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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2003-NE-36-AD; Amendment 39-13346; AD 2003-21-11]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc RB211-524 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 certain Rolls-Royce plc (RR) RB211-524 series turbofan engines. This AD requires replacing the dedicated generator rotor assembly, the adaptor casing on the high speed gearbox (HSGB), and bearings with new design parts on certain engines. This AD is prompted by several reports of dedicated generator rotor assembly bearing failures. We are issuing this AD to prevent possible uncommanded engine acceleration with no reaction to throttle movement, which could result in uncontrollable asymmetric engine thrust levels during takeoff or climb.

DATES: Effective November 10, 2003. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of November 10, 2003.

We must receive any comments on this AD by December 23, 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-

36-AD, 12 New England Executive Park, Burlington, MA 01803-5299.

- By fax: (781) 238-7055.
- By e-mail: 9-ane-adcomment@faa.gov.

You can get the service information referenced in this AD from Rolls-Royce plc, P.O. Box 31, Derby, England, DE248BJ; telephone: 011-44-1332-242424; fax: 011-44-1332-245418.

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. You may examine the service information, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT:

James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine And Propeller Directorate, 12 New England Executive Park; Burlington, MA 01803-5299; telephone (781) 238-7176; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: The Civil Aviation Authority (CAA), which is the airworthiness authority for the United Kingdom (U.K.), recently notified the FAA that an unsafe condition may exist on certain RR RB211-524 series turbofan engines. The CAA advises that a number of dedicated generator rotor assembly bearing failures have occurred due to low fatigue life of the bearing material and inadequate bearing lubrication. Bearing failure can lead to an erratic high pressure (HP) shaft speed signal sent to the Full Authority Fuel Controller (FAFC). This erratic signal can cause possible uncommanded engine acceleration with no reaction to throttle movement, which could result in uncontrollable asymmetric engine thrust levels during takeoff or climb.

Relevant Service Information

We have reviewed and approved the technical contents of RR Mandatory Service Bulletin (MSB) No. RB.211-72-E037, dated March 26, 2003, that describes procedures for replacing the dedicated generator adaptor casing, and the rotor assembly bearings with new design parts. The CAA classified RR MSB No. RB.211-72-E037 as mandatory and issued AD 004-03-2003, dated March 26, 2003, in order to ensure the

airworthiness of these RR engines in the U.K.

FAA's Determination and Requirements of this AD

Although no airplanes that are registered in the United States use these engines, the possibility exists that the engines could be used on airplanes that are registered in the United States in the future. The unsafe condition described previously is likely to exist or develop on other RB211-524 series turbofan engines. We are issuing this AD to prevent possible uncommanded engine acceleration with no reaction to throttle movement, which could result in uncontrollable asymmetric engine thrust levels during takeoff or climb.

This AD requires replacing the dedicated generator rotor assembly, part number (P/N) UL39102, the adaptor casing P/N UL26756 or UL26729, on the high speed gearbox (HSGB), and bearings P/N UL21029 with new design parts on the following:

- RB211-524G2-19, RB211-524G3-19, and RB211-H2-19 turbofan engines with SNs before SN 13793.
- RB211-524H-36 turbofan engines with SNs before SN 13472.
- All SN RB211-524G2-T-19 turbofan engines.
- All SN RB211-524G3-T-19 turbofan engines.
- All SN RB211-524H2-T-19 turbofan engines.
- All SN RB211-524H-T-36 turbofan engines.

The actions must be done within 62 months after the effective date of the AD for RB211-524G2-19, RB211-524G2-T-19, RB211-524G3-19, RB211-524G3-T-19, RB211-524H2-19, RB211-524H2-T-19 engines, and within 16 months after the effective date of the AD for SN RB211-524H-36, RB211-524H-T-36 engines. You must use the service information described previously to perform the actions required by this AD.

Bilateral Airworthiness Agreement

This engine model is manufactured in the U.K. and is type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Under this bilateral airworthiness agreement, the CAA has kept the FAA informed of the situation described above. We have examined the findings of the CAA,