

[Federal Register Volume 79, Number 231 (Tuesday, December 2, 2014)]  
[Rules and Regulations]  
[Pages 71300-71302]  
From the Federal Register Online via the Government Printing Office [www.gpo.gov]  
[FR Doc No: 2014-28325]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2009-0776; Directorate Identifier 2009-NE-32-AD; Amendment 39-18007; AD 2010-17-11R2]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Dowty Propellers Constant Speed Propellers**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are revising airworthiness directive (AD) 2010-17-11R1, which applies to all Dowty Propellers R408/6-123-F/17 model propellers. AD 2010-17-11R1 required initial application of sealant between the bus bar assembly and the backplate assembly of certain line-replaceable units (LRUs) and repetitive re-applications of sealant on all R408/6-123-F/17 model propellers. AD 2010-17-11R1 also provided an optional terminating action to the repetitive re-application of sealant. This AD increases the interval allowed between the required re-application of sealant, and specifies an additional acceptable sealant. This AD was prompted by failure of the propeller de-ice bus bar due to friction or contact between the bus bar and the backplate assembly, consequent intermittent short circuit, and possible double generator failure. We are issuing this AD to prevent an in-flight double generator failure, which could result in reduced control of the airplane.

**DATES:** This AD is effective January 6, 2015.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of January 6, 2015.

**ADDRESSES:** For service information identified in this AD, contact Dowty Propellers, Anson Business Park, Cheltenham Road East, Gloucester GL2 9QN, UK; phone: 44 0 1452 716000; fax: 44 0 1452 716001. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2009-0776; or in person at the Docket Management Facility between 9

a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the mandatory continuing airworthiness information, regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, 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:** Michael Schwetz, Aerospace Engineer, Boston Aircraft Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7761; fax 781-238-7170; email: michael.schwetz@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to revise AD 2010-17-11R1, Amendment 39-17481 (78 FR 41283, July 10, 2013), ("AD 2010-17-11R1"). AD 2010-17-11R1 applied to the specified products. The NPRM published in the Federal Register on March 19, 2014 (79 FR 15269). The NPRM proposed to require increasing the interval allowed between the required re-application of sealant and specified an additional acceptable sealant.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comments received.

### **Request Correction to the Applicability and Compliance Paragraphs**

Horizon Air requested a correction in the Applicability and Compliance paragraphs for possible typographical errors between AD 2010-17-11R1 and the NPRM (79 FR 15269, March 19, 2014). Horizon Air stated that the Applicability has changed from ". . . serial number (S/N) below DAP0327" in AD 2010-17-11R1 to ". . . S/N below DAP0927" in the proposed rule. With no discussion about the increased number of affected propellers, Horizon Air believes that typographical errors exist in the Applicability and Compliance sections.

We do not agree. AD 2010-17-11R1 required initial sealant application to all Dowty Propellers R408/6-123-F/17 model propellers with a hub, actuator, and backplate assembly LRU S/Ns below DAP0347, not DAP0327 as quoted above. AD 2010-17-11R1 also required repetitive re-application of sealant for all LRU S/Ns below DAP0927. We did not change this AD.

### **Request Change to Optional Terminating Action**

Horizon Air requested that all revisions to Dowty Propellers Service Bulletin (SB) No. D8400-61-94 be included in the Optional Terminating Action paragraph. The implied reason for this request was to support terminating action throughout the range of qualified SBs.

We partially agree. We agree that Dowty Propellers SB No. D8400-61-94, Revision 6, dated December 12, 2013 and earlier revisions provide adequate corrective actions to address the unsafe condition. We changed the Optional Terminating Action paragraph to include Dowty Propellers SB No. D8400-61-94, Revision 6, dated December 12, 2013 and earlier revisions.

We do not agree that unknown future SB versions should be included in this AD. The content of future SB revisions is speculation. We did not change this AD to include all revisions of the SB.

## **Request for Alternative Method of Compliance**

Horizon Air requested that we allow the use of 3M 4200 sealant as an equivalent replacement for the 3M 5300 sealant.

We agree. We approved 3M 4200 as an acceptable sealant in response to the Horizon Air comment to AD 2010-17-11R1 when that AD was at the NPRM stage; see 78 FR 41283, July 10, 2013. 3M 4200 sealant is also one of three sealants identified in Dowty Propellers Alert Service Bulletin (ASB) No. D8400-61-A66, Revision 8, dated October 31, 2013. That Dowty ASB is incorporated by reference to this AD and is authorized for use when performing paragraph (g) of this AD. We did not change this AD.

## **Conclusion**

We reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously. We determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

## **Costs of Compliance**

We estimate that this AD affects 104 propellers installed on airplanes of U.S. registry. We also estimate that it will take about 2 hours per propeller to comply with this AD. The average labor rate is \$85 per hour. Required parts cost about \$20 per propeller. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$19,760.

## **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**

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),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) 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.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA 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. The FAA amends § 39.13 by removing airworthiness directive (AD) 2010-17-11R1, Amendment 39-17481 (78 FR 41283, July 10, 2013), and adding the following new AD:



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**2010-17-11R2 Dowty Propellers Constant Speed Propellers:** Amendment 39-18007; Docket No. FAA-2009-0776; Directorate Identifier 2009-NE-32-AD.

