DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

14 CFR Part 39


RIN 2120–AA64

Airworthiness Directives; Williams International Co., L.L.C. Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Williams International Co., L.L.C. (Williams) FJ44–2A, FJ44–2C, FJ44–3A, and FJ44–3A–24 model turbofan engines. This proposed AD was prompted by a report of cracks in high-pressure turbine (HPT) disk posts and failure of an HPT disk post. This proposed AD would require the removal and replacement of the affected HPT disk before reaching its new life limit. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by August 9, 2021.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

• Federal eRulemaking Portal: Go to https://www.regulations.gov. Follow the instructions for submitting comments.

• Fax: (202) 493–2251.


• Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Williams International Co., L.L.C., Product Support, 2000 Centerpoint Pkwy., Pontiac, MI 48341; phone: (800) 859–3544; website: http://www.williams-int.com/product-support. You may view this service information at the Chicago ACO Branch, 2300 East Devon Avenue, Des Plaines, IL 60018. For information on the availability of this material at the FAA, call (781) 238–7759.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA–2021–0511; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Kyle Bush, Aviation Safety Engineer, Chicago ACO Branch, FAA, 2300 East Devon Avenue, Des Plaines, IL 60018; phone: (847) 294–7870; fax: (847) 294–7834; email: kyle.bush@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA–2021–0511; Project Identifier AD–2020–01229–E” at the beginning of your comments. The most helpful comments will reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to https://www.regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Kyle Bush, Aviation Safety Engineer, Chicago ACO Branch, FAA, 2300 East Devon Avenue, Des Plaines, IL 60018. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA received a report that Williams discovered cracks in one HPT disk post during a scheduled inspection of an FJ44–2A model turbofan engine. An operator also discovered that one HPT disk post failed, while the engine was in service, resulting in the release of an HPT blade.

Williams initiated an investigation to understand the root cause of the cracks and to determine the necessary corrective action. Williams found that, between August 2018 and July 2019, nine FJ44–2A HPT disks were rejected during inspection after discovery of cracks in the HPT disk post. As part of its investigation, Williams conducted several tests and analysis to determine the failure mechanism. Engine tests confirmed that FJ44–2A and FJ44–2C model turbofan engines operate at a higher temperature than most recently certified engines. Metallurgical evaluation showed cracking is intergranular with oxidation attack near and around the crack, with no fatigue striations. Metallurgical evaluation and comparison of HPT disk, part number (P/N) 67093, installed on both FJ44–2A and FJ44–3A model turbofan engines, showed cracking of the HPT disk.

As a result of this investigation, Williams determined the root cause of this cracking was due to higher temperatures and a difference in manufacturing processes (electrical discharge machining vs. broaching).

Williams determined that these cracks have only occurred on HPT disks with P/N 67093. Williams subsequently issued service information to instruct operators to remove the HPT disk, P/N 67093. This condition, if not addressed, could result in failure of the engine, in-flight shutdown of the engine, and loss of control of the aircraft.

FAA’s Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.
The FAA reviewed Williams International Service Bulletin (SB) WISB–72–1032, dated March 23, 2020. This service information specifies procedures for removing and replacing the HPT rotor assemblies that include HPT disk, P/N 67093. The service information also provides instructions for incorporating the latest HPT combustor/fuel slinger module on FJ44–2A and FJ44–2C model turbofan engines. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Other Related Service Information


Proposed AD Requirements in This NPRM

This proposed AD would require removing the HPT disk, P/N 67093, from service before reaching its new life limit and replacing it with a part eligible for installation.

Differences Between This Proposed AD and the Service Information

The Accomplishment Instructions, paragraph 2.D., of Williams International SB WISB–72–1032, dated March 23, 2020, instruct operators of FJ44–2A and FJ44–2C model turbofan engines to replace or rework the HPT combustor/fuel slinger module on FJ44–2A and FJ44–2C model turbofan engines, while this proposed AD does not. Replacement or rework of the HPT combustor/fuel slinger module is not necessary to resolve the unsafe condition addressed by this proposed AD.

