

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 39**

[Docket No. 99-NE-59-AD; Amendment 39-11605; AD 2000-04-22]

RIN 2120-AA64

**Airworthiness Directives; Rolls-Royce plc 524 Series and Trent 768-60 and 772-60 Turbofan Engines**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** This amendment adopts a new airworthiness directive (AD) that is applicable to Rolls-Royce plc (RR) RB211-524G2-T-19; RB211-524G3-T-19; RB211-524H2-T-19; RB211 Trent 768-60; and RB211 Trent 772-60 turbofan engines. This AD requires the replacement of the joint bolt assemblies that secure the high-pressure compressor (HPC) to the high-pressure turbine (HPT) of the RB211-524 series and Trent 768 and 772 series turbofan engines. This amendment is prompted by six incidents of bolt failure, one of which resulted in a damaged stage 6 HPC disk following an impact with a separated bolt head. The actions specified in this AD are intended to prevent failure of the HPC-to-HPT joint bolt assemblies, which could result in a cracked stage 6 HPC disk, possible uncontained engine failure, and damage to the airplane.

**DATES:** Effective April 7, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of April 7, 2000.

Comments for inclusion in the Rules Docket must be received on or before May 8, 2000.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 99-NE-59-AD, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may also be sent via the Internet using the following address: "9-ane-adcomment@faa.gov." Comments sent via the Internet must contain the docket number in the subject line.

The service information referenced in this AD may be obtained from Rolls-Royce plc, PO Box 31, Derby, England; telephone: International Access Code 011, Country Code 44, 1332-249428, fax: International Access Code 011,

Country Code 44, 1332-249223. This information may be examined 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 (UK), recently notified the Federal Aviation Administration (FAA) that an unsafe condition may exist on Rolls-Royce plc (RR) RB211-524G2-T-19; RB211-524G3-T-19; RB211-524H2-T-19; and RB211 Trent 768-60 and 772-60 turbofan engines. The CAA advises that it has received six reports of failures of high-pressure compressor (HPC)-to-high-pressure turbine (HPT) joint bolt assemblies, part number (P/N) BLT5543. In one case, a bolt head separated from the rest of the bolt and was propelled toward the HPC stage 6 disk where it caused impact damage to the stage 6 disk. A crack could initiate from the damage and propagate to disk failure. The investigation by the CAA has revealed that material selection, INCO 909, contributed to the failure of the HPC-to-HPT joint bolt assemblies, P/N BLT5543. This condition, if not corrected, could result in failure of the HPC-to-HPT joint bolt assemblies, which could result in a cracked stage 6 HPC disk, possible uncontained engine failure, and damage to the airplane.

**Manufacturer's Service Information**

RR has issued mandatory service bulletin (SB) RB.211-72-C491, Revision 1, dated October 8, 1999, that specifies procedures for replacement of the INCO 909 HPC-to-HPT joint bolt assemblies, P/N BLT5543, with INCO 718 HPC-to-HPT joint bolt assemblies, P/N BLT5541, during the next normal overhaul when the module is sufficiently disassembled to allow access to the bolts, but no later than June 30, 2000. The CAA classified this service bulletin as mandatory and issued AD 004-10-99, dated October 8, 1999, in order to assure the airworthiness of these RR engines in the UK.

**Bilateral Airworthiness Agreement**

These engine models are manufactured in the UK and are 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. 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.

**Required Actions**

Since an unsafe condition has been identified that is likely to exist or develop on other engines of the same type design registered in the United States, this AD requires replacement of the INCO 909 HPC-to-HPT joint bolt assemblies, P/N BLT5543, with INCO 718 HPC-to-HPT joint bolt assemblies, P/N BLT5541, before further flight. The actions would be required to be accomplished in accordance with the SB described previously.

**Difference of Compliance Times Between the Manufacturer's Service Bulletin and This AD**

RR SB No. RB.211-72-C491, Revision 1, dated October 8, 1999, requires that the joint bolts be replaced before June 30, 2000. The FAA has determined that since none of these engines are currently in use in the United States, the AD may require that the joint bolts be replaced before further flight.

**Immediate Adoption**

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

**Comments Invited**

Although this action is in the form of a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption **ADDRESSES**. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that

supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 99-NE-59-AD." The postcard will be date stamped and returned to the commenter.

#### Regulatory Impact

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

The FAA has determined that this regulation is a nonsignificant regulation that may be issued immediately to correct an unsafe condition in engines, and is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves a nonsignificant regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption **ADDRESSES**.

#### List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the

Federal Aviation Regulations (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. Section 39.13 is amended by adding the following new airworthiness directive:

**2000-04-22 Rolls-Royce plc:** Amendment 39-11605. Docket 99-NE-59-AD.

**Applicability:** RB211-524G2-T-19; RB211-524G3-T-19; RB211-524H2-T-19; and RB211 Trent 768-60 and 772-60 turbofan engines installed on, but not limited to Airbus Industrie A330 series and The Boeing Co. 747 series airplanes.

**Note 1:** This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (b) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

**Compliance:** Required as indicated, unless accomplished previously.

To prevent failure of the HPC-to-HPT joint bolt assemblies, which could result in a cracked stage 6 HPC disk, possible uncontained engine failure, and damage to the airplane accomplish the following:

##### Replacement of HPC-to-HPT Joint Bolt Assemblies

(a) Replace INCO 909 HPC-to-HPT joint bolt assemblies, part number BLT5543, with INCO 718 HPC-to-HPT joint bolt assemblies, P/N BLT5541, before further flight, in accordance with the section 3.A., Accomplishment Instructions, of Rolls-Royce Mandatory service bulletin (SB) RB.211-72-C491, Revision 1, dated October 8, 1999.

##### Alternate Methods of Compliance

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

**Note 2:** Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

#### Special Flight Permits

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

#### Incorporation by Reference

(d) Perform the actions required by this AD in accordance with Rolls-Royce Mandatory SB RB.211-72-C491, Revision 1, dated October 8, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Rolls-Royce plc, PO Box 31, Derby, England; telephone: International Access Code 011, Country Code 44, 1332-249428, fax: International Access Code 011, Country Code 44, 1332-249223. Copies may be inspected 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.

(e) This amendment becomes effective on April 7, 2000.

Issued in Burlington, Massachusetts, on February 21, 2000.

**David A. Downey,**

*Assistant Manager, Engine and Propeller Directorate, Aircraft Certification Service.*

[FR Doc. 00-4929 Filed 3-7-00; 8:45 am]

**BILLING CODE 4910-13-U**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. 99-NE-34-AD; Amendment 39-11607; AD 2000-04-24]

**RIN 2120-AA64**

**Airworthiness Directives; Honeywell International (formerly AlliedSignal Inc.) 36-300(A), 36-280(B), and 36-280(D) Series Auxiliary Power Units**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

**SUMMARY:** This amendment adopts a new airworthiness directive (AD), applicable to Honeywell International (formerly AlliedSignal Inc.) 36-300(A), 36-280(B), and 36-280(D) series Auxiliary Power Units (APUs). This amendment requires installation of an external load compressor containment shield, or installation of a load compressor impeller with lower stress concentrations. This amendment is prompted by reports of load compressor impeller failures. The actions specified by this AD are intended to prevent an