List of Subjects in 14 CFR Part 39
Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment
Accordingly, under the authority delegated to me by the Administrator, the FAA amends 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) Effective Date
This airworthiness directive (AD) is effective September 7, 2021.

(b) Affected ADs
None.

(c) Applicability
This AD applies to the following BALÓNÝ KUBÍČEK spol. s r.o. balloons, certificated in any category:
(1) Model BB78Z, serial numbers (S/Ns) 1292 and 1364;
(2) Model BB85Z, S/N 1360;
(3) Model BB92Z, S/N 1331; and

(d) Subject

(e) Unsafe Condition
This AD was prompted by mandatory continuing airworthiness information (MCAI) issued by the aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as failure of the envelope vertical load tape. The FAA is issuing this AD to detect and correct defects in the envelope vertical load tape, which could result in an envelope tear and consequent uncontrolled descent.

(f) Compliance
Comply with this AD within the compliance times specified, unless already done.

(g) Inspection and Repair
Within 30 days after the effective date of this AD, inspect the envelope load tape for weaving defects indicated by visible yellow thread. If there is visible yellow thread in any envelope load tape, before further flight, repair any damaged area of the envelope load tape.

Note 1 to paragraph (g): BALÓNÝ KUBÍČEK spol. s r.o. Servis Bulletin No. BB/52, dated July 23, 2018, includes an example of a weaving defect and specifies acceptable procedures and materials for repairing envelope load tape.

(h) Alternative Methods of Compliance (AMOCs)
(1) The Manager, International Validation Branch, 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, paragraph (i)(1) of this AD or email 9-AVS-AIR-730-AMOC@faa.gov.
(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/certificate holding district office.

(i) Related Information
(1) For more information about this AD, contact Mike Kiesov, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 901 Locust, Room 301, Kansas City, MO 64106; phone: (816) 329–4144; fax: (816) 329–4090; email: mike.kiesov@faa.gov.

(j) Material Incorporated by Reference
None.

Issued on August 5, 2021.

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

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

14 CFR Part 39


RIN 2120–AA64

Airworthiness Directives; Pratt & Whitney Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Pratt & Whitney PW1500G and PW1900G series turbofan engines. This AD was prompted by reports of cracks in the high-pressure compressor (HPC) rotor shaft that resulted in in-flight shutdowns (IFSDs) and unscheduled engine removals (UERs). This AD requires removal and replacement of the HPC front hub and HPC rotor shaft. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective September 22, 2021.

ADDRESSES: For service information identified in this final rule, contact Pratt & Whitney, 400 Main Street, East Hartford, CT 06118; phone: (800) 565–0140; email: help24@pw.utc.com; website: https://fleetcare.prattwhitney.com/. You may view this 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. It is also available at https://www.regulations.gov by searching for and locating Docket No. FAA–2021–0447.

Examining the AD Docket
You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA–2021–0447; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT:
Mark Taylor, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238–7229; fax: (781) 238–7199; email: Mark.Taylor@faa.gov.

SUPPLEMENTARY INFORMATION:

Background
UERs. The manufacturer determined that the threads on the HPC rotor shaft were not optimized for load distribution, which resulted in vibration stresses. During one occurrence, oil was released at the high-pressure turbine (HPT) disk bore location. The manufacturer redesigned the HPC front hub and HPC rotor shaft for increased durability and decreased vibration stress. The redesigned HPC front hub is made from nickel to help with corrosion resistance. The threads on the HPC rotor shaft were also redesigned to help distribute the load on the threads and decrease vibration stress. In the NPRM, the FAA proposed to require removal and replacement of the HPC front hub and HPC rotor shaft. The FAA is issuing this AD to address the unsafe condition on these products.

**Discussion of Final Airworthiness Directive**

**Comments**

The FAA received comments from one commenter, the Air Line Pilots Association, International (ALPA). ALPA supported the NPRM without change.

**Conclusion**

The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting the AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. This AD is adopted as proposed in the NPRM.

### ESTIMATED COSTS

<table>
<thead>
<tr>
<th>Action</th>
<th>Labor cost (Cost per work-hour)</th>
<th>Parts cost</th>
<th>Cost per product</th>
<th>Cost on U.S. operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace HPC front hub and HPC rotor shaft</td>
<td>$25.75 × $85 per hour = $2,188.75</td>
<td>$120,090</td>
<td>$122,278.75</td>
<td>$10,760,530</td>
</tr>
</tbody>
</table>

**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**

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. Will not affect intrastate aviation in Alaska, 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.

**List of Subjects in 14 CFR Part 39**

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

**The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA 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:


   **(a) Effective Date**

   This airworthiness directive (AD) is effective September 22, 2021.

   **(b) Affected ADs**

   None.

   **(c) Applicability**


   **(d) Subject**

   Joint Aircraft System Component (JASC) Code 7230, Turbine Engine Compressor Section.

