Airworthiness Directive

AD No.: 2017-0019R1

Issued: 22 February 2017

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 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 (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:	Type/Model designation(s):
SAFRAN HELICOPTER ENGINES	ARRIEL 1 engines

Effective Date:	Revision 1: 22 February 2017 Original issue: 07 February 2017
TCDS Number(s):	EASA.E.073
Foreign AD:	Not applicable
Revision:	This AD revises Emergency EASA AD 2017-0019-E dated 03 February 2017.

ATA 73 – Engine Fuel & Control – Drain Valve Assembly – Inspection / Replacement

Manufacturer(s):
SAFRAN Helicopter Engines, S.A. (formerly Turbomeca, S.A.)

Applicability:
ARRIEL 1A1, 1A2, 1B, 1C, 1C1, 1C2, 1D, 1D1, 1E2, 1K, 1K1, 1S and 1S1 engines, all serial numbers.

These engines are known to be installed on, but not limited to, Airbus Helicopters (formerly Eurocopter, Eurocopter France, Aerospatiale) AS 350 B, BA, BB, B1 and B2, AS 365 and SA 365 (all models, except AS 365 N3), Airbus Helicopters Deutschland (formerly Eurocopter Deutschland, Messerschmitt-Bölkow-Blohm) MBB-BK117-C1 and -C2, Leonardo (formerly AgustaWestland, Agusta) A 109 K2, and Sikorsky S-76A helicopters.

Reason:
Some fuel leaks were reported originating from the drain valve (DV) assembly on certain ARRIEL 1 engines. Investigation results revealed that these fuel leaks had been caused by non-compliant diaphragms.

This condition, if not detected and corrected, could lead to fuel spraying on engine hot section and fire, possibly resulting in a commanded in-flight shut-down with consequent emergency autorotation landing on single engine helicopter.

To address this potential unsafe condition, SAFRAN Helicopter Engines published Mandatory Service Bulletin (MSB) 292 73 0851, providing instructions to identify the affected DV, temporary measures (wrapping) and repetitive inspections, and removal from service of the affected DV.

Consequently, EASA issued Emergency AD 2017-0019-E to require replacement of the affected DV, or wrapping and repetitive inspections, pending replacement of the affected DV.

After that AD was issued, SAFRAN Helicopter Engines developed a new alternative solution to the DV replacement and published MSB 292 73 0851 version B for in-service introduction of that alternative.

For the reason described above, this AD is revised to introduce the wrap of the affected DV with a heat-shrinkable tubing, as a new alternative to the DV replacement.

Required Action(s) and Compliance Time(s):
Required as indicated, unless accomplished previously:

Note 1: SAFRAN Helicopter Engines MSB 292 73 0851 (any version) is hereafter referred to as 'the MSB' in this AD.

Note 2: For the purpose of this AD, an affected DV is a part with a Part Number (P/N) and a serial number (s/n) listed in the MSB.

Note 3: For the purpose of this AD, a serviceable DV is not an affected DV (see Note 2 of this AD), or an affected DV where the diaphragm has been replaced in accordance with the instructions of the MSB.

Replacement:

(1) Within 10 flight hours (FH) or 7 days (see Note 4 of this AD), whichever occurs first after 07 February 2017 [the effective date of EASA AD 2017-0019-E], replace the affected DV (see Note 2 of this AD) with a serviceable DV (see Note 3 of this AD) in accordance with the instructions of the MSB.

Note 4: For a helicopter for which the compliance time(s) is not sufficient to reach a location where the initial actions required by this AD can be accomplished on the engine of that helicopter, a single ferry flight (not exceeding 5 FH) with no passengers is allowed to reach that location.

Inspection:

(2) As an alternative to the DV replacement as required by paragraph (1) of this AD, within 10 FH or 7 days (see Note 4 of this AD), whichever occurs first after 07 February 2017 [the effective date of EASA AD 2017-0019-E], visually inspect the affected DV to detect fuel leakage in accordance with the instructions of the MSB.

Corrective Action(s):

(3) If, during the inspection, as specified in paragraph (2) of this AD, a fuel leak is detected, before next flight, replace the affected DV (see Note 2 of this AD) with a serviceable DV (see Note 3 of this AD) in accordance with the instructions of the MSB.

(4) If, during the inspection, as specified in paragraph (2) of this AD, no fuel leak is detected, before next flight, wrap the affected DV with a self-amalgamate tape or with a heat shrinkable tubing in accordance with the instructions of the applicable MSB.

(5) Before next flight after wrapping of an affected DV, as specified in paragraph (4) of this AD, and, thereafter, before each first flight of the day, inspect the DV in accordance with the instructions of the MSB.

(6) If, during any inspection, as required by paragraph (5) of this AD, a fuel leak is detected, before next flight, replace the affected DV with a serviceable DV (see Note 3 of this AD) in accordance with the instructions of the MSB.

(7) If, during any inspection, as required by paragraph (5) of this AD, the wrapping is found defective, before next flight, remove the wrap and re-wrap the affected DV in accordance with the instructions of the MSB.

Replacement:

(8) For an engine on which the affected DV was wrapped, within 180 days after the first wrapping of the affected DV as specified in paragraph (4) of this AD, unless already accomplished as required by paragraph (6) of this AD, replace the affected DV with a serviceable DV (see Note 3 of this AD) in accordance with the instructions of the MSB.

Terminating Action:

(9) Replacement of a DV on an engine, as required by paragraph (6) or (8) of this AD, as applicable, constitutes terminating action for the repetitive inspections as required by paragraph (5) of this AD for that engine.

Part(s) Installation:

(10) From 07 February 2017 [the effective date of EASA AD 2017-0019-E], do not install an affected DV (see Note 2 of this AD) on any engine, unless the diaphragm of the affected DV has been replaced in accordance with the instructions of the MSB.

Ref. Publications:

SAFRAN Helicopter Engines MSB 292 73 0851 version A dated 31 January 2017, or version B dated 14 February 2017.

The use of later approved revisions of this 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. The results of the safety assessment have indicated the need for immediate publication and notification, without the full consultation process.

3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.

4. 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.