

point a supplier or PAH may no longer perform work on its product under part 21, and when that work must be performed by an appropriately certificated person under part 43, part 91, part 145, or any of the operating rules of 14 CFR Subchapter G, Air Carriers and Operations for Compensation or Hire: Certification and Operations.

Part 21 applies to new products or parts that remain under the control of a PAH. Any work performed on those products or parts while under the control of the PAH's quality system is to be accomplished in accordance with that system. However, once the products or parts leave that quality system, any work performed would be in accordance with part 43.

Part 43 applies to: (1) Aircraft having a U.S. airworthiness certificate; (2) Foreign-registered civil aircraft used in common carriage of mail under the provisions of part 121, or 135 of this chapter; and (3) Airframe, aircraft engines, propellers, appliances, and component parts of such aircraft. This indicates that any work performed on an article before it meets the applicability requirements of part 43 would not have to be accomplished in accordance with part 43.

#### Discussion

In an effort to better define where the regulatory authority of part 21 ends and the regulatory authority of part 43 begins, the Aviation Rulemaking Advisory Committee (ARAC) for part 21 suggested incorporating new language into part 21 that would clarify a manufacturer's authority to maintain products and parts that do not meet part 43 applicability requirements, *i.e.*, new products and parts that have not yet left the PAH's quality system. This work would be done without the need for a repairman or mechanic certificate, and would not be considered to be maintenance as it pertains to part 43. Currently, aviation authorities such as Transport Canada and the Joint Aviation Authorities allow this. Rather than initiate a lengthy rule change to accommodate ARAC's recommendation, AFS and AIR are providing the following clarification:

Products or parts that leave a PAH or supplier (either foreign or domestic) and go to a PAH for incorporation into a higher level product/part (*e.g.*, fuel control unit incorporated into an engine; or an engine incorporated into an aircraft) for which that PAH controls the type design must have work performed in accordance with the higher level PAH's quality system

regardless of who performs the work. Conditions are as follows:

(1) The supplier or PAH working on the product or part must have the appropriate design data to ensure that the product or part continues to conform to its type design.

(2) The PAH incorporating the product or part must have an approved system in place (*e.g.*, quality control system, material review board, configuration control, etc.) that defines how work is performed and documented. If the product or part is worked on by the supplier, it must then be accepted through the PAH's quality system.

(3) If the PAH incorporating the product or part chooses to work on it, the work must be accomplished by authorized personnel who are familiar with the product's or part's complexities.

(4) If a product or part has moved through several suppliers or PAHs during its assembly, the PAH that is incorporating the product or part into its type design must determine which of those organizations is the appropriate one to work on the product or part based on the above conditions.

Products or parts that leave a PAH's quality system and are delivered to an airline, repair station, distributor, etc., are intended to be installed on a higher assembly that has already met the applicability requirements of part 43. Therefore, any maintenance, preventive maintenance, or alterations on such articles will be performed by persons authorized under part 43.

#### Summary

Effective April 6, 2003, products or parts that leave a PAH or supplier (either foreign or domestic) and go to a PAH for incorporation into a higher level product/part for which that PAH controls the type design must have work performed in accordance with the higher level PAH's quality system under part 21.

Products or parts shipped to airlines, repair stations, distributors, etc., after leaving a PAH's approved quality system must be maintained in accordance with part 43. Any used products or parts returned to the manufacturer must be maintained in accordance with part 43 under the provisions of the new § 145.61. Any used products or parts installed on new production aircraft must have been maintained in accordance with part 43 prior to their installation. As noted in Notice Number 99-09, the FAA will give full consideration to the part 21 quality control system established by the manufacturer when it applies for the

§ 145.61, Limited rating under new § 145.51, Application for certificate.

Issued in Washington, DC on February 25, 2003.

