

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [64 FR 14097 NO. 56 03/24/99]

[Docket No. 98-ANE-36-AD; Amendment 39-11088; AD 99-07-04]

RIN 2120-AA64

Airworthiness Directives; Williams International, L.L.C. FJ44-1A Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to Williams International, L.L.C. FJ44-1A turbofan engines, that requires removing the high pressure turbine (HPT) disk from service prior to accumulating a reduced cyclic life limit of 1,900 cycles since new (CSN) and replacing with a serviceable disk. As an option, the HPT nozzle can be modified, thereby increasing the HPT disk cyclic life limit from the new reduced cyclic life limit. This amendment is prompted by a revised life analysis conducted by the manufacturer after the failure of a similarly designed HPT disk. The actions specified by this AD are intended to prevent HPT disk rim failure, which could result in an uncontained engine failure and damage to the aircraft.

DATES: Effective May 24, 1999.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of May 24, 1999.

ADDRESSES: The service information referenced in this AD may be obtained from Williams Rolls, 2280 West Maple Road, P.O. Box 200, Walled Lake, MI 48390-0200; telephone (248) 960-2545, fax (248) 669-9515. This information may be examined at the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Patricia Bonnen, Aerospace Engineer, Chicago Aircraft Certification Office, FAA, Small Airplane Directorate, 2300 East Devon Avenue, Des Plaines, IL 60018; telephone (847) 294-7134, fax (847) 294-7834.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to Williams International, L.L.C. FJ44-1A turbofan engines was published in the Federal Register on September 9, 1998 (63 FR 48140). That action proposed to require removing the high pressure turbine (HPT) disk from service prior to accumulating a reduced cyclic life limit of 1,900 cycles since new (CSN) and replacing with a serviceable disk. As an option, the HPT

nozzle can be modified, thereby increasing the HPT disk cyclic life limit from the new reduced cyclic life limit.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received on the proposal or the FAA's determination of the cost to the public. The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

There are approximately 223 engines of the affected design in the worldwide fleet. The FAA estimates that 165 engines installed on aircraft of U.S. registry will be affected by this AD. The cost of removing a disk earlier than the original life-limit rather than reworking the disk is \$12,546 per engine. The costs of reworking the HPT nozzle assembly to obtain increased HPT life are substantially less than the costs of replacement of the HPT disk. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$2,070,090 assuming all disks are replaced. The actual total cost to U.S. operators, however, will be less depending on how many operators exercise the rework option. In addition, the manufacturer may reimburse operators for the costs of removing disks earlier than the original life limit, reducing even further the total cost impact for U.S. operators.

The regulations adopted herein will not have substantial direct effects 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. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

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 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 from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, 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 adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC



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

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, 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 FAR Subpart 39.3).

99-07-04 Williams International, L.L.C.: Amendment 39-11088. Docket 98-ANE-36-AD.

Applicability: Williams International, L.L.C. FJ44-1A turbofan engines, installed on but not limited to Cessna 525 series aircraft.

Note 1: This airworthiness directive (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: Required as indicated, unless accomplished previously.

To prevent high pressure turbine (HPT) disk rim failure, which could result in an uncontained engine failure and damage to the aircraft, accomplish the following:

(a) Prior to accumulating 1,900 cycles since new (CSN), remove from service HPT disk, part number (P/N) 55291, and replace with a serviceable part.

(b) As an option to paragraph (a), modify the HPT nozzle assembly and remark the HPT disk and assembly with new P/Ns in accordance with Williams Rolls Service Bulletin (SB) FJ44-72-36, dated October 21, 1997.

Note 2: The low cycle fatigue retirement lives for the HPT disks remarked with new P/Ns in accordance with paragraph (b) of this AD may be found in Williams Rolls SB FJ44-A-72-38, dated October 21, 1997.

(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, Chicago Aircraft Certification Office. Operators shall submit their request through an appropriate FAA

Principal Maintenance Inspector, who may add comments and then send it to the Manager, Chicago Aircraft Certification Office.

Note 3: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Chicago Aircraft Certification Office.

(d) Thereafter, except as provided in paragraph (c) of this AD, no alternative replacement times or life limits may be approved for HPT disk, P/N 55291.

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(f) The actions required by this AD shall be done in accordance with the following Williams Rolls SBs:

Document No	Pages	Date
FJ44-A-72-38	1-2	October 21, 1997
Total pages: 2.		
FJ44-72-36	1-9	October 21, 1997
Total Pages: 9.		

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Williams Rolls, 2280 West Maple Road, P.O. Box 200, Walled Lake, MI 48390-0200; telephone (248) 960-2545, fax (248) 669-9515. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street NW., suite 700, Washington, DC.

(g) This amendment becomes effective on May 24, 1999.

FOR FURTHER INFORMATION CONTACT: Patricia Bonnen, Aerospace Engineer, Chicago Aircraft Certification Office, FAA, Small Airplane Directorate, 2300 East Devon Avenue, Des Plaines, IL 60018; telephone (847) 294-7134, fax (847) 294-7834.