



Airworthiness Directive

AD No.: 2019-0180

Issued: 25 July 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: 08 August 2019

TCDS Number(s): EASA.E.001

Foreign AD: Not applicable

Supersedure: None

ATA 73 – Engine Fuel & Control – Fuel Filter Pre-blockage Pressure Switch – Operational Check

Manufacturer(s):

SAFRAN Helicopter Engines, formerly Turboméca

Applicability:

ARRIEL 2B, 2B1, 2B1A, 2C, 2C1, 2C2, 2S1 and 2S2 engines, all serial numbers (s/n).

These engines are known to be installed on, but not limited to, Airbus Helicopters AS 350 B3, EC 130 B4, AS 365 N3, EC 155 B and Sikorsky S-76C helicopters.

Definitions:

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

The MSB: SAFRAN Helicopter Engines (SAFRAN) Mandatory Service Bulletin **(MSB) N° 292 73 2869.**

Affected part: Fuel filter pre-blockage pressure switches, having Part Number (P/N) 9 550 17 200 0, with s/n SER 00001 to SER 12753 inclusive, and s/n SER A0001 to SER A0247 inclusive.

Serviceable part: A fuel filter pre-blockage pressure switch which is not an affected part; or an affected part which has passed a check (no discrepancies detected) in accordance with the instructions of the MSB.



Groups: Group 1 engines are those equipped with an affected part. Group 2 engines are those not equipped with an affected part.

Reason:

Occurrences have been reported of non-conforming fuel filter pre-blockage pressure switches, manufactured before December 2016. The non-conformity of the fuel filter pre-blockage pressure switch can cause its non-activation in case of fuel system contamination, with consequent opening of the by-pass without indication in the cockpit.

This condition, if not detected and corrected, and in case of fuel contamination, could lead to an uncommanded in-flight shut-down, possibly resulting in an emergency autorotation landing on a single engine helicopter, or to a double uncommanded in-flight shut-down on a twin engine helicopter.

To address this potential unsafe condition, SAFRAN issued the MSB, providing inspection instructions.

For the reasons described above, this AD requires repetitive daily visual checks of the fuel filter by-pass indicator pop-up. This AD also requires a one-time operational check of the affected part and, depending on findings, replacement of that part, which constitutes terminating action for the repetitive daily checks as required by this AD.

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

Required as indicated, unless accomplished previously:

Visual Check(s):

- (1) For Group 1 engines: From the effective date of this AD, during each “pre-flight inspection” of the first flight of the day, accomplish a visual check of the fuel filter by-pass indicator pop-up.

Note 1: The visual check as required by paragraph (1) of this AD may be accomplished by a flight crew member and/or pilot owner, provided that person has been appropriately trained and authorized in accordance with provisions of Commission Regulation (EU) 1321/2014 Part M and Part 145.

- (2) For Group 1 engines: Within 300 operating hours by the hydro-mechanical metering unit (HMU) or within 6 months, whichever occurs first after the effective date of this AD, accomplish an operational check of the fuel filter pre-blockage pressure switch in accordance with the instructions of the MSB.

Corrective Action(s):

- (3) If, during any check as required by paragraph (1) of this AD, or during the operational check as required by paragraph (2) of this AD, as applicable, failure is detected, in addition to a corrective action in accordance with the instructions of ARRIEL 2 Maintenance Manual (MM), Task 05-20-10-201-810-A01, before next flight, replace the affected part with a serviceable part in accordance with the instructions of the MSB.



Terminating Action:

- (4) Passing the operational check (no failure detected) of the fuel filter pre-blockage pressure switch on an engine, as required by paragraph (2) of this AD, or installation of a serviceable part, as required by paragraph (3) of this AD, as applicable, constitutes terminating action for the repetitive visual checks as required by paragraph (1) of this AD for that engine.

Credit:

- (5) Accomplishment on an engine of the operational check of the fuel filter pre-blockage pressure switch, before the effective date of this AD in accordance with the instructions of ARRIEL 2 MM Task 73-23-xx-750-801 (where “xx” is the numeric model identifier for each model specific MM) of the ARRIEL 2 MM, is acceptable to comply with the requirement of paragraph (2) of this AD for that engine.

Parts Installation:

- (6) For Group 1 and Group 2 engines: From the effective date of this AD, it is allowed to install a fuel filter pre-blockage pressure switch on an engine, provided it is a serviceable part, as defined in this AD.

Ref. Publications:

SAFRAN Helicopter Engines MSB N° 292 73 2869 issued 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 19-066 for consultation until 14 May 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: www.tools.safran-helicopter-engines.com.