**Frank P. Paskiewicz,**

*Manager, Production and Airworthiness Division, AIR-200.*

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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. 2000-NM-369-AD]

RIN 2120-AA64

#### **Airworthiness Directives; Lockheed Martin Models L-1011 Airplanes and Rolls-Royce plc RB211 Series Turbofan Engines**

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

**ACTION:** Notice of proposed rulemaking (NPRM).

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**SUMMARY:** The Federal Aviation Administration (FAA) proposes to supersede an existing airworthiness directive (AD) that is applicable to Lockheed Martin L-1011-385 series airplanes. That AD currently requires modifications of the engine turbine cooling air panel at the flight engineer/second officer's console, pilot's caution and warning light panel on the main instrument panel, and installation of an engine turbine air temperature monitoring system. This proposal would require the same modifications. In addition, this proposal would add Lockheed Martin L-1011-385 series airplanes with RB211-22B-02 series engines to the applicability, would require installation of a revised engine front bearing housing assembly, installation of a revised speed probe loom electrical support assembly, and installation of a low pressure (LP) compressor shaft extreme axial movement detector system. Also, this proposal would require additional modifications to the engine turbine cooling air panel at the flight engineer/second officer's console, pilot's caution and warning light panel on the main instrument panel. This proposal is prompted by reports of an undetected fire breaching the high speed gearbox (HSGB) case on certain Rolls-Royce engines installed on in-service airplanes due to lack of an internal fire detection system within the HSGB. In addition, this proposal is prompted by an undetected LP compressor shaft location

bearing failure, and the discovery of possible fatigue failure of the speed probe loom electrical support assembly. The actions specified by the proposed AD are intended to prevent undetected fires originating within the HSGB from breaching the HSGB case, which could result in engine damage and increased difficulty in extinguishing a fire, and to prevent undetected LP compressor shaft location bearing failure, which could result in LP compressor and turbine shaft assembly failure, turbine overspeed, and possible uncontained engine failure.

**DATES:** Comments must be received by May 12, 2003.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2000-NM-369-AD, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may be inspected at this location, by appointment, between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. 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 the proposed rule may be obtained from Rolls-Royce plc, P.O. Box 31, Derby, England, DE248BJ; telephone: 011-44-1332-242-424; fax: 011-44-1332-245-418 and Lockheed Martin & Logistics Center, 120 Orion Street, Greenville, South Carolina 29605. This information may be examined, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

**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, and Robert A. Bosak, Aerospace Engineer, Atlanta Aircraft Certification Office, One Crown Center, Suite 475, 1895 Phoenix Blvd., Atlanta, GA 39348, telephone: (770) 703-6094, fax: (770) 703-6097.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

Interested persons are invited to participate in the making of the proposed 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 above. All

communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this action may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed 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 summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this action must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2000-NM-369-AD." The postcard will be date stamped and returned to the commenter.

**Availability of NPRM's**

Any person may obtain a copy of this NPRM by submitting a request to the FAA, New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2000-NM-369-AD, 12 New England Executive Park, Burlington, MA 01803-5299.

**Discussion**

On August 15, 2001, the FAA issued airworthiness directive (AD) 2000-17-10 R1, Amendment 39-12378 (66 FR 44030 August 22, 2001), to require modifications of the engine turbine cooling air panel at the flight engineer/second officer's console, pilot's caution and warning light panel on the main instrument panel, and installation of an engine turbine air temperature monitoring system. That action was prompted by reports of an undetected fire breaching the HSGB case on certain Rolls-Royce engines installed on in-service airplanes due to lack of an internal fire detection system within the HSGB. That condition, if not corrected, could result in engine damage and increased difficulty in extinguishing a fire.

