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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2009-0544; Directorate Identifier 2009-NE-17-AD; Amendment 39-16142; AD 2009-26-07]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Turbomeca Arriel 1A1, 1A2, 1B, 1C, 1C1, 1C2, 1D, 1D1, 1E2, 1K1, 1S, and 1S1 Turboshaft Engines**

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

**ACTION:** Final rule; request for comments.

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**SUMMARY:** The FAA is superseding an existing airworthiness directive (AD) for Turbomeca Arriel 1A1, 1A2, 1B, 1C, 1C1, 1C2, 1D, 1D1, 1E2, 1K1, 1S, and 1S1 turboshaft engines. That AD currently requires initial and repetitive visual inspections of certain reduction gearboxes (module M05) for oil leakage, repair if leaking, and repair of all affected modules as optional terminating action to the repetitive inspections. This AD requires the same actions, but adds five more serial numbers of the reduction gearboxes (module M05) that are affected, and adds an alternative optional terminating action to the repetitive visual inspections. This AD results from Turbomeca identifying five additional reduction gearboxes (module M05) affected, and adding an alternative optional terminating action to the repetitive visual inspections. We are issuing this AD to prevent uncommanded in-flight engine shutdown, possible engine fire, and an emergency autorotation landing.

**DATES:** Effective January 12, 2010, the Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of January 12, 2010.

We must receive any comments on this AD by February 26, 2010.

**ADDRESSES:** Use one of the following addresses to comment on this AD.

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- 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.

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

**FOR FURTHER INFORMATION CONTACT:** James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine and 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:** On June 22, 2009, the FAA issued AD 2009-12-51, Amendment 39-15952 (74 FR 31167, June 30, 2009). That AD requires initial and repetitive visual inspections of certain reduction gearboxes (module M05) for oil leakage, repair if leaking, and repair of all affected modules as terminating action to the repetitive inspections. That AD was the result of reports of oil leaks from certain reduction gearbox (module M05) front casings. The engine manufacturer reported that the lubrication duct plug was not properly bonded/glued in place. That condition, if not corrected, could result in uncommanded in-flight engine shutdown, possible engine fire, and an emergency autorotation landing.

### **Actions Since AD 2009-12-51 Was Issued**

Since AD 2009-12-51 was issued, the European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, recently notified us that an unsafe condition may exist on Turbomeca Arriel 1A1, 1A2, 1B, 1C, 1C1, 1C2, 1D, 1D1, 1E2, 1K1, 1S, and 1S1 turboshaft engines. EASA advises that Turbomeca has added five more serial numbers of the reduction gearboxes (module M05) that are affected, and has also added an alternative optional terminating action to the repetitive visual inspections. This AD requires initial and repetitive visual inspections of certain reduction gearboxes (module M05) for oil leakage, repair if leaking, and repair of all affected modules as optional terminating action to the repetitive inspections. We are issuing this AD to prevent uncommanded in-flight engine shutdown, possible engine fire, and an emergency autorotation landing.

### **Relevant Service Information**

We have reviewed and approved the technical contents of Turbomeca S.A. Mandatory Service Bulletin (MSB) No. A292 72 0825, Version B, dated October 6, 2009, that describes procedures for visual inspections of affected reduction gearboxes (module M05) for oil leakage, repair if leaking, and repair of all affected modules as terminating action to the repetitive inspections.

EASA classified this service bulletin as mandatory and issued AD 2009-0245-E to ensure the airworthiness of these Turbomeca Arriel 1A1, 1A2, 1B, 1C, 1C1, 1C2, 1D, 1D1, 1E2, 1K1, 1S, and 1S1 turboshaft engines in Europe.

### **Bilateral Airworthiness Agreement**

This engine model is manufactured in France and is type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Under this bilateral airworthiness agreement, EASA has kept the FAA informed of the situation described above. We have examined the findings of EASA, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

## **FAA's Determination and Requirements of This AD**

The unsafe condition described previously is likely to exist or develop on other Turbomeca Arriel 1A1, 1A2, 1B, 1C, 1C1, 1C2, 1D, 1D1, 1E2, 1K1, 1S, and 1S1 turboshaft engines of the same type design. We are issuing this AD to prevent uncommanded in-flight engine shutdown, possible engine fire, and an emergency autorotation landing. This AD requires initial and repetitive visual inspections of certain reduction gearboxes (module M05) for oil leakage, repair if leaking, and repair of all affected modules as terminating action to the repetitive inspections. You must use the service information described previously to perform the actions required by this AD.

