

[Federal Register: May 21, 2010 (Volume 75, Number 98)]
[Rules and Regulations]
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[DOCID:fr21my10-8]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0750; Directorate Identifier 2008-NE-21-AD; Amendment 39-16302; AD 2010-10-23]

RIN 2120-AA64

Airworthiness Directives; Dowty Propellers R175/4-30-4/13; R175/4-30-4/13e; R184/4-30-4/50; R193/4-30-4/50; R193/4-30-4/61; R193/4-30-4/64; R193/4-30-4/65; R193/4-30-4/66; R.209/4-40-4.5/2; R212/4-30-4/22; R.245/4-40-4.5/13; R257/4-30-4/60; and R.259/4-40-4.5/17 Model Propellers

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD) for the Dowty Propellers, propeller models listed above. That AD currently requires, for all Dowty Rotol propellers, visual inspections for seizure and for cadmium plating of the blade pitch change operating links and eyebolt fork assemblies. That AD also requires replacement or heat-treatment of the blade pitch change operating links and eyebolt fork assemblies, if necessary. This AD requires the same actions, but only for certain propeller models. This AD results from the FAA determining that AD 70-16-02 does not apply to all propellers, since current Dowty propellers are differently designed. We are issuing this AD supersedure to specify the affected propeller models, and to prevent seizure or embrittlement and cracking of the blade pitch change operating links and eyebolt fork assemblies, which could result in reduced controllability of the airplane.

DATES: This AD becomes effective June 25, 2010. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of June 25, 2010.

ADDRESSES: You can get the service information identified in this AD from Dowty Propellers, Anson Business Park, Cheltenham Road East, Gloucester GL2 9QN, UK; Telephone 44 (0) 1452 716000; fax 44 (0) 1452 716001.

The Docket Operations office is located at Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

FOR FURTHER INFORMATION CONTACT: Terry Fahr, Aerospace Engineer, Boston Aircraft Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: terry.fahr@faa.gov; telephone (781) 238-7155; fax (781) 238-7170.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend 14 CFR part 39 by superseding AD 70-16-02, Amendment 39-1503 (37 FR 16535, August 16, 1972), with a proposed AD. The proposed AD applies to certain Dowty Propellers, propeller models. We published the proposed AD in the Federal Register on August 29, 2008 (74 FR 50892). That action proposed to require visual inspections before further flight of the blade pitch change operating links and eyebolt fork assemblies and replacement or heat-treatment of them, if necessary, for certain Dowty Propellers, propeller models.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comment received.

Request To Revise the Proposed Applicability

One commenter, a private citizen, states that there were no Dowty Rotol propellers installed on Convair 240, 340, and 440 airplanes. However, the commenter also states that Convair 240, 340, and 440 airplanes modified by supplemental type certificates (STC) SA1054WE and SA1096SW, do have Dowty Rotol propellers installed. The propeller R.245/4-40-4.5 is used on a Convair model 240, redesignated as Convair model 600 on supplemental type certificate (STC) SA1054WE, and the propellers R.245/4-40-4.5 and R.259/4-40-4.5 are used on Convair models 340 and 440, redesignated Convair model 640 on STC SA1096SW.

We partially agree. We reviewed these STCs, and the aircraft type certificate data sheets A-793 and 6A6, and determined there are no official Convair model designations of 600 or 640 for these airplanes. We agree that Convair airplanes models 240, 340, and 440 if modified by these STCs have Dowty propellers installed and are affected by this proposed AD. We changed the AD applicability to call out the STCs, to remove the reference to Convair 600, and to list the complete part numbers of the affected propellers, instead of the basic part numbers. We also deleted propeller part number R251/4-30-4 from the applicability, as it was inadvertently listed.

Conclusion

We have carefully reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD with the changes described previously.

Costs of Compliance

We anticipate that this AD will affect no propellers installed on airplanes of U.S. registry, as the affected propellers should already be in compliance with AD 70-16-02 since it became effective, on

August 21, 1972. Based on this information, we estimate the total cost of the AD to U.S. operators to be \$0.

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

We have determined that 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); 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.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary at the address listed under ADDRESSES.

