Airworthiness Directive

AD No.: 2016-0098

Issued: 23 May 2016

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:
TURBOMECA

Type/Model designation(s):
ARRIEL 2 engines

Effective Date: 06 June 2016
TCDS Number(s): EASA E.001
Foreign AD: Not applicable
Supersedure: None

ATA 73 – Engine Fuel & Control – Hydro-Mechanical Metering Unit – Modification

---

Manufacturer(s):
Turbomeca

Applicability:
ARRIEL 2B engines, all serial numbers.

These engines are known to be installed on, but not limited to, Airbus Helicopters (formerly Eurocopter) AS 350 B3 helicopters.

Reason:
Following a report of an un-commanded in-flight shut-down (IFSD), Turbomeca carried out an engineering investigation. This investigation concluded that the cause of the event was a low returning spring rate of the needle of the hydro-mechanical metering unit (HMU), which enabled needle oscillation during rapid engine deceleration.

This condition, if not corrected, could lead to further cases of IFSD, possibly resulting in an emergency landing on single engine.

To address this potential unsafe condition, Turbomeca developed modification (Mod) TU 158, which increases needle return spring rate to prevent oscillation during rapid deceleration, thus preventing

the risk of un-commanded IFSD. Turbomeca also published Mandatory Service Bulletin (MSB) 292 73 3158 for embodiment of this modification in service.

For the reasons described above, this AD requires modification of the engine to embody Mod TU 158.

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

(1) For an engine in pre-Mod TU 158 configuration, within 200 engine hours, or within 5 months, whichever occurs first after the effective date of this AD, modify the engine by replacing the HMU with a serviceable HMU (see Note of this AD) in accordance with the instructions of Turbomeca MSB 292 73 3158 version A.

Note: For the purpose of this AD, a serviceable HMU is one that embodies Mod TU 158.

(2) After modification of an engine as required by paragraph (1) of this AD, it is allowed to install a replacement HMU on that engine, provided the HMU is a serviceable one (see Note of this AD).

(3) For an engine in post-Mod TU 158 configuration, from the effective date of this AD, it is allowed to install an HMU on the engine provided the replacement HMU is serviceable (see Note of this AD).

Ref. Publications:
Turbomeca MSB 292 73 3158 version A dated 07 April 2016.

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. This AD was posted on 19 April 2016 as PAD 16-056 for consultation until 17 May 2016. No comments were received during the consultation period.

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: Turboméca S.A., ARRIEL 2 Customer Support, 40220 Tarnos, France
Fax: +33 5 59 74 45 15, or your usual or nearest TURBOMECA technical representative (refer to http://www.turbomeca-support.com).