[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-5539; Directorate Identifier 2015-NE-37-AD]

RIN 2120-AA64

Airworthiness Directives; Turbomeca S.A. Turboshaft Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all Turbomeca S.A. Arriel 2E turboshaft engines. This proposed AD was prompted by reports of fuel flow non-conformities found during acceptance tests of Arriel 2E hydro-mechanical metering units (HMUs). This proposed AD would require removing the pre-TU 193 adjusted high-pressure/low-pressure (HP/LP) pump and metering valve assembly and replacing it with a part that is eligible for installation. This proposed AD would also require replacing the constant delta-pressure (delta-P) diaphragm of the fuel metering valve. We are proposing this AD to prevent failure of the delta-P diaphragm, which could result in an uncommanded in-flight shutdown and damage to the helicopter.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.
- Mail: Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Fax: 202-493-2251.

For service information identified in this proposed AD, contact Turbomeca S.A., 40220 Tarnos, France; phone: 33 (0)5 59 74 40 00; fax: 33 (0)5 59 74 45 15. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

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-2015-5539 or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed 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 in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Kyle Gustafson, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7183; fax: 781-238-7199; email: kyle.gustafson@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this NPRM. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2015-5539; Directorate Identifier 2015-NE-37-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory,

economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM based on those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2015-0213, dated October 16, 2015 (referred to hereinafter as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

> Fuel flow non-conformities were found during reception tests of ARRIEL 2E Hydraulic Mechanical Metering Unit (HMU). Investigation and instrumented tests revealed instabilities on the additional check valve. These instabilities lead to hydraulic pulses. All HMU installed on ARRIEL 2E and 2N engines could present these instabilities.
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> This condition, if not corrected, could lead to life reduction of the delta pressure valve diaphragm, and consequently, an uncommanded engine power increase, or an uncommanded in flight shutdown, possibly resulting in an emergency landing.

This proposed AD applies to Arriel 2E engines only. There are no Arriel 2N engines installed on aircraft of U.S. registry.

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-2015-5539.

Related Service Information

Turbomeca S.A. has issued Mandatory Service Bulletin (MSB) No. 292 73 2193, Version A, dated July 16, 2015. The MSB describes procedures for incorporating modification TU 193 and replacing the constant delta-P diaphragm of the fuel metering valve. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this NPRM.

FAA's Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of France, and is approved for operation in the United States. Pursuant to our bilateral agreement with the European Community, EASA has notified us of the unsafe condition described in the MCAI referenced above. We are proposing this NPRM because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design. This NPRM would require removing the pre-TU 193 adjusted HP/LP pump and metering valve assembly and replacing it with a part that is eligible for installation. This NPRM would also require replacing the constant delta-P diaphragm of the fuel metering valve.

Costs of Compliance

We estimate that this proposed AD affects 12 engines installed on helicopters of U.S. registry. We also estimate that it would take about 2 hours per engine to comply with this proposed AD. The average labor rate is $85 per hour. Required parts cost about $13,400 per engine. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be $162,840.

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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 proposed regulation:

(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.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

Turbomeca S.A.: Docket No. FAA-2015-5539; Directorate Identifier 2015-NE-37-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Turbomeca S.A. Arriel 2E turboshaft engines that have a pre-TU 193 adjusted high-pressure/low-pressure (HP/LP) pump and metering valve assembly, installed.

(d) Reason

This AD was prompted by reports of fuel flow non-conformities found during acceptance tests of Arriel 2E hydro-mechanical metering units. We are issuing this AD to prevent failure of the constant delta-pressure (delta-P) diaphragm of the fuel metering valve, which could result in an uncommanded in-flight shutdown and damage to the helicopter.

(e) Actions and Compliance

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

(1) Prior to exceeding 880 operating hours since new on the adjusted HP/LP pump and metering valve assembly or within 50 operating hours after the effective date of this AD, whichever occurs later:

(i) remove from service the adjusted HP/LP pump and metering valve assembly and replace with a part that is eligible for installation, and

(ii) replace the constant delta-P diaphragm of the fuel metering valve.

(2) Reserved.

(f) Installation Prohibition

After the effective date of this AD, do not install into any engine any pre-TU 193 adjusted HP/LP pump and metering valve assembly, nor install onto any helicopter any engine that has a pre-TU 193 adjusted HP/LP pump and metering valve assembly.

(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 Kyle Gustafson, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7183; fax: 781-238-7199; email: kyle.gustafson@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2015-0213, dated October 16, 2015, 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-2015-5539.

(3) Turbomeca S.A. Mandatory Service Bulletin No. 292 73 2193, Version A, dated July 16, 2015, can be obtained from Turbomeca S.A., using the contact information in paragraph (h)(4) of this proposed AD.

(4) For service information identified in this proposed AD, contact Turbomeca S.A., 40220 Tarnos, France; phone: 33 (0)5 59 74 40 00; fax: 33 (0)5 59 74 45 15.

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on December 18, 2015.

Ann C. Mollica,
Acting Directorate Manager, Engine & Propeller Directorate,
Aircraft Certification Service.
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