Airworthiness Directive

AD No.: 2017-0040

Issued: 24 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:
SAFRAN HELICOPTER ENGINES

Type/Model designation(s):
RTM 322 engines

Effective Date: 10 March 2017

TCDS Number(s): EASA.E.009

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2015-0059 dated 07 April 2015.

ATA 75 – Air – Inlet Guide Vane / Variable Stator Vane Actuator / Clevis Pin – Inspection / Re-Installation

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

Applicability:
RTM 322-01/9 and RTM 322-01/9A engines, all serial numbers.

These engines are known to be installed on, but not limited to, NH Industries NH90 (military) helicopters.

Reason:
In-service events were reported where the clevis pin was found missing or loosened within the engine compartment deck. The clevis pin secures connection of the Inlet Guide Vane (IGV) actuator piston to the IGV drive mechanism. For all events, the clevis pin was installed from rear to front, with the spring clip in internal position when locked, in accordance with the instructions of the engine maintenance manual. Analysis showed that these installation instructions may lead (when the spring clip is distorted) to an interference between the spring clip and the control lever which leads to open/release the spring clip, and subsequently, loosening the clevis pin.

This condition, if not detected and corrected, may lead to loss of engine performance, compressor surge and loss of power, or an in-flight shut-down, possibly resulting in an emergency landing.

To address this potential unsafe condition, Turbomeca published Mandatory Service Bulletin (MSB) MSBP-M3-A-75-31-10-05A-A-A, to provide inspection and installation instructions applicable to the clevis pin, which replaced those available in the engine maintenance manual. These instructions ensured that the clevis spring clip is in the external position, thereby avoiding interference with the control lever.

Consequently, EASA issued AD 2015-0059, which also addressed another type of event where the clevis pin was found partially disassembled, and could also cause clevis pin detachment. This loss of the hinge pin was due to a non-compliance in crimping process, for which Turbomeca issued Recommended Service Bulletin SBP-M3-A-75-31-10-03A-A-A issue 1. The instructions of Turbomeca MSBP-M3-A-75-31-10-05A-A-A also covered the instructions of the Recommended SBP-M3-A-75-31-10-03A-A-A issue 1.

Since that AD was issued, a new in-service event was reported where a clevis pin was found in two parts on the engine deck. The locking strip of the clevis pin body was found without its hinge pin. Despite application of MSBP-M3-A-75-31-10-05A-A-A issue 1, on three occurrences, swaging anomaly was not detected.

Prompted by these findings, SAFRAN Helicopter Engines improved the instructions for the clevis pin inspection and published issue 002 of MSBP-M3-A-75-31-10-05A-A-A. The installation of lock wire on the hinge pin is now part of these instructions.

For the reasons described above, this AD supersedes EASA AD 2015-0059, and requires inspection of clevis pin Part Number (P/N) 0322738070 and, depending on findings, accomplishment of applicable corrective action(s). This AD also requires the use of the instructions of SAFRAN Helicopter Engines MSBP-M3-A-75-31-10-05A-A-A issue 002 for each (re-)installation of a clevis pin on an engine.

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

Note 1: SAFRAN Helicopter Engines MSBP-M3-A-75-31-10-05A-A-A issue 002 is hereafter referred to as ‘the SB’ in this AD.

Inspection:
(1) Within 50 engine flight hours (EFH) after the effective date of this AD, visually inspect each component of the clevis pin P/N 0322738070 (including hinge pin, spring clip, pin and wire lock) in accordance with the instructions of the SB.

Corrective Action(s):
(2) If, during the inspection as required by paragraph (1) of this AD, any discrepancy is detected, as defined in the SB, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of the SB.

Part Installation:

(3) From the effective date of this AD, it is allowed to install, or re-install, as applicable (see Note 2 of this AD), a clevis pin P/N 0322738070 on an engine, provided the installation is accomplished in accordance with the instructions of the SB.

Note 2: The SB provides a list of tasks where the instructions include removal and re-installation of the clevis pin.

Engine Installation:

(4) From the effective date of this AD, do not install an engine on a helicopter, unless the engine is in compliance with the requirements of this AD.

Ref. Publications:

SAFRAN Helicopter Engines MSBP-M3-A-75-31-10-05A-A-A issue 002 dated 27 January 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. This AD was posted on 08 February 2017 as PAD 17-019 for consultation until 22 February 2017. The Comment Response Document can be found at http://ad.easa.europa.eu.

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: SAFRAN Helicopter Engines, Operator Support & Sales RTM322, 40220 TARNOS – France, Fax: +33 5 59 74 45 15, or contact SAFRAN on-line for technical assistance.