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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0935; Directorate Identifier 2008-NE-28-AD; Amendment 39-15790; AD 2009-01-11]

RIN 2120-AA64

Airworthiness Directives; Turbomeca Arriel 2B and 2B1 Turboshaft Engines

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

Several cases of loss of internal components from the Hydro Mechanical Unit (HMU) low fuel pressure switch Hydra-Electric part number (P/N) 9 550 17 956 0 into the fuel system, have been reported on Arriel 2 engines.

The loss of internal components from the low fuel pressure switch into the fuel system may lead to a rupture of the HP-LP pumps drive shaft shear pin, and thus to a possible uncommanded in-flight shutdown (IFSD). On a single-engine helicopter, an uncommanded IFSD results in an emergency autorotation landing and in certain conditions may lead to an accident.

We are issuing this AD to prevent forced autorotation landing, or an accident.

DATES: This AD becomes effective February 27, 2009. The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of February 27, 2009.

ADDRESSES: The Docket Operations office is located at Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

FOR FURTHER INFORMATION CONTACT: James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: james.lawrence@faa.gov; telephone (781) 238-7176; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on October 30, 2008 (73 FR 64566). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states that:

Several cases of loss of internal components from the HMU low fuel pressure switch Hydra-Electric P/N 9 550 17 956 0 into the fuel system, have been reported on Arriel 2 engines. The loss of internal components from the low fuel pressure switch into the fuel system may lead to a rupture of the HP-LP pumps drive shaft shear pin, and thus to a possible uncommanded IFSD. On a single-engine helicopter, an uncommanded IFSD results in an emergency autorotation landing and in certain conditions may lead to an accident.

The evaluation of this condition prompts the issuance of this AD, which requires the following actions for the HMUs installed on Arriel 2 single-engine applications in order to:

- Verify the part number of the low fuel pressure switch;
- If installed, replace the Hydra-Electric low fuel pressure switch P/N 9 550 17 956 0 (with either of two different P/N low fuel pressure switches, referenced in the MCAI).
- In case a Hydra-Electric switch P/N 9 550 17 956 0 is installed or may have been installed on the HMU, verify that no parts are found in the chamber of the HMU body where the base of the low fuel pressure switch has been installed.

Comments

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

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. We are not referencing the P/Ns of the serviceable low pressure switch as the MCAI does, in order to follow FAA policies. This difference is described in a separate paragraph of the AD.

Costs of Compliance

Based on the service information, we estimate that this AD will affect about 414 products installed on helicopters of U.S. registry. We also estimate that it will take about 1 work-hour per product to comply with this AD. The average labor rate is \$80 per work-hour. Required parts will cost about \$256 per product. Based on these figures, we estimate the cost of the AD on U.S. operators to be \$139,104. Our cost estimate is exclusive of possible warranty coverage.

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); and
3. 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; 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 AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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 AD:



2009-01-11 Turbomeca: Amendment 39-15790. Docket No. FAA-2008-0935; Directorate Identifier 2008-NE-28-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective February 27, 2009.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Turbomeca Arriel 2B and 2B1 turboshaft engines. These engines are installed on, but not limited to, Eurocopter France AS350B3 and EC130 B4 helicopters.

Reason

(d) European Aviation Safety Agency (EASA) AD No. 2008-0077, dated March 13, 2006 (and corrected May 6, 2008), states:

"Several cases of loss of internal components from the Hydro Mechanical Unit (HMU) low fuel pressure switch Hydra-Electric part number (P/N) 9 550 17 956 0 into the fuel system, have been reported on Arriel 2 engines. The loss of internal components from the low fuel pressure switch into the fuel system may lead to a rupture of the HP-LP pumps drive shaft shear pin, and thus to a possible uncommanded in-flight shutdown (IFSD). On a single-engine helicopter, an uncommanded IFSD results in an emergency autorotation landing and in certain conditions may lead to an accident. 'We are issuing this AD to prevent forced autorotation landing, or an accident.' "

Actions and Compliance

- (e) Unless already done, do the following actions.
 - (1) No later than September 30, 2009, perform a one-time inspection of the HMU, using paragraph 2 of Turbomeca Mandatory Service Bulletin (MSB) No. 292 73 2826, dated March 13, 2008, to identify the low fuel pressure switch installed on the adjusted HMU.
 - (2) If a Hydra-Electric low fuel pressure switch, part number (P/N) 9 550 17 956 0 is installed:
 - (i) Inspect the low fuel pressure switch and chamber of the HMU body.
 - (ii) If any parts from the low fuel pressure switch are missing or found in the HMU chamber, replace the HMU with a new or overhauled HMU equipped with a serviceable low fuel pressure switch.
 - (iii) If not, replace only the low fuel pressure switch with a serviceable low fuel pressure switch.

(3) If a low fuel pressure switch other than a Hydra-Electric low fuel pressure switch, P/N 9 550 17 956 0 is installed, and that is the only type of low fuel pressure switch that has been installed since new, repair, or overhaul, no further action is required.

(4) If a Hydra-Electric switch, P/N 9 550 17 956 0, has been or may have been installed previously, and the conditions of paragraph (e)(3) of this AD are not met:

(i) Inspect the chamber of the HMU body.

(ii) If any parts are found in the HMU chamber, replace the HMU with a new or overhauled HMU equipped with a serviceable low fuel pressure switch.

Definition

(f) For the purpose of this AD, a serviceable low fuel pressure switch is a switch that has a P/N other than P/N 9 550 17 956 0.

FAA AD Difference

(g) This AD differs from the Mandatory Continuing Airworthiness Information (MCAI) and/ or service information, by not referencing the P/Ns of the serviceable low fuel pressure switch, and, defining a serviceable low fuel pressure switch, for the purpose of this AD.

Alternative Methods of Compliance (AMOCs)

(h) The Manager, Engine Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

Related Information

(i) Refer to MCAI EASA AD 2008-0077, dated April 28, 2008 (and corrected May 6, 2008), for related information.

(j) Contact James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: james.lawrence@faa.gov; telephone (781) 238-7176; fax (781) 238-7199, for more information about this AD.

Material Incorporated by Reference

(k) You must use Turbomeca Mandatory Service Bulletin No. 292 73 2826, dated March 13, 2008, to do the low fuel pressure switch installation inspection required by this AD.

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

(2) For service information identified in this AD, contact Turbomeca, 40220 Tarnos, France; telephone (33) 05 59 74 40 00; fax (33) 05 59 74 45 15.

(3) You may review copies at the FAA, New England Region, 12 New England Executive Park, Burlington, MA; or 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 December 30, 2008.
Peter A. White,
Assistant Manager, Engine and Propeller Directorate,
Aircraft Certification Service.