 07 28620 for in-service retrofit), providing instructions for wiring harness modification of the 'flight/ground' logic signal source of the AHRS1.

For the reasons described above, this AD retains the requirement of EASA AD 2017-0077, which is superseded, and requires a wiring harness modification of the AHRS1.

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

Required as indicated, unless accomplished previously:

Restatement of requirements of EASA AD 2017-0077:**RFM Amendment:**

- (1) Within 30 days after 10 May 2017 [the effective date of EASA AD 2017-0077], amend the emergency procedures of the applicable RFM by inserting a copy of AH AS 332 C1e RFM RR 6A, or AS 332 L1e RFM RR 6A (or later approved revisions), as applicable to helicopter model, inform all flight crews, and, thereafter, operate the helicopter accordingly.
- (2) Amending the emergency procedures of the applicable RFM of a helicopter to incorporate a later approved RFM revision which includes the procedures detailed in AH AS 332 C1e RFM RR 6A, or AS 332 L1e RFM RR 6A, as applicable to helicopter model, is acceptable to comply with the requirements of paragraph (1) of this AD for that helicopter.

New requirements of this AD:**Modification:**

- (3) Within 6 months after the effective date of this AD, modify the 'flight/ground' logic signal source of the AHRS1 in accordance with the instructions of the ASB.



RFM Amendment:

- (4) Before next flight after the modification as required by paragraph (3) of this AD, remove the RFM amendment specified in paragraph (1) of this AD, inform all flight crews, and, thereafter, operate the helicopter accordingly.

Ref. Publications:

AH AS 332 C1e RFM RR 6A dated 31 March 2017, or RFM RR 7A dated 06 September 2018.

AH AS 332 L1e RFM RR 6A dated 31 March 2017, or RFM RR 7A dated 06 September 2018.

AH ASB AS332-34.00.60 original issue dated 06 December 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. This AD was posted on 21 January 2019 as PAD 19-010 for consultation until 31 January 2019. 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](#).
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: support.technical-dyncomp.ah@airbus.com, and TechnicalSupport.Helicopters@airbus.com.

