



Airworthiness Directive

AD No.: 2019-0110

Issued: 21 May 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:

SAFRAN HELICOPTER ENGINES

Type/Model designation(s):

ARRIEL 2 engines

Effective Date: 04 June 2019

TCDS Number(s): EASA.E.001

Foreign AD: Not applicable

Supersedure: None

ATA 72 – Engine – Torque Conformation Box – Check

Manufacturer(s):

SAFRAN Helicopter Engines, formerly Turboméca S.A.

Applicability:

ARRIEL 2C, 2C1, 2S1 and 2S2 engines, all serial numbers.

These engines are known to be installed on, but not limited to, Airbus Helicopters AS 365 N3, EC 155 B and Sikorsky S-76C helicopters.

Definitions:

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

The SB: SAFRAN Helicopter Engines Mandatory Service Bulletin (SB) N° 292 72 2868.

Affected part: Torque conformation boxes, in pre-mod TU 34 configuration (ARRIEL 2C and C1), or in pre-mod TU 34 and post-mod TU 188 (ARRIEL 2S1), or in post-mod TU 188 (ARRIEL 2S2) configuration.

Serviceable part: An affected part which has passed an inspection (no defects detected) in accordance with the instructions of the SB and within the re-inspection period of this AD.



Groups: Group 1 engines are those that have an affected part installed. Group 2 engines are those that do not have an affected part installed.

Reason:

It was reported that, during investigations following level 1 failures in flight (minor anomalies) and level 2 failures on the ground (minor failures), cracks were found on the soldered joints of certain torque conformation boxes. Although no events in operation were reported of One Engine Inoperative (OEI) ratings maximum power unavailability, the failure mode analysis for these boxes demonstrated that such event could not be excluded.

This condition, if not detected and corrected, could lead to engine in-flight shut-down, possibly resulting in reduced control of the helicopter.

To address this potential unsafe condition, SAFRAN Helicopter Engines issued the SB, to provide instructions for repetitive checks of the box resistance values.

For the reasons described above, this AD requires repetitive checks of the affected part and, depending on findings, replacement of the affected part with a serviceable part.

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

Required as indicated, unless accomplished previously:

Inspection(s):

- (1) For Group 1 engines: Within 600 engine hours (EH) or 6 months, whichever occurs first after the effective date of this AD, and, thereafter, at intervals not to exceed 600 EH, accomplish a torque conformation check in accordance with the instructions of the SB.

Note 1: A non-cumulative tolerance of 10% may be applied to the compliance times specified in paragraph (1) of this AD to allow synchronization of the required checks with other required maintenance tasks for which a non-cumulative tolerance is already granted in the applicable Engine Maintenance Manual.

Corrective Action(s):

- (2) If, during any check as required by paragraph (1) of this AD, any discrepancy is identified, before next flight, replace the affected part with a serviceable part in accordance with the instructions of the SB.

Terminating Action:

- (3) None.

Part Installation:

- (4) For Group 1 and Group 2 engines: From the effective date of this AD, it is allowed to install on any engine an affected part, provided it is a serviceable part, as defined in this AD, and that, following installation, the affected is subjected to repetitive checks, as required by this AD.



Ref. Publications:

SAFRAN Helicopter Engines MSB N° 292 72 2868 version A (original issue) dated 12 December 2018.

The use of later approved revisions of the above mentioned document 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 16 April 2019 as PAD 19-067 for consultation until 30 April 2019. No comments were received during the consultation period.
3. Enquiries regarding this AD should be referred to the EASA Programming and Continued Airworthiness 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 your nearest SAFRAN Helicopter Engines technical representative or connect to www.tools.safran-helicopter-engines.com.