   **(e) Unsafe Condition**

   This AD was prompted by reports of cracks in the high-pressure compressor (HPC) rotor shaft that resulted in in-flight shutdowns and unscheduled engine removals. The FAA is issuing this AD to prevent cracking of the HPC rotor shaft. The unsafe condition, if not addressed, could result in release of a high-pressure turbine disk, 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 Action**

   At the next engine shop visit after the effective date of this AD, remove HPC front hub, part number (P/N) 30G1910 or 30G3210, and HPC rotor shaft, P/N 30G1854, 30G3109, 30G4995, 30G4953, or 31G0014, from service and replace each part with a part eligible for installation.

**Costs of Compliance**

The FAA estimates that this AD affects 88 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

- **Time:** Replace HPC front hub and HPC rotor shaft: 25.75 work-hours × $85 per hour = $2,188.75.
- **Cost:** $120,090, $122,278.75, $10,760,530.

**Related Service Information**

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

14 CFR Part 39

RIN 2120–AA64

Airworthiness Directives; Leonardo S.p.A. Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for Leonardo S.p.A. (Leonardo) Model A109S and AW109SP helicopters with a certain part-numbered vertical fin vibration absorber installation installed. This AD requires repetitive inspections of the vertical fin vibration absorber installation and the surrounding structure and depending on the inspection results, removing certain parts from service. This AD also prohibits installing certain part-numbered vertical fin vibration absorber installations on any helicopter. This AD was prompted by a report of cracks and damage detected on the vertical fin absorber installation and surrounding structure. EASA stated that during a scheduled engine shop visit, damage was detected on the vertical fin vibration absorber installation part number P/N 109–A810–79–101 installed. The NPRM published in the Federal Register on May 13, 2021 (86 FR 26198). In the NPRM, the FAA proposed, within 30 hours time-in-service (TIS), and thereafter at intervals not to exceed 100 hours TIS, removing the vertical fin vibration absorber installation and, using a mirror and light source, inspecting the rib assembly and depending on the inspection results, removing certain parts from service. The NPRM also proposed to require inspecting the vertical fin vibration absorber installation for hole elongation; for fretting on the plate and the masses, and in between the masses; for fretting on the doubler; and the bolts for scratches and corrosion. Depending on the inspection results, the NPRM proposed removing the vertical fin vibration absorber installation from service. The NPRM also proposed to require, within 12 months TIS, removing the vertical fin vibration absorber installation from service. Finally, the NPRM proposed to prohibit installing an affected part on any helicopter, and provided a terminating action for the 100-hour TIS repetitive inspections. The NPRM was prompted by EASA AD 2014–0150, dated June 18, 2014 (EASA AD 2014–0150), issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for certain AgustaWestland S.p.A. (now Leonardo S.p.A. Helicopters) Model A109S and AW109SP helicopters with an absorber P/N 109–B810–79–101 installed. EASA advises that during a scheduled inspection on Model A109S and AW109SP helicopters, cracks and damage were detected on the vertical fin vibration absorber installation and the surrounding structure. EASA stated that investigation results determined the

Issued on August 12, 2021.

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

BILLING CODE 4910–13–P

FOR FURTHER INFORMATION CONTACT: Kristin Bradley, Aerospace Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222–5110; email kristin.bradley@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to Leonardo Model A109S and AW109SP helicopters with a vertical fin vibration absorber installation part number P/N 109–A810–79–101 installed. The NPRM published in the Federal Register on May 13, 2021 (86 FR 26198). In the NPRM, the FAA proposed, within 30 hours time-in-service (TIS), and thereafter at intervals not to exceed 100 hours TIS, removing the vertical fin vibration absorber installation and, using a mirror and light source, inspecting the rib assembly and depending on the inspection results, removing certain parts from service. The NPRM also proposed to require inspecting the vertical fin vibration absorber installation for hole elongation; for fretting on the plate and the masses, and in between the masses; for fretting on the doubler; and the bolts for scratches and corrosion. Depending on the inspection results, the NPRM proposed removing the vertical fin vibration absorber installation from service. The NPRM also proposed to require, within 12 months TIS, removing the vertical fin vibration absorber installation from service. Finally, the NPRM proposed to prohibit installing an affected part on any helicopter, and provided a terminating action for the 100-hour TIS repetitive inspections.

The NPRM was prompted by EASA AD 2014–0150, dated June 18, 2014 (EASA AD 2014–0150), issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for certain AgustaWestland S.p.A. (now Leonardo S.p.A. Helicopters) Model A109S and AW109SP helicopters with an absorber P/N 109–B810–79–101 installed. EASA advises that during a scheduled inspection on Model A109S and AW109SP helicopters, cracks and damage were detected on the vertical fin vibration absorber installation and the surrounding structure. EASA stated that investigation results determined the