

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 98-ANE-45-AD; Amendment 39-13667; AD 2004-12-08]

RIN 2120-AA64

Airworthiness Directives; International Aero Engines (IAE) AG V2500-A1, V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, and V2533-A5 Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD) for IAE AG V2500-A1, V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, and V2533-A5 turbofan engines. That AD currently requires revisions to the Airworthiness Limitations Section (ALS) and Maintenance Scheduling Section (MSS) of the Instructions for Continued Airworthiness (ICA), located in the Time Limits Manual (Chapter 05-10-00) of the Engine Manuals, to include required enhanced inspection of selected critical life-limited parts at each piece-part exposure. This action would add critical life-limited parts for enhanced inspection. This action is prompted by additional focused inspection procedures that have been developed by the manufacturer. The actions specified by this AD are intended to prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane.

DATES: This AD becomes effective July 23, 2004.

ADDRESSES: You may examine the AD docket, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

FOR FURTHER INFORMATION CONTACT: James Rosa, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7152; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 2000-12-05, Amendment 39-11783 (65 FR 36783, June 12, 2000), which is applicable to IAE AG V2500-A1, V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, and V2533-A5 turbofan engines, was

published in the Federal Register on June 25, 2003 (68 FR 37774). That action proposed to revise the Airworthiness Limitations Section (ALS) and Maintenance Scheduling Section (MSS) of the Instructions for Continued Airworthiness (ICA), located in the Time Limits Manual (Chapter 05-10-00) of the Engine Manuals, to add critical life-limited parts for enhanced inspection at each piece-part exposure.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

High Pressure Compressor (HPC) Rear Airseal

One commenter requests that the HPC rear airseal be removed from the list of parts requiring inspection because it is smaller and lighter than other parts requiring inspection and its failure is unlikely to cause an uncontained failure. We do not agree. Although failure of the HPC rear airseal is less likely to cause an uncontained failure than other listed parts, it has been identified as a critical part, the failure of which can lead to a hazardous condition.

Inspection of New Parts

One commenter questions the need for additional non-destructive inspections for the new high pressure compressor (HPC) and low pressure turbine (LPT) parts added to this AD, as the original AD requires fluorescent penetrant inspection (FPI) only. We agree. FPI was the only intended method of inspection. The intent of this AD is to specify all parts and all critical features of these parts requiring inspection. New parts added to the mandatory inspection list by this AD will require the same inspections as parts listed in the original AD. The Compliance Section of the final rule will reflect this change.

Conclusion

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Economic Analysis

The FAA estimates that 734 engines installed on airplanes of U.S. registry would be affected by this AD, that it would take approximately 24 work hours per engine to perform the enhanced inspection for HPC stage 3-8 drums, HPC stage 9-12 drum, HPC rear shaft, HPC rear rotating seal, and stages 3 through 7 LPT disks. The average labor rate is \$65 per work hour. The total cost of the added inspections per engine would be approximately \$1,560. Using average shop visitation rates, the annual cost of the added inspections on U.S. operators is approximately \$1,145,040.

Regulatory Analysis

This final rule does not have federalism implications, as defined in Executive Order 13132, because it 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. Accordingly, the FAA has not consulted with state authorities prior to publication of this final rule.

For the reasons discussed above, I certify that this action (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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to 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. Section 39.13 is amended by removing Amendment 39-11783 (65 FR 36783, June 12, 2000) and by adding a new airworthiness directive, Amendment 39-13667, to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2004-12-08 International Aero Engines: Amendment 39-13667. Docket No. 98-NE-45-AD.
Supersedes AD 2000-12-05, Amendment 39-11783.

Applicability

This airworthiness directive (AD) is applicable to International Aero Engines AG (IAE) V2500-A1, V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, and V2533-A5 turbofan engines. These engines are installed on, but not limited to, Airbus Industrie A319, A320, and A321 series, and McDonnell Douglas MD-90 airplanes.

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Compliance with this AD is required as indicated, unless already done.

To prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane, do the following:

Inspections

(a) Within the next 90 days after the effective date of this AD, revise the Airworthiness Limitations Section (ALS) and Maintenance Scheduling Section (MSS) of the Instructions for Continued Airworthiness (ICA) located in the Time Limits Manual (Chapter 05-10-00) of the Engine Manuals, part number (P/N) E-V2500-11A and P/N E-V2500-31A, and for air carrier operations revise the approved continuous airworthiness maintenance program, by

(1) Adding the following to paragraph 1, entitled "Airworthiness Limitations:" "Refer to paragraph 2—Maintenance Scheduling for information that sets forth the operator's maintenance requirements for the V2500 On-Condition engine."

(2) Adding the following paragraph 2, entitled "Maintenance Scheduling:"

"Whenever a Group A part identified in this paragraph (see 4.0 for definition of Group A) satisfies both of the following conditions:

The part is considered completely disassembled when accomplished in accordance with the disassembly instructions in the engine manufacturer's engine manual; and

The part has accumulated more than 100 cycles in service since the last piece-part opportunity inspection, provided that the part was not damaged or related to the cause for its removal from the engine; then that part is considered to be at the piece-part level and it is mandatory to perform the inspections for that part as specified in the following:

Part nomenclature	Part number (P/N)	Inspect per engine manual chapter
Fan Disk	All	Chapter 72-31-12, Subtask 72-31-12-230-054.
Stage 1 HP Turbine Hub	All	Chapter 72-45-11, Task 72-45-11-200-002.
Stage 2 HP Turbine Hub	All	Chapter 72-45-31, Task 72-45-31-200-004.
High Pressure Compressor (HPC) Stage 3-8 Drum.	All	Chapter 72-41-11, Subtask 72-41-11-230-104.
HPC Stage 9-12 Drum	All	Chapter 72-41-12, Subtask 72-41-12-230-079.
HPC Rear Shaft	All	Chapter 72-41-13, Subtask 72-41-13-230-097 & 72-41-13-230-098.
HPC Stage Rear Rotating Seal	All	Chapter 72-41-14, Subtask 72-41-14-230-064 & 72-41-14-230-065.
Stages 3 through 7 Low Pressure Turbine (LPT) Disks.	All	Chapter 72-50-31, Task 72-50-31-200-006.

(b) Except as provided in paragraph (c) of this AD, and notwithstanding contrary provisions in section 43.16 of the Federal Aviation Regulations (14 CFR 43.16), these mandatory inspections must be performed only in accordance with the ALS and MSS of the ICA in the Time Limits Manual (Chapter 05-10-00) of the Engine Manuals, P/N E-V2500-1IA and P/N E-V2500-3IA.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators must submit their request through an appropriate FAA Principal Maintenance Inspector (PMI), who may add comments and then send it to the Manager, ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be done.

Continuous Airworthiness Maintenance Program

(e) FAA-certificated air carriers that have an approved continuous airworthiness maintenance program in accordance with the record keeping requirement of § 121.369(c) of the Federal Aviation Regulations (14 CFR 121.369(c)) of this chapter must maintain records of the mandatory inspections that result from revising the ALS and MSS of the ICA in the Time Limits Manual (Chapter 05-10-00) of the Engine Manuals, P/N E-V2500-1IA and P/N E-V2500-3IA, and the air carrier's continuous

airworthiness program. Alternatively, certificated air carriers may establish an approved system of record retention that provides a method for preservation and retrieval of the maintenance records that include the inspections resulting from this AD, and include the policy and procedures for implementing this alternate method in the air carrier's maintenance manual required by § 121.369(c) of the Federal Aviation Regulations (14 CFR 121.369(c)); however, the alternate system must be accepted by the appropriate PMI and require the maintenance records be maintained either indefinitely or until the work is repeated. Records of the piece-part inspections are not required under § 121.380(a)(2)(vi) of the Federal Aviation Regulations (14 CFR 121.380(a)(2)(vi)). All other operators must maintain the records of mandatory inspections required by the applicable regulations governing their operations.

Note 3: The requirements of this AD have been met when the engine manual changes are made and air carriers have modified their continuous airworthiness maintenance plans to reflect the requirements in the Engine Manuals.

Effective Date

(f) This amendment becomes effective on July 23, 2004.

Issued in Burlington, Massachusetts, on June 8, 2004.

Francis A. Favara,

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

[FR Doc. 04-13698 Filed 6-17-04; 8:45 am]

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