Since that AD was issued, it has been determined that Lockheed Martin L-1011-385 series airplanes with RB211-22B-02 series engines need to be added to the applicability. Also since that AD was issued, the Civil Aviation Authority (CAA), which is the airworthiness authority for the United Kingdom (U.K.), notified the FAA that other unsafe conditions may exist on Rolls-

Royce plc RB211-22B-02, RB211-524B-02, RB211-524B-B-02, RB211-524B3-02, RB211-524B4-02, and RB211-524B4-D-02 series turbofan engines which are installed in Lockheed Martin models L-1011-385-1, L-1011-385-1-14, L-1011-385-1-15, and L-1011-385-3 airplanes. The CAA has reported that recently an event occurred in which the continued operation of an engine with an undetected failure of the LP compressor shaft location bearing, resulted in failure of the LP compressor and turbine shaft assembly and severe secondary engine damage. The manufacturer states that the method used to detect pending failure of the LP compressor shaft location bearing is to monitor the LP vibration level on an indicator in the cockpit. This method has proved ineffective.

This proposal contains actions that would be required for these Rolls-Royce engines and the airplanes on which the engines are installed. Those actions must be done so that the installation of the engine turbine air temperature monitoring system and installation of the LP compressor shaft extreme axial movement detector system are complete. Without complete monitor and detector systems, engine damage and increased difficulty in extinguishing a fire could occur, and failures of the LP compressor shaft location bearing would continue undetected. These actions have been coordinated with the Atlanta Aircraft Certification Office and the Transport Airplane Directorate. All parties agree that a single AD addressing these unsafe conditions and the complete modifications to address these unsafe conditions should be issued from the Engine and Propeller Directorate.

**Manufacturer's Service Information**

Rolls-Royce plc has issued Mandatory Service Bulletins (MSB) RB.211-72-C863, dated February 15, 2002, applicable to RB211-22B-02 engines and MSB RB.211-72-C963, dated December 4, 2001, applicable to RB211-524B-02, RB211-524B-B-02, RB211-524B3-02, RB211-524B4-02, and RB211-524B4-D-02 engines, that specify installation of an LP compressor shaft extreme axial movement detector system. These MSB's require compliance with five other service bulletins (SB's) concurrently or before accomplishing the applicable MSB. This proposal would require compliance with the latest revisions of these SB's, as listed in this proposal. The SB's are as follows:

- RR SB RB.211-72-6149, Revision 9, dated November 24, 1999, which introduces a new design engine front

bearing housing assembly containing changes to the intermediate pressure (IP) and LP speed probe terminal block positions to prevent oil leakage.

- RR SB RB.211-72-C178, Revision 1, dated March 9, 2001, which introduces a revised engine gearbox breather duct assembly that provides mounting locations for overheat detectors.

- RR SB RB.211-77-C144, Revision 1, dated February 13, 2002, which introduces overheat detectors mounted in the engine gearbox breather duct assembly, to provide detection of temperature increase in the gearbox breather air flow, and early detection of fires originating in the gearbox.

- RR MSB RB.211-71-E047, dated August 2, 2002, which introduces a revised speed probe loom electrical support assembly, located on the engine front bearing housing assembly.

- Lockheed Martin SB 093-77-059, Revision 2, dated April 11, 2002, which introduces modifications to the airplane instrument panels and consoles, necessary for compatibility with the installation of the engine turbine air temperature monitoring system.

- Lockheed Martin SB 093-77-060, dated April 11, 2002, which introduces modifications to the airplane instrument panels and consoles, necessary for compatibility with the installation of engine failure indicators and LP compressor shaft extreme axial movement detector indicators.

These modifications would be mandated by this proposal. The CAA classified MSB RB.211-72-C863, MSB RB.211-72-C963, and MSB RB.211-71-E047 as mandatory and issued AD 006-02-2002, dated February 15, 2002, AD 006-12-2001, dated December 4, 2001, and AD 003-08-2002, dated August 2, 2002 respectively, in order to assure the airworthiness of these engines in the U.K.

