



## Emergency Airworthiness Directive

**AD No.:** 2018-0012-E

**Issued:** 16 January 2018

Note: This Emergency 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:

SAFRAN HELICOPTER ENGINES

### Type/Model designation(s):

ARRIUS 2F engines

**Effective Date:** 18 January 2018

**TCDS Number(s):** EASA.E.031

**Foreign AD:** Not applicable

**Supersedure:** None

## ATA 79 – Engine Oil system – Electrical Magnetic Plug – Inspection / Replacement

### Manufacturer(s):

Safran Helicopter Engines (formerly Turboméca)

### Applicability:

ARRIUS 2F engines, all serial numbers.

These engines are known to be installed on, but not limited to, Airbus Helicopters (formerly Eurocopter, Eurocopter France) EC120 B helicopters.

### Reason:

Flaking of the cadmium coating of electrical magnetic plugs head Part Number (P/N) 9 520 01 154 5 was detected. Investigation results indicate that this was the result of manufacturing deficiency. This part is installed on electrical magnetic plugs (front and rear position) of the engine, providing warning signals for early detection of internal part(s) structural degradation, propagating in form of presence of metal particles in the lubrication system. The subsequent investigation identified the batch of affected magnetic plugs heads by serial number (s/n).

This condition, if not detected and corrected, could lead to reduced capability of the particle detection system to identify internal structural failures and consequent in-flight shut-down, resulting in forced landing with possible damage to the helicopter and injury to occupants.



To address this potential unsafe condition, Safran Helicopter Engines issued Alert Mandatory Service Bulletin (MSB) A319 79 4840 and Alert MSB A319 79 4841 to provide inspection and replacement instructions.

For the reasons described above, this AD requires repetitive inspections of the affected magnetic plug heads and replacement as terminating action for those inspections. This AD also introduces installation restrictions applicable to the affected magnetic plug heads.

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

Required as indicated, unless accomplished previously:

Note 1: Magnetic plug heads having P/N 9 520 01 154 5, s/n DU4621 through DU5053 inclusive, are hereafter collectively referred to as an 'affected part' in this AD.

Note 2: Group 1 engines are those that have an affected part (see Note 1 of this AD) installed. Group 2 engines are all other engines.

#### **Inspection(s):**

(1) For Group 1 engines (see Note 2 of this AD): Within 15 flight hours (FH) or 30 days, whichever occurs first after the effective date of this AD, and, thereafter, during each post-flight inspection, inspect the affected part installed on the rear electrical magnetic plug in accordance with the instructions of Safran Helicopter Engines Alert MSB A319 79 4840.

#### **Corrective Action(s):**

(2) If, during any inspection as required by paragraph (1) of this AD, any particle is detected, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of Safran Helicopter Engines Alert MSB A319 79 4840.

#### **Replacement:**

(3) For Group 1 engines (see Note 2 of this AD): Within 60 days after the effective date of this AD, replace each affected part, installed on the front or the rear electrical magnetic plug, with a serviceable part in accordance with the instructions of Safran Helicopter Engines Alert MSB A319 79 4841.

#### **Terminating Action:**

(4) Replacement on an engine of the affected part installed on the rear electrical magnetic plug, as required by paragraph (3) of this AD, constitutes a terminating action for repetitive inspections as required by paragraph (1) of this AD for that engine.

#### **Parts Installation:**

(5) Do not install an affected part on any engine, as required by paragraph (5.1) of (5.2) of this AD, as applicable.

(5.1) Group 1 engines: After replacement as required by paragraph (3) of this AD.

(5.2) Group 2 engines: From the effective date of this AD.



**Ref. Publications:**

Safran Helicopter Engines Alert MSB A319 79 4840 version A (original issue) dated 27 November 2017.

Safran Helicopter Engines Alert MSB A319 79 4841 version A (original issue) dated 20 November 2017.

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. 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](mailto: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](http://www.tools.safran-helicopter-engines.com).

