

pressure (LP) turbine nozzle vane case, the LP turbine bearing support exhaust case, and the support arm bracket assemblies. This AD is prompted by a report of an LP stage 4 blade failure at the blade shank, resulting in severe radial distortion of the rear flange of the LP turbine case and failure of a number of attaching bolts, resulting in enough flange separation to allow the release of high energy debris. We are issuing this AD to prevent possible uncontained LP turbine case failure and damage to the airplane.

**DATES:** Effective November 14, 2003. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of November 14, 2003.

We must receive any comments on this AD by December 29, 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-37-AD, 12 New England Executive Park, Burlington, MA 01803-5299.
- By fax: (781) 238-7055.
- By e-mail: [9-ane-adcomment@faa.gov](mailto: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; 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 RR RB211 Trent 768-60 engines with serial numbers (SNs) before SN 41056 and RB211 Trent 772-60 engines with SNs before SN 41056. The CAA advises that an LP turbine stage 4 blade failed during a development test. Examination

of the LP turbine case and attaching bolts, which had been subjected to the stage 4 blade failure at the shank, showed severe radial distortion of the rear flange and a number of bolts which had failed in shear or a combination of shear and tension. The initial distortion and flange separation occurred locally at the blade impact point and allowed debris to become trapped between the flanges. This debris then contacted with the remaining rotating blades resulting in enough flange separation to allow release of high-energy debris.

**Relevant Service Information**

We have reviewed and approved the technical contents of RR Mandatory Service Bulletin (MSB) No. RB.211-72-C224, Revision 4, dated April 12, 2002, that describes the procedures for reworking the LP turbine nozzle vane case, the LP turbine bearing support exhaust case, and the support arm bracket assemblies. The CAA classified this service bulletin as mandatory and issued AD 010-03-99, dated April 12, 2002, in order to ensure the airworthiness of these RR plc engines in the U.K.

**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, 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.

**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 RR Trent 768-60 and Trent 772-60 engines of the same type design. We are issuing this AD to prevent possible uncontained LP turbine case failure and damage to the airplane. This AD requires reworking the LP turbine nozzle vane case, the LP turbine bearing support exhaust case, and the support arm bracket assemblies. You must use the service information described

previously to perform the actions required by this AD.

**FAA's Determination of the Effective Date**

Since there are currently no domestic operators of this engine model, notice and opportunity for public comment before issuing this AD are unnecessary. Therefore, a situation exists that allows the immediate adoption of this regulation.

**Changes to 14 CFR Part 39—Effect on the AD**

On July 10, 2002, we issued a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs our AD system. This regulation now includes material that relates to special flight permits, alternative methods of compliance, and altered products. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

**Interim Action**

These actions are interim actions and we may take further rulemaking actions in the future.

**Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under **ADDRESSES**. Include "AD Docket No. 2003-NE-37-AD" in the subject line of your comments. If you want us to acknowledge receipt of your mailed comments, send us a self-addressed, stamped postcard with the docket number written on it; we will date-stamp your postcard and mail it back to you. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it. If a person contacts us verbally, and that contact relates to a substantive part of this AD, we will summarize the contact and place the summary in the docket. We will consider all comments received by the closing date and may amend the AD in light of those comments.

We are reviewing the writing style we currently use in regulatory documents. We are interested in your comments on whether the style of this document is clear, and your suggestions to improve the clarity of our communications with you. You may get more information about plain language at <http://>