[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-3753; Directorate Identifier 2015-NE-26-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 certain Turbomeca S.A. Arriel 2B, 2B1, 2C, 2C1, 2C2, 2D, 2E, 2S1, and 2S2 turboshaft engines. This proposed AD was prompted by a report of an uncommanded in-flight shutdown of an Arriel 2 engine caused by rupture of the 41-tooth gear, which forms part of the bevel gear in the engine accessory gearbox (AGB). This proposed AD would require inspection, and, depending on the results, removal of the engine AGB. We are proposing this AD to prevent failure of the engine AGB, which could lead to in-flight shutdown, damage to the engine, and damage to the aircraft.

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-2015-3753; 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: Philip Haberlen, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7770; fax: 781-238-7199; email: philip.haberlen@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2015-3753; Directorate Identifier 2015-NE-26-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD 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 with FAA personnel concerning this proposed AD.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2015-0162, dated August 6, 2015 (referred to hereinafter as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

> An uncommanded in-flight shut-down (IFSD) of an ARRIEL 2 engine was reported, caused by rupture of the 41-tooth gear, which forms part of the bevel gear of the accessory gearbox (module M01). The subsequent investigation revealed that wear on the housing of the front bearing of this gear was a major contributor to this rupture. In addition, the investigation showed that this wear mechanism had resulted in positive Spectrometric Oil Analysis (SOA) indications before the event.

> This condition, if not detected and corrected, could potentially lead to further cases of IFSD, possibly resulting in an emergency landing.

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-2015-3753.

Related Service Information under 1 CFR Part 51

Turbomeca S.A. has issued Mandatory Service Bulletin No. 292 72 2861, Version A, dated April 24, 2015. The service information describes procedures for inspecting the engine AGB. 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 document.

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 and service information referenced above. We are proposing this AD 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 proposed AD would require inspection, and, depending on the results, removal of the engine AGB.

Costs of Compliance

We estimate that this proposed AD affects 250 engines installed on aircraft of U.S. registry. We also estimate that it would take about 0.5 hours per engine to comply with the initial inspection requirement in this proposed AD and about 2 hours per engine

to remove the engine AGB. The spectrometric oil analysis kit costs about $79. The average labor rate is $85 per hour. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be $72,875.

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-2015-3753; Directorate Identifier 2015-NE-26-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 Turbomeca S.A. Arriel 2B, 2B1, 2C, 2C1, 2C2, 2D, 2E, 2S1, and 2S2 turboshaft engines with an engine accessory gearbox (AGB), part number 0292120650, with a machined front casing.

(d) Reason

This AD was prompted by a report of an uncommanded in-flight shutdown of an Arriel 2 engine caused by rupture of the 41-tooth gear, which forms part of the bevel gear in the engine AGB. We are issuing this AD to prevent failure of the engine AGB, which could lead to in-flight shutdown, damage to the engine, and damage to the aircraft.

(e) Actions and Compliance

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

(1) Initial Spectrometric Oil Analysis (SOA)

(i) Perform an initial SOA within the compliance times given in paragraph (e)(1)(i)(A) or (e)(1)(i)(B) of this AD:

(A) If the engine AGB has less than 800 engine hours (EHs) since new or since last overhaul, do an initial SOA before exceeding 850 EHs since new or since last overhaul.

(B) If the engine AGB has 800 EHs or more since new or since last overhaul, or if the EHs are unknown, do an initial SOA within 50 EHs after the effective date of this AD.

(C) Use paragraphs 2.4.2.1 and 2.4.2.2 of Turbomeca S.A. Mandatory Service Bulletin (MSB) No. 292 72 2861, Version A, dated April 24, 2015, to perform the SOA required by paragraph (e) of this AD.

(ii) Reserved.

(2) Repetitive SOA

(i) If the aluminum concentration determined from the most recent SOA is less than 0.8 parts per million (PPM), repeat the SOA required by paragraph (e) of this AD within 100 EHs time since last analysis (TSLA).

(ii) If the aluminum concentration determined from the most recent SOA is between 0.8 PPM and 1.4 PPM, inclusive, repeat the SOA required by paragraph (e) of this AD within 50 EHs TSLA. Do not perform draining before doing the next SOA.

(iii) If the aluminum concentration determined from the most recent SOA is greater than 1.4 PPM, remove the engine AGB from service within 50 EHs TSLA.

(f) 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.

(g) Related Information

(1) For more information about this AD, contact Philip Haberlen, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7770; fax: 781-238-7199; email: philip.haberlen@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2015-0162, dated August 6, 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-2015-3753.

(3) Turbomeca S.A. MSB No. 292 72 2861, Version A, dated April 24, 2015, can be obtained from Turbomeca S.A., using the contact information in paragraph (g)(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 November 12, 2015.

Colleen M. D'Alessandro,
Directorate Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

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