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 Federal Aviation Administration 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 removing Amendment 39-1503 (37 FR 16535, August 16, 1972), and by adding a new airworthiness directive, Amendment 39-16302, to read as follows:



2010-10-23 Dowty Propellers (Formerly Dowty Aerospace; Dowty Rotol Limited; and Dowty Rotol): Amendment 39-16302. Docket No. FAA-2008-0750; Directorate Identifier 2008-NE-21-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective June 25, 2010.

Affected ADs

- (b) This AD supersedes AD 70-16-02, Amendment 39-1503.

Applicability

(c) This AD applies to Dowty Propellers R175/4-30-4/13; R175/4-30-4/13e; R184/4-30-4/50; R193/4-30-4/50; R193/4-30-4/61; R193/4-30-4/64; R193/4-30-4/65; R193/4-30-4/66; R.209/4-40-4.5/2; R212/4-30-4/22; R.245/4-40-4.5/13; R257/4-30-4/60; and R.259/4-40-4.5/17 model propellers. These propellers are installed on, but not limited to, Fairchild F-27, Fairchild-Hiller FH-227, Grumman G-159, Nihon YS-11, and BAe HS 748 Series 2 airplanes, Convair 240 airplanes modified per supplemental type certificate (STC) SA1054WE, and Convair 340 and 440 airplanes modified per STC SA1096SW.

Unsafe Condition

(d) This AD results from the FAA determining that AD 70-16-02 does not apply to all propellers, since current Dowty Rotol propellers are differently designed. We are issuing this AD supersedure to specify the affected propeller models, and to prevent seizure or embrittlement and cracking of the blade pitch change operating links and eyebolt fork assemblies, which could result in reduced controllability of the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed before further flight after the effective date of this AD, unless the actions have already been done.

(f) Inspect the blade pitch change operating link and eyebolt fork assembly for:

- (1) Seizure (the link and eyebolt are seized if the torque required to move the link is 300 inch pounds or more); and
- (2) Cadmium plating on the mating surfaces between the operating link and eyebolt fork and the holes through the eyebolt fork and the operating link.

(g) If the link and eyebolt fork are not seized and have not been cadmium plated, they may remain in service.

(h) If the link and eyebolt fork are not seized but cadmium plating is found in the prohibited areas, remove the plating by means of wet or dry silicon carbide paper, fine or medium grade, and conduct a magnetic crack test. If no cracks are found, the assembly may remain in service until the

next propeller overhaul for air carrier airplanes and airplanes under a continuous maintenance program or for 3,300 hours time-in-service after the effective date of this AD for all other airplanes. At the next propeller overhaul for air carrier airplanes and airplanes under a continuous maintenance program, or within 3,300 hours time-in-service after the effective date of this AD for all other airplanes, heat treat the links and eyebolt forks found to have been cadmium plated, to remove embrittlement. Use Dowty Rotol Service Bulletin No. 61-754, dated June 12, 1970 to perform the heat treatment.

(i) If the link and eyebolt fork are seized, remove the link and eyebolt fork from service and replace them with an assembly having a part number approved for that model propeller that has not been cadmium plated in the prohibited areas.

(j) If the link or eyebolt fork are found to be cracked during the inspection in paragraph (h) of this AD, remove the cracked part from service and replace it with a part having a part number approved for that model propeller that has not been cadmium plated.

(k) The inspection required by paragraph (f) of this AD need not be performed and the propeller may remain in service if:

(1) The operator can show that no cadmium plating exists in the prohibited areas of that propeller; or

(2) It is a new propeller that has never been overhauled.

Alternative Methods of Compliance

(l) The Manager, Boston Aircraft Certification Office, FAA, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Related Information

(m) Contact Terry Fahr, Aerospace Engineer, Boston Aircraft Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: terry.fahr@faa.gov; telephone (781) 238-7155; fax (781) 238-7170, for more information about this AD.

Material Incorporated by Reference

(n) You must use Dowty Rotol Service Bulletin No. 61-754, dated June 12, 1970 to perform the heat treatment required by this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Dowty Propellers, Anson Business Park, Cheltenham Road East, Gloucester GL2 9QN, UK; Telephone 44 (0) 1452 716000; fax 44 (0) 1452 716001 for a copy of this service information. You may review copies at the FAA, New England Region, 12 New England Executive Park, Burlington, MA; or 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 May 5, 2010.

Peter A. White,
Assistant Manager, Engine and Propeller Directorate,
Aircraft Certification Service.