

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. FAA-2006-25970; Directorate Identifier 99-NE-12-AD; Amendment 39-14829; AD 2006-23-17]

RIN 2120-AA64

Airworthiness Directives; Turbomeca Turmo IV A and IV C Series Turboshaft Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD) for Turbomeca Turmo IV A and IV C series turboshaft engines. That AD currently requires borescope and eddy current inspections or ultrasonic inspections of centrifugal compressor intake wheel blades for cracks and evidence of corrosion pitting, and replacement with serviceable parts. This AD requires the same actions, but would require borescope inspections at more frequent intervals for certain engines. This AD results from Turbomeca's review of the engines' service experience that determined more frequent borescope inspections are required on engines not modified to the TU 191, TU 197, or TU 224 standard. We are issuing this AD to prevent centrifugal compressor intake wheel blade cracks, which can result in engine in-flight power loss, engine shutdown, or forced landing.

DATES: This AD becomes effective December 21, 2006. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of December 21, 2006.

ADDRESSES: You can get the service information identified in this AD from Turbomeca, 40220 Tarnos, France; telephone 33 05 59 74 40 00, fax 33 05 59 74 45 15.

You may examine the AD docket on the Internet at <http://dms.dot.gov> or in Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Christopher Spinney, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; telephone (781) 238-7175; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend 14 CFR Part 39 with a proposed AD. The proposed AD applies to Turbomeca Turmo IV A and

IV C series turboshaft engines. We published the proposed AD in the **Federal Register** on February 9, 2006 (71 FR 6691). That action proposed to require initial and repetitive borescope and eddy current inspections or ultrasonic inspections of centrifugal compressor intake wheel blades for cracks and evidence of corrosion pitting, and, if found cracked or if there is evidence of corrosion pitting, replacement with serviceable parts. Additionally, it proposed to require borescope inspections at more frequent intervals for certain engines.

Examining the AD Docket

You may examine the docket that contains the AD, any comments received, and any final disposition in person at the Docket Management Facility Docket Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Office (telephone (800) 647-5227) is located on the plaza level of the Department of Transportation Nassif Building at the street address stated in **ADDRESSES**. Comments will be available in the AD docket shortly after the DMS receives them.

Comments

We provided the public the opportunity to participate in the development of this AD. We received no comments on the proposal or on the determination of the cost to the public.

Docket Number Change

We are transferring the docket for this AD to the Docket Management System as part of our on-going docket management consolidation efforts. The new Docket No. is FAA-2006-25970. The old Docket No. became the Directorate Identifier, which is 99-NE-12-AD. This final rule might get logged into the DMS docket, ahead of the proposed AD and comments received, as we are in the process of sending those items to the DMS.

Conclusion

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

Costs of Compliance

We estimate that this AD will affect 36 Turbomeca Turmo IV A and IV C series turboshaft engines installed on helicopters of U.S. registry. We also estimate that it will take about 41 work-hours per engine to perform the inspections, including disassembling and assembling engines, and that the average labor rate is \$65 per work-hour.

A replacement centrifugal compressor assembly costs about \$21,651. Based on these figures, the cost per inspection and replacement is estimated to be \$24,316. Based on these figures, we estimate the total cost of the AD to U.S. operators to be \$875,390.

Special Flight Permits Paragraph Removed

Paragraph (e) of the current AD, AD 2003-11-09, contains a paragraph pertaining to special flight permits. Even though this AD does not contain a similar paragraph, we have made no changes with regard to the use of special flight permits to operate the helicopter to a repair facility to do the work required by this AD. In July 2002, we published a new Part 39 that contains a general authority regarding special flight permits and airworthiness directives; see Docket No. FAA-2004-8460, Amendment 39-9474 (69 FR 47998, July 22, 2002). Thus, when we now supersede ADs we will not include a specific paragraph on special flight permits unless we want to limit the use of that general authority granted in section 39.23.

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 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

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration 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 removing Amendment 39–13168 (68 FR 31970, May 29, 2003) and by adding a new airworthiness directive, Amendment 39–14829, to read as follows:

2006–23–17 Turbomeca: Amendment 39–14829. Docket No. FAA–2006–25970; Directorate Identifier 99–NE–12–AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective December 21, 2006.

Affected ADs

(b) This AD supersedes AD 2003–11–09, Amendment 39–13168.

Applicability

(c) This AD applies to Turbomeca Turmo IV A and IV C series turboshaft engines. These engines are installed on but not limited to Aerospatiale SA 330—PUMA helicopters.

Unsafe Condition

(d) This AD results from Turbomeca's review of the engines' service experience that determined more frequent borescope inspections are required on engines not

modified to the TU 191, TU 197, or TU 224 standard. The actions specified in this AD are intended to prevent centrifugal compressor intake wheel blade cracks, which can result in engine in-flight power loss, engine shutdown, or forced 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.

Engine Modification Before Further Flight

(f) For engines modified to the TU 197 standard, but not to the TU 191 or TU 224 standard, before further flight, remove the TU 197 standard and install the TU 224 standard.

Initial Inspections

(g) For all engines, borescope-inspect, and either eddy current-inspect (ECI) or ultrasonic-inspect (UI) the centrifugal compressor intake wheel blades using paragraphs 2.B.(1)(a) through 2.B.(1)(g) of Turbomeca Mandatory Service Bulletin A249 72 0100, Update No. 5, dated February 25, 2005, and the criteria in the following Table 1:

TABLE 1.—INSPECTION CRITERIA

If engine modification level is:	Then borescope-inspect centrifugal compressor intake wheel blades:	Were traces of corrosion found at borescope-inspection?	Then confirm corrosion by performing ECI or UI within:
(1) Pre TU 191 and Pre TU 224	Within 200 flight hours-since-last inspection.	(i) Yes (ii) No	Six months-or 50 flight hours-since-borescope inspection, whichever occurs first. Two hundred flight hours-since-borescope inspection.
(2) Post TU 191 or Post TU 224. ..	Within 1,000 flight hours-since-last inspection.	(i) Yes (ii) No	Six months-or 50 flight hours-since-borescope inspection, whichever occurs first. One thousand flight hours-since-borescope inspection.

(h) Thereafter, perform repetitive inspections using the criteria in Table 1 of this AD.

(i) Remove centrifugal compressor intake wheel blades confirmed cracked or pitted.

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.

Material Incorporated by Reference

(k) You must use Turbomeca Mandatory Service Bulletin A249 72 0100, Update No. 5, dated February 25, 2005, to perform the

actions 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 of this service information 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, Office of the Regional Counsel, 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>.

Related Information

(l) Direction Generale de L'Aviation Civile airworthiness directive F–2005–037, dated March 2, 2005, also addresses the subject of this AD.

Issued in Burlington, Massachusetts, on November 7, 2006.

Peter A. White,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

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