#### Differences Between This AD and the Manufacturer's Service Information

Although Mandatory Service Bulletins RB.211-72-C863 and RB.211-72-C963 specify a fixed date for compliance for RB211-22B-02, RB211-524B-02, RB211-524B-B-02, RB211-524B3-02, RB211-524B4-02 and RB211-524B4-D-02 engines, the FAA requires the compliance to be done within a specified time span such as months or years from the effective date of the AD.

#### Bilateral Agreement Information

These engine models are manufactured in the U.K. and are 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.

#### Proposed Requirements of This AD

Since an unsafe condition has been identified that is likely to exist or develop on other Lockheed Martin models L-1011-385-1, L-1011-385-1-14, L-1011-385-1-15, and L-1011-385-3 airplanes and Rolls-Royce plc RB211-22B-02, RB211-524B-02, RB211-524B-B-02, RB211-524B3-02, RB211-524B4-02, and RB211-524B4-D-02 series turbofan engines of the same type design that are used on airplanes registered in the United States, the proposed AD would require:

- Modifications of the engine turbine cooling air panel at the flight engineer/second officer's console, pilot's caution and warning light panel on the main instrument panel.
- Installation of an engine turbine air temperature monitoring system.
- Installation of a revised engine front bearing housing assembly.
- Installation of speed probe loom electrical support assembly part number (P/N) FW15212, if applicable.
- Installation of an LP compressor shaft extreme axial movement detector system.

The actions would be required to be done in accordance with the MSB's and SB's described previously.

#### Economic Analysis

There are approximately 492 engines and 164 airplanes of the affected design in the worldwide fleet. The FAA estimates that 270 engines installed on 90 airplanes of U.S. registry would be affected by this proposed AD. The FAA estimates that it would take approximately 40 work hours per engine to accomplish the proposed actions, and that the average labor rate is \$60 per work hour. Required parts would cost approximately \$58,956 per engine. The FAA estimates that it would cost approximately \$37,920 per airplane to do the airframe panel modifications. In addition, one airplane of U.S. registry would require speed probe loom electrical support assemblies P/N FW15212 installed on all three engines, at an estimated cost of \$588 per engine. Based on these figures, the total cost of the proposed AD to U.S. operators is estimated to be \$19,980,684.

#### Regulatory Analysis

This proposed rule does not have federalism implications, as defined in Executive Order 13132, because it would 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. Accordingly, the FAA has not consulted with state authorities prior to publication of this proposed rule.

For the reasons discussed above, I certify that this proposed regulation (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the draft regulatory evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption

#### ADDRESSES.

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

Air transportation, Aircraft, Aviation safety, Safety.

#### The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 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 removing Amendment 39-12378, 66 FR 44030 August 22, 2001), and by adding a new airworthiness directive:

**Lockheed Martin and Rolls-Royce plc:**  
Docket No. 2000-369-AD.

*Applicability:* This airworthiness directive (AD) is applicable to Lockheed Martin models L-1011-385-1, L-1011-385-1-14, L-1011-385-1-15, and L-1011-385-3 airplanes and Rolls-Royce plc (RR) RB211-22B-02, RB211-524B-02, RB211-524B-B-02, RB211-524B3-02, RB211-524B4-02, and RB211-524B4-D-02 series turbofan engines.

**Note 1:** This airworthiness directive (AD) applies to each airplane and 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 airplanes and 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 (e) 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:** Compliance with this AD is required as indicated, unless already done.

To prevent undetected fires originating within the high speed gearbox (HSGB) from breaching the HSGB case, which could result in engine damage and increased difficulty in extinguishing a fire, and to prevent undetected low pressure (LP) compressor shaft location bearing failure, which could result in LP compressor and turbine shaft assembly failure, turbine overspeed, and possible uncontained engine failure, do the following:

#### Requirements for All Applicable Airplanes and Engines

(a) Incorporate the following service bulletins concurrently or before accomplishing the requirements of RR Mandatory Service Bulletin (MSB) RB.211-72-C963, dated December 4, 2001, or RR MSB RB.211-72-C863, dated February 15, 2002, whichever is applicable, as specified in paragraphs (b) through (d) of this AD:

(1) Install a new design engine front bearing housing assembly in accordance with RR SB RB.211-72-6149, Revision 9, dated November 24, 1999.

