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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-1245; Directorate Identifier 2008-NE-27-AD; Amendment 39-15912; AD 2009-11-02]

RIN 2120-AA64

Airworthiness Directives; CFM International S.A. Model CFM56 Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for CFM International S.A. CFM56-2, CFM56-3, CFM56-5A, CFM56-5B, CFM56-5C, and CFM56-7B series turbofan engines with certain part number (P/N) and serial number (SN) high-pressure compressor (HPC) 4-9 spools installed. This AD requires removing certain HPC 4-9 spools listed by P/N and SN in this AD. This AD results from reports of certain HPC 4-9 spools that Propulsion Technology LLC (PTLLC) improperly repaired and returned to service. We are issuing this AD to prevent cracking of the HPC 4-9 spool, which could result in possible uncontained failure of the spool and damage to the airplane.

DATES: This AD becomes effective June 23, 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: Stephen K. Sheely, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: stephen.k.sheely@faa.gov; telephone (781) 238-7750; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend 14 CFR part 39 with a proposed AD. The proposed AD applies to CFM International S.A. CFM56-2, CFM56-3, CFM56-5A, CFM56-5B, CFM56-5C, and CFM56-7B series turbofan engines with certain P/N and SN HPC 4-9 spools installed. We published the proposed AD in the Federal Register on November 26, 2008 (73 FR 71951). That action proposed to require removing certain HPC 4-9 spools that have a P/N and

SN listed in Table 1 of this AD before accumulating 8,900 cycles since repair at PTLCC or within 1,100 cycles from the effective date of this AD, whichever occurs later.

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.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

Incorrect SN in Table 1 of the Proposed AD

Three commenters, the Air Transport Association (ATA), United Airlines, and CFM International, point out a typographical error in the SN for a 4-9 spool, P/N 1590M29G01. They state that the Special Airworthiness Information Bulletin (SAIB) NE-08-17 shows SN GWNFY924 for that P/N and the proposed rule shows SN GWNFY824 for the same P/N.

We agree. Serial number GWNFY924 is the correct SN. We changed Table 1, P/N 1590M29G01 SN "GWNFY824," to "GWNFY924" in this AD.

Request To Clarify the Relationship Between SAIB NE-08-17 and the Proposed AD

One commenter, the ATA, suggests the proposed AD doesn't show a clear relationship between its requirements and those contained in SAIB NE-08-17. The ATA suggests we provide a clarification and a better understanding of why we wrote SAIB NE-08-17 and the proposed rule. The ATA also asks if the recommendations or the hardware listed in SAIB NE-08-17 is still in effect.

We partially agree. The proposed AD specifies the same twenty-six 4-9 spools as SAIB NE-08-17. Special Airworthiness Information Bulletin NE-08-17 still provides recommendations for dispositioning other parts listed in that SAIB. However, we don't require removing the hardware listed in SAIB NE-08-17, other than the 4-9 spools. We didn't change the AD.

Request To Delete "Seal Tooth Plasma Overspray" Statement From Discussion

One commenter, CFM International, asks us to delete "Seal tooth plasma overspray between the seal teeth, which is not permitted by the engine overhaul manual, and" from the Discussion Section. CFM International states that the overhaul manual does allow plasma overspray between the seal teeth.

We agree that the overhaul manual allows plasma overspray between the seal teeth. However, the Discussion Section is not included in the AD. We didn't change the AD.

Request To Include Instructions for Dispositioning the Removed 4-9 Spool

One commenter, Japan Airlines, states that we include a prohibition for installing the affected 4-9 spools, but we don't specify what to do with the 4-9 spools removed as specified in the proposed AD. They ask us to provide instructions to disposition the removed 4-9 spools.

We don't agree. The proposed rule requires removing from service, certain 4-9 spools, which removes the unsafe condition. The included installation prohibition resolves our remaining regulatory concerns. How operators recycle metal is beyond the scope of an AD, so long as the excluded part doesn't find its way back into service. We didn't change the AD.

Request To Clarify the Compliance Times

One commenter, the Boeing Company, asks us to clarify the compliance times for removing the affected 4-9 spools. Boeing suggests that, as written, the compliance times of "before accumulating 8,900 cycles-since-repair at PTLIC or within 1,100 cycles after the effective date of this AD," could allow up to 10,000 cycles to accumulate on an engine before an operator has to take corrective action.

We agree. That is what we intended. We didn't change the AD.

Conclusion

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

We estimate that this AD will affect 26 engines installed on airplanes of U.S. registry. We also estimate that it will take about 410 work-hours per engine to perform the required actions, and that the average labor rate is \$80 per work-hour. Required parts will cost about \$227,500 per engine. Based on these figures, we estimate the total cost of the AD to U.S. operators to be \$6,767,800.

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, 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 adding the following new airworthiness directive:



2009-11-02 CFM International S.A.: Amendment 39-15912. Docket No. FAA-2008-1245; Directorate Identifier 2008-NE-27-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective June 23, 2009.

Affected ADs

(b) None.

Applicability

(c) This AD applies to CFM International S.A. CFM56-2, CFM56-3, CFM56-5A, CFM56-5B, CFM56-5C, and CFM56-7B series turbofan engines with a high-pressure compressor (HPC) 4-9 spool that has a part number (P/N) and serial number (SN) specified in Table 1 of this AD, installed. These engines are installed on, but not limited to, Airbus A319, A320, and A340 airplanes and Boeing 737 airplanes.

Table 1—HPC 4-9 Spools by P/N and SN

HPC 4-9 Spool P/N	HPC 4-9 Spool SN
9513M93G08	MPON1641
1590M29G01	GWN0087D
1590M29G01	GWN00MG2
1590M29G01	GWN011LG
1590M29G01	GWN01285
1590M29G01	GWN021JC
1590M29G01	GWNFY923
1590M29G01	GWNFY924
1590M29G01	GWNPA756
1590M29G01	GWNPG015
1590M29G01	GWNWC515
1590M29G01	GWNWR523
1590M29G01	GWNWT631
1590M29G01	GWNYC495
1588M89G03	GWN03K1R

1588M89G03	GWN03N61
1588M89G03	GWN03N6C
1588M89G03	GWN040L9
1588M89G03	GWN0468N
1588M89G03	GWN05AMO
1277M97G02	GWNE1298
1277M97G02	GWNE1564
1277M97G02	GWNJ7891
1277M97G02	GWNT4187
9513M93G11	GWNB3373
1358M94G01	GWNU0169

Unsafe Condition

(d) This AD results from reports of certain HPC 4-9 spools that Propulsion Technology LLC (PTLLC) improperly repaired and returned to service. We are issuing this AD to prevent cracking of the HPC 4-9 spool, which could result in possible uncontained failure of the spool and damage to the airplane.

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.

Removing the HPC 4-9 Spool

(f) Remove HPC 4-9 spools from service that have a P/N and S/N listed in Table 1 of this AD before accumulating 8,900 cycles-since-repair at PTLLC or within 1,100 cycles from the effective date of this AD, whichever ever occurs later.

Installation Prohibition

(g) After the effective date of this AD, do not install any engine with an HPC 4-9 spool that has a P/N and SN specified in Table 1 of this AD.

Alternative Methods of Compliance

(h) 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

(i) Contact Stephen K. Sheely, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail:

stephen.k.sheely@faa.gov; telephone (781) 238-7750; fax (781) 238-7199, for more information about this AD.

Material Incorporated by Reference

(j) None.

Issued in Burlington, Massachusetts, on May 13, 2009.

Peter A. White,
Assistant Manager, Engine and Propeller Directorate,
Aircraft Certification Service.