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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2015-8257; Directorate Identifier 2015-NE-36-AD; Amendment 39-18555; AD 2016-12-06]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Turbomeca S.A. Turboshaft Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for all Turbomeca S.A. MAKILA 2A and MAKILA 2A1 turboshaft engines. This AD requires repetitive diffuser inspections and replacement of those diffusers that fail inspection. This AD was prompted by two occurrences of crack initiation on a ferrule of the diffuser. We are issuing this AD to prevent rupture of the ferrule of the diffuser, which could result in engine fire and damage to the helicopter.

**DATES:** This AD becomes effective July 22, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of July 22, 2016.

**ADDRESSES:** For service information identified in this final rule, contact Turbomeca S.A., 40220 Tarnos, France; phone: (33) 05 59 74 40 00; fax: (33) 05 59 74 45 15. You may view this service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-8257.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-8257; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the mandatory continuing airworthiness information (MCAI), the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30,

West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Brian Kierstead, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7772; fax: 781-238-7199; email: brian.kierstead@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to the specified products. The NPRM was published in the Federal Register on March 11, 2016 (81 FR 12834) ("the NPRM"). The NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Two occurrences of crack initiation were reported on a ferrule of diffuser part number (P/N) 0298210100, which propagated and led to the ferrule rupture. The investigation shows in both cases that the ruptured ferrule contacted and punctured the main fuel supply line, resulting in a fuel leak. This condition, if not detected and corrected, could lead to an engine fire, consequently triggering an uncommanded engine in flight shut down, possibly resulting in an emergency landing. Prompted by these occurrences, Turbomeca published Mandatory Service Bulletin (MSB) No. 298 72 2832 to provide repetitive inspection instructions.

This AD requires repetitive inspections of the affected diffuser and removal of those diffusers that fail the required inspection. You may obtain further information by examining the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-8257.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM.

We increased the compliance time for repetitive inspection from 50 hours since last inspection to 300 hours since last inspection. We updated the revision number and date of Turbomeca S.A. Alert Mandatory Service Bulletin (MSB) No. A298 72 2832 throughout this AD and changed the Credit for Previous Actions paragraph as a result of the MSB change.

### **Conclusion**

We reviewed the available data and determined that air safety and the public interest require adopting this AD with the changes described previously. We determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

### **Related Service Information Under 1 CFR Part 51**

Turbomeca S.A. has issued Alert MSB No. A298 72 2832, Version C, dated April 15, 2016. The Alert MSB describes procedures for repetitive inspections of the affected diffuser and depending on findings, accomplishment of the corrective action(s).

## **Costs of Compliance**

We estimate that this AD affects 10 engines installed on helicopters of U.S. registry. We also estimate that it will take about 2 hours per engine to comply with this AD. The average labor rate is \$85 per hour. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$1,700.

## **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):



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**2016-12-06 Turbomeca S.A.:** Amendment 39-18555; Docket No. FAA-2015-8257; Directorate Identifier 2015-NE-36-AD.

**(a) Effective Date**

This AD becomes effective July 22, 2016.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Turbomeca S.A. MAKILA 2A and MAKILA 2A1 turboshaft engine models with a high-pressure gas generator module (M03) that has modification (mod) TU 52 installed.

**(d) Reason**

This AD was prompted by two occurrences of crack initiation on a ferrule of the diffuser, which propagated and led to the ferrule rupture. We are issuing this AD to prevent rupture of the ferrule of the diffuser, which could result in engine fire and damage to the helicopter.

**(e) Actions and Compliance**

Comply with this AD within the compliance times specified, unless already done.

(1) Borescope inspect the centrifugal diffuser ferrule, part number 0298210100, prior to the ferrule accumulating 700 hours, time since new or time since replacement or within 30 hours from the effective date of this AD, whichever is later. Use Accomplishment Instructions, paragraphs 2.4.1 through 2.4.2.2.1, of Turbomeca S.A. Alert Mandatory Service Bulletin (MSB) No. 298 72 2832, Version C, dated April 15, 2016, to do the borescope inspections required by this AD.

(2) Repeat the borescope inspection required by this AD every 300 hours since last inspection.

(3) If any crack, loss of contact between the ferrule and diffuser axial vane, or any contact between the injection manifold supply pipe and the diffuser ferrule is found, remove the diffuser case and replace the ferrule with a part eligible for installation.

**(f) Credit for Previous Actions**

You may take credit for the actions required by paragraph (e) of this AD if you performed those actions using Turbomeca S.A. MSB No. 298 72 2832, Version B, dated October 12, 2015 or earlier versions, before the effective date of this AD.

**(g) Alternative Methods of Compliance (AMOCs)**

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

**(h) Related Information**

(1) For more information about this AD, contact Brian Kierstead, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7772; fax: 781-238-7199; email: brian.kierstead@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2015-0209R1, dated April 20, 2016, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2015-8257.

**(i) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Turbomeca S.A. Alert MSB No. A298 72 2832, Version C, dated April 15, 2016.

(ii) Reserved.

(3) For Turbomeca S.A. service information identified in this AD, contact Turbomeca S.A., 40220 Tarnos, France; phone: (33) 05 59 74 40 00; fax: (33) 05 59 74 45 15.

(4) You may view this service information at FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(5) You may view this service information at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on June 10, 2016.  
Colleen M. D'Alessandro,  
Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.