

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>.