Estimated Costs

<table>
<thead>
<tr>
<th>Action</th>
<th>Labor cost</th>
<th>Parts cost</th>
<th>Cost per product</th>
<th>Cost on U.S. operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove and replace the HPT disk</td>
<td>33 work-hours × $85 per hour = $2,805</td>
<td>$16,694</td>
<td>$19,499</td>
<td>$4,153,287</td>
</tr>
</tbody>
</table>

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected operators.

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.

The FAA is 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

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD 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.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866,
2. Would not affect intrastate aviation in Alaska, and
3. Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

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

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

§ 39.13 [Amended]

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:


(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by August 9, 2021.

(b) Affected ADs

None.

(c) Applicability


(d) Subject

Joint Aircraft System Component (JASC) Code 7250, Turbine Section.
(e) Unsafe Condition

This AD was prompted by a report of cracks in the HPT disk posts and failure of the HPT disk post, resulting in the release of an HPT blade. The FAA is issuing this AD to prevent cracking and failure of the HPT disk posts. The unsafe condition, if not addressed, could result in uncontained release of the HPT blade, damage to the engine, and damage to the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) For FJ44–2A and FJ44–2C model turbofan engines, within the compliance times specified in Table 1 to paragraph (g) of this AD, remove the affected HPT disk from service and replace it with a part eligible for installation using paragraphs 2.C. and E., Accomplishment Instructions—FJ44–2A & FJ44–2C, of the SB.

(2) For FJ44–3A and FJ44–3A–24 model turbofan engines, within the compliance times specified in Table 1 to paragraph (g) of this AD, remove the affected HPT disk from service and replace it with a part eligible for installation using paragraphs 3.C. and D., of the SB.

<table>
<thead>
<tr>
<th>HPT disk, P/N 67093, cycles since new (CSN) as of the effective date of this AD</th>
<th>Replace within HPT disk cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1,000 CSN</td>
<td>1,620 CSN</td>
</tr>
<tr>
<td>1,000 to 2,000 CSN</td>
<td>2,530 CSN</td>
</tr>
<tr>
<td>2,001 to 3,000 CSN</td>
<td>3,245 CSN</td>
</tr>
<tr>
<td>3,001 to 4,000 CSN</td>
<td>4,130 CSN</td>
</tr>
<tr>
<td>4,001 or higher CSN</td>
<td>130 cycles after the effective date of this AD</td>
</tr>
</tbody>
</table>

(h) Definition

For the purpose of this AD, a part eligible for installation is an HPT disk with a P/N other than P/N 67093.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Chicago ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in Related Information.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Kyle Bush, Aviation Safety Engineer, Chicago ACO Branch, FAA, 2300 East Devon Avenue, Des Plaines, IL 60018; phone: (847) 294–7870; fax: (847) 294–7834; email: kyle.bush@faa.gov.

(2) For service information identified in this AD, contact Williams International Co., L.L.C., Product Support, 2000 Centerpoint Parkway, Pontiac, MI 48341; phone: (800) 859–3544; website: http://www.williams-int.com/product-support. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238–7759.

Issued on June 21, 2021.

Lance T. Gant,
Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2021–13516 Filed 6–24–21; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2021–0169; Airspace Docket No. 21–ASO–3]

RIN 2120–AA66

Proposed Amendment of Class D and Class E Airspaces; South Florida

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This action proposes to amend Class D and Class E airspace in the South Florida area, by updating the geographic coordinates of the following airports: Fort Lauderdale-Hollywood International Airport, Miami-Opa Locka Executive Airport, (formerly Opa Locka Airport), North Perry Airport, Pompano Beach Airpark, Miami International Airport, Homestead ARB, Boca Raton Airport, Miami Executive Airport (formerly Kendall-Tamiami Executive Airport). This action would also update the geographic coordinates of the Fort Lauderdale Very High Frequency Omnidirectional Range Collocated with Distance Measuring Equipment (VOR/DME), and the QEEZY Locator Outer Marker (LOM). This action would also make an editorial change replacing the term Airport/Facility Directory with the term Chart Supplement in the legal descriptions of associated Class D and E airspace. Controlled airspace is necessary for the safety and management of instrument flight rules (IFR) operations in the area.

DATES: Comments must be received on or before August 9, 2021.


FAA Order 7400.11E, Airspace Designations and Reporting Points, and