**(a) Effective Date**

This AD is effective January 6, 2015.

**(b) Affected ADs**

This AD revises AD 2010-17-11R1, Amendment 39-17481 (78 FR 41283, July 10, 2013).

**(c) Applicability**

This AD applies to Dowty Propellers R408/6-123-F/17 model propellers with a hub, actuator, and backplate assembly line-replaceable unit (LRU) serial number (S/N) below DAP0927.

**(d) Unsafe Condition**

This AD was prompted by failure of the propeller de-ice bus bar due to friction or contact between the bus bar and the backplate assembly, consequent intermittent short circuit, and possible double generator failure. We are issuing this AD to prevent an in-flight double generator failure, which could result in reduced control of the airplane.

**(e) Compliance**

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

(1) For R408/6-123-F/17 model propellers with a hub, actuator, and backplate assembly LRU S/N below DAP0347, do the following initial sealant application within 5,000 flight-hours (FHs) after September 27, 2010, or within 100 FHs after the effective date of this AD, whichever occurs later:

(i) Apply a sealant specified in Dowty Propellers Alert Service Bulletin (ASB) No. D8400-61-A66, Revision 8, dated October 31, 2013 between the bus bar assemblies and the backplate assembly.

(ii) Use paragraph 3.A. or 3.B. of the Accomplishment Instructions of Dowty Propellers ASB No. D8400-61-A66, Revision 8, dated October 31, 2013, to apply the sealant.

(2) Thereafter, for R408/6-123-F/17 model propellers, with a hub, actuator, and backplate assembly LRU S/N below DAP0927, re-apply sealant as specified in paragraphs (e)(1)(i) and (e)(1)(ii) of this AD within every additional 10,500 FHs.

**(f) Installation Prohibition**

After the effective date of this AD, do not install any Dowty Propellers R408/6-123-F/17 model propeller unless 3M 5300 or 3M 4200 sealant was applied between the bus bar assembly and the backplate assembly as required by this AD, or unless the optional terminating action as specified in paragraph (g) of this AD was performed.

### **(g) Optional Terminating Action**

As optional terminating action to the sealant application required by paragraph (e) of this AD, replace the bus bar assembly with a slip ring de-icer harness. Use paragraph 3.A. of the Accomplishment Instructions of Dowty Propellers Service Bulletin (SB) No. D8400-61-94, Revision 6, dated December 12, 2013, to do the replacement.

### **(h) Credit for Previous Actions**

(1) Sealant applications performed before the effective date of this AD using Dowty Propellers SB No. D8400-61-66, dated February 9, 2007; Revision 1, dated May 4, 2007; ASB No. D8400-61-A66, Revision 2, dated August 19, 2009; Revision 3, dated November 10, 2009; Revision 4, dated January 19, 2010; Revision 5, dated June 16, 2010; Revision 6, dated August 17, 2011; or Revision 7, dated December 1, 2011, satisfy the initial sealant application required by paragraph (e) of this AD.

(2) Replacement of the busbar assembly with a slip ring de-icer harness before the effective date of this AD using Dowty Propellers SB No. D8400-61-94, Revision 2, dated August 29, 2012; Revision 3, dated October 23, 2012; Revision 4, dated June 12, 2013; or Revision 5, dated September 2, 2013, satisfies the optional terminating action specified in paragraph (g) of this AD.

### **(i) Alternative Methods of Compliance (AMOCs)**

The Manager, Boston Aircraft Certification Office, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

### **(j) Related Information**

(1) For more information about this AD, contact Michael Schwetz, Aerospace Engineer, Boston Aircraft Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7761; fax 781-238-7170; email: michael.schwetz@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2009-0114R2, (Correction: December 16, 2013), dated December 13, 2013, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2009-0776-0014>.

(3) Dowty Propellers SB No. D8400-61-66, dated February 9, 2007; Revision 1, dated May 4, 2007; ASB No. D8400-61-A66, Revision 2, dated August 19, 2009; Revision 3, dated November 10, 2009; Revision 4, dated January 19, 2010; Revision 5, dated June 16, 2010; Revision 6, dated August 17, 2011; or Revision 7, dated December 1, 2011, which are not incorporated by reference in this AD, can be obtained from Dowty Propellers, using the contact information in paragraph (k)(3) of this AD.

(4) Dowty Propellers SB No. D8400-61-94, Revision 2, dated August 29, 2012; Revision 3, dated October 23, 2012; Revision 4, dated June 12, 2013; or Revision 5, dated September 2, 2013, which are not incorporated by reference in this AD, can be obtained from Dowty Propellers, using the contact information in paragraph (k)(3) of this AD.

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

### **(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Dowty Propellers Alert Service Bulletin No. D8400-61-A66, Revision 8, dated October 31, 2013.

(ii) Dowty Propellers Service Bulletin No. D8400-61-94, Revision 6, dated December 12, 2013.

(3) For Dowty Propellers service information identified in this AD, contact Dowty Propellers, Anson Business Park, Cheltenham Road East, Gloucester GL2 9QN, UK; phone: 44-0-1452-716000; fax: 44-0-1452-716001.

(4) You may view this service information at FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(5) You may view this service information at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on November 3, 2014.

Kim Smith,  
Acting Directorate Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.