## **FAA's Determination of the Effective Date**

Since an unsafe condition exists that requires the immediate adoption of this AD, we have found that notice and opportunity for public comment before issuing this AD are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

## **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to send us any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "AD Docket No. FAA-2009-0544; Directorate Identifier 2009-NE-17-AD" in the subject line of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it.

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 AD. Using the search function of the DMS Web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

## **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 the same as the Mail address provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

## **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 have 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 that 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 summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary at the address listed under ADDRESSES.

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

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

## **Adoption of the Amendment**

Under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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 removing Amendment 39-15952 (74 FR 31167, June 30, 2009), and by adding a new airworthiness directive, Amendment 39-16142, to read as follows:



**2009-26-07 Turbomeca:** Amendment 39-16142. Docket No. FAA-2009-0544; Directorate Identifier 2009-NE-17-AD.

### **Effective Date**

- (a) This airworthiness directive (AD) becomes effective January 12, 2010.

### **Affected ADs**

- (b) This AD supersedes AD 2009-12-51, Amendment 39-15952.

### **Applicability**

(c) This AD applies to Turbomeca Arriel 1A1, 1A2, 1B, 1C, 1C1, 1C2, 1D, 1D1, 1E2, 1K1, 1S, and 1S1 turboshaft engines if modified by Turbomeca Modification TU332 and fitted with a reduction gearbox (module M05) as listed by serial number in Figure 1 of Turbomeca Mandatory Service Bulletin (MSB) No. A292 72 0825, Version B, dated October 6, 2009. These engines are installed on, but not limited to, Eurocopter France AS350B, AS350BA, AS365N, AS350B1, AS350B2, Eurocopter Deutschland GmbH MBB-BK117-C1, Agusta A109K2, and Sikorsky S-76A+, S-76A++ and S-76C helicopters.

### **Unsafe Condition**

(d) This AD results from Turbomeca identifying five additional reduction gearboxes (module M05) affected, and adding an alternative optional terminating action to the repetitive visual inspections. We are issuing this AD to prevent uncommanded in-flight engine shutdown, possible engine fire, and an emergency autorotation landing.

### **Compliance**

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

### **Initial Visual Inspection Before Further Flight**

(f) Before further flight:

(1) Visually inspect the reduction gearbox (module M05) lubrication duct for oil leakage. Use paragraph 1.C.(1)(a), paragraph 2.A., and Figure 2 of Turbomeca S.A. MSB No. A292 72 0825, Version B, dated October 6, 2009, to do the inspection.

(2) If oil leakage is found:

(i) Repair the reduction gearbox (module M05) lubrication duct by filling it with black CAF 33 elastomer. Use paragraphs 2.B.1 through 2.B.1.(a)3 3.2, Figure 3, and Figure 4 in Turbomeca S.A. MSB No. A292 72 0825, Version B, dated October 6, 2009, to do the repair; or

(ii) Repair the reduction gearbox (module M05) lubrication duct by installing a steel plug. Use paragraphs 2.B.1(b)1 through 2.B.1(b)7, and Figure 5 in Turbomeca S.A. MSB No. A292 72 0825, Version B, dated October 6, 2009, to do the repair.

### **Repetitive Visual Inspections**

(g) If no oil leakage is found, repeat the visual inspection every four flight hours, or after the last flight of each day, whichever comes first.

(h) The actions required by paragraph (g) of this AD may be performed by the owner/operator holding at least a private pilot certificate, and must be entered into the aircraft records showing compliance with this AD in accordance with 14 CFR 43.9 and 14 CFR 91.417(a)(2)(v).

### **Optional Terminating Action**

(i) As optional terminating action to the repetitive visual inspections in paragraph (g) of this AD, repair the affected reduction gearbox (module M05) as specified in paragraph (f)(2) of this AD.

### **Alternative Methods of Compliance**

(j) The Manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

### **Related Information**

(k) European Aviation Safety Agency emergency airworthiness directive 2009-0245-E, dated November 10, 2009, also addresses the subject of this AD.

### **Contact Information**

(l) For further information, contact: James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine and 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**

(m) You must use Turbomeca Mandatory Service Bulletin No. A292 72 0825, Version B, dated October 6, 2009, to identify the serial numbers of reduction gearboxes (module M05) affected by this AD, and to perform the inspections and repairs required by this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You can get a copy from Turbomeca, 40220 Tarnos, France; telephone (33) 05 59 74 40 00, fax (33) 05 59 74 45 15. 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>.

### **Special Flight Permits**

(n) Under 14 CFR part 39.23, special flight permits for this AD are prohibited.

Issued in Burlington, Massachusetts, on December 10, 2009.  
Peter A. White,  
Assistant Manager, Engine and Propeller Directorate,  
Aircraft Certification Service.