(2) Modify airplane instrument panels and consoles, necessary for compatibility with the installation of the engine turbine air temperature monitoring system, in accordance with Lockheed Martin SB 093-77-059, Revision 2, dated April 11, 2002.

(3) Install a revised gearbox breather assembly in accordance with RR SB RB.211-72-C178, Revision 1, dated March 9, 2001.

(4) Install overheat detectors in the gearbox breather duct assembly, in accordance with RR SB RB.211-77-C144, Revision 1, dated February 13, 2002.

(5) Modify airplane instrument panels and consoles and install engine failure indicators and LP compressor shaft extreme axial movement detector indicators, in accordance with Lockheed Martin SB 093-77-060, dated April 11, 2002.

#### RB211-524B-02 and RB211-524B-B-02 Engines

(b) Within three months after the effective date of this AD, for RB211-524B-02 and RB211-524B-B-02 engines, do the following:

(1) Install an LP compressor shaft extreme axial movement detector system in accordance with RR Mandatory Service Bulletin (MSB) RB.211-72-C963, dated December 4, 2001.

(2) Replace existing speed probe loom electrical support assembly, located on the

engine front bearing housing assembly, with speed probe loom electrical support assembly P/N FW15212, in accordance with 3.A. Accomplishment Instructions of RR MSB RB.211-71-E047, dated August 2, 2002.

#### RB211-22B-02 Engines

(c) Within three years after the effective date of this AD, for RB211-22B-02 engines, install an LP compressor shaft extreme axial movement detector system in accordance with RR MSB RB.211-72-C863, dated February 15, 2002.

#### RB211-524B3-02, RB211-524B4-02, and RB211-524B4-D-02 Engines

(d) Within four years after the effective date of this AD, for RB211-524B3-02, RB211-524B4-02, and RB211-524B4-D-02 engines, install an LP compressor shaft extreme axial movement detector system in accordance with RR MSB RB.211-72-C963, dated December 4, 2001.

#### Alternative Methods of Compliance

(e) 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) for engines or Manager, Atlanta Aircraft Certification Office (ACO) for airplanes. Operators must submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO, or Manager, ACO.

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

#### Special Flight Permits

(f) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be done.

**Note 3:** The subject of this AD is addressed in CAA airworthiness directive AD 006-12-2001, AD 003-08-2002, and AD 006-02-2002.

Issued in Burlington, Massachusetts, on March 4, 2003.

**Jay J. Pardee,**

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

[FR Doc. 03-5582 Filed 3-10-03; 8:45 am]

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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. 2003-NE-03-AD]

RIN 2120-AA64

#### Airworthiness Directives; Rolls-Royce plc RB211 Trent 800 Series Turbofan Engines

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The Federal Aviation Administration (FAA) proposes to adopt a new airworthiness directive (AD) that is applicable to Rolls-Royce plc (RR) RB211 Trent 875, Trent 877, Trent 884, Trent 892, Trent 892B, and Trent 895 turbofan engines with high pressure (HP) compressor rotor rear stage 5 and 6 discs and cone shafts, part numbers (P/Ns) FK25230 and FK27899 installed. This proposal would require removal from service of these HP compressor rotor rear stage 5 and 6 discs and cone shafts, before reaching newly reduced life limits. This proposal is prompted by three reports of crack indications in the stage 5 and stage 6 blade loading slots, found during engine overhaul. The actions specified by the proposed AD are intended to prevent crack initiation and propagation leading to uncontained disc failure and damage to the airplane.

**DATES:** Comments must be received by May 12, 2003.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2003-NE-03-AD, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may be inspected at this location, by appointment, between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. 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.

**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:**