



Airworthiness Directive

AD No.: 2020-0046

Issued: 04 March 2020

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: 18 March 2020

TCDS Number(s): EASA.E.001

Foreign AD: Not applicable

Supersedure: None

ATA 73 – Engine Fuel & Control – Full Authority Digital Engine Control B / Digital Engine Control Unit – Inspection / Replacement

Manufacturer(s):

SAFRAN Helicopter Engines S.A. (SAFRAN), formerly Turboméca S.A.

Applicability:

ARRIEL 2C and 2S1 engines, all serial numbers (s/n).

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

Definitions:

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

The MSB: SAFRAN Mandatory Service Bulletin (MSB) 292 73 2872.

Affected part: A full authority digital engine control (FADEC) B digital engine control unit (DECU), having an s/n as listed in the “concerned” list given in Appendix 1 of the electronic version of the MSB available on the [SAFRAN Engine Life Customer Portal](#).

Serviceable part: A FADEC B DECU which is not an affected part, as defined in this AD.



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

Reason:

Occurrences have been reported of FADEC B DECU error messages, which were found to be caused by blistering of the varnish on the DECU circuit board. Subsequent investigation determined that the use of a non-compliant primer is related to the blistering effect which, in wet conditions, can cause malfunction of the stepper motor.

This condition, if not corrected, could lead to loss of automatic control on both engines concurrently, possibly resulting in reduced control of the helicopter.

To address this potentially unsafe condition, SAFRAN issued the MSB, as defined in this AD, to provide instructions for identification and replacement of affected parts.

For the reason described above, this AD requires replacement of affected parts with serviceable parts. This AD also prohibits (re-)installation of affected parts.

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

Required as indicated, unless accomplished previously:

Replacement:

- (1) For Group 1 engines: Within 1 400 engine operating hours after the effective date of this AD, replace the affected part with a serviceable part in accordance with the instructions of the MSB.

Parts Installation:

- (2) For Group 1 and Group 2 engines: From the effective date of this AD, it is allowed to install a FADEC B DECU on an engine, provided it is a serviceable part, as defined in this AD.

Ref. Publications:

SAFRAN MSB 292 73 2872 Version A dated 17 October 2019.

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 29 January 2020 as PAD 20-022 for consultation until 12 February 2020. 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: www.tools.safran-helicopter-engines.com.

