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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2003-NE-15-AD; Amendment 39-13146; AD 2003-10-02]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc RB211 Series Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for Rolls-Royce plc (RR) RB211-524C2-19 and RB211-524C2-B-19 series turbofan engines. This AD requires replacing the existing low pressure (LP) compressor location bearing assembly, intermediate pressure (IP) compressor location bearing, IP compressor bearing support housing, IP compressor rear stub shaft, LP compressor location bearing support, oil transfer connector assembly, hydraulic oil seal housing, and hydraulic oil seal with improved design parts. This AD is prompted by statistical analysis by the manufacturer of in-service premature bearing failures. The actions specified in this AD are intended to prevent LP compressor failure and uncontained disc failures, resulting in damage to the airplane.

DATES: Effective June 19, 2003.

We must receive any comments on this AD by July 14, 2003.

ADDRESSES: Use one of the following addresses to submit comments on this AD:

- By mail: The Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2003-NE-15-AD, 12 New England Executive Park, Burlington, MA 01803-5299.

- By fax: (781) 238-7055.

- By e-mail: 9-ane-adcomment@faa.gov

You may get the service information referenced in this AD from Rolls-Royce plc, PO Box 31, Derby, England, DE248BJ; telephone: 011-44-1332-242424; fax: 011-44-1332-245-418.

You may examine the AD docket, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

FOR FURTHER INFORMATION CONTACT: Ian Dargin, Aerospace Engineer, Engine Certification Office, FAA, Engine And Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299, telephone (781) 238-7178; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: The manufacturer has performed statistical analysis of in-service bearing failures in RR RB211-524C2-19 and RB211-524C2-B-19 series turbofan engines. The analysis indicates a more rapid deterioration of the LP compressor location bearing assembly and IP compressor location bearing than the latest bearing standard used on other model RB211 turbofan engines. This AD requires replacing the existing LP compressor location bearing assembly, IP compressor location bearing, IP compressor bearing support housing, IP compressor rear stub shaft, LP compressor location bearing support, oil transfer connector assembly, hydraulic oil seal housing, and hydraulic oil seal with improved design parts. The actions specified in this AD are intended to prevent LP compressor failure and uncontained disc failures, resulting in damage to the airplane.

Relevant Service Information

We have reviewed the technical contents of RR Mandatory Service Bulletin (MSB) No. RB.211-72-D021, Revision 2, dated March 5, 2001, that introduces an improved design LP compressor location bearing assembly. We have also reviewed Service Bulletin (SB) No. RB.211-72-9446, dated October 15, 1993, that introduces an improved design IP compressor location bearing, IP compressor bearing support housing, IP compressor rear stub shaft, LP compressor location bearing support, oil transfer connector assembly, hydraulic oil seal housing, and hydraulic oil seal. MSB No. RB.211-72-

D021, Revision 2, dated March 5, 2001, requires that the improved design parts listed in SB RB.211-72-9446, dated October 15, 1993, be installed before or concurrently with the installation of the improved design LP compressor location bearing assembly listed in SB RB.211-72-D021. The Civil Aviation Authority (CAA), which is the airworthiness authority for the U.K., classified MSB No. RB.211-72-D021 as mandatory and issued AD 001-12-2000, dated December 5, 2000, in order to assure the airworthiness of these RR RB211-524C2-19 and RB211-524C2-B-19 series turbofan engines in the U.K.

FAA's Determination and Requirements of This AD

Although none of these affected engine models are used on any airplanes that are registered in the United States, the possibility exists that the engine models could be used on airplanes that are registered in the United States in the future. Since an unsafe condition has been identified that is likely to exist or develop on other RR RB211-524C2-19 and RB211-524C2-B-19 series turbofan engines of the same type design, this AD is being issued to prevent LP compressor failure and uncontained disc failures, resulting in damage to the airplane. This AD requires replacing the LP compressor location bearing assembly, IP compressor location bearing, IP compressor bearing support housing, IP compressor rear stub shaft, LP compressor location bearing support, oil transfer connector assembly, hydraulic oil seal housing, and hydraulic oil seal with improved design parts.

Bilateral Airworthiness Agreement

These engine models are manufactured in the U.K. and is type certificated for operation in the United States under the provisions of § 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, the CAA has kept the FAA informed of the situation described above. The FAA has examined the findings of the CAA, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.