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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-20885; Directorate Identifier 2005-NM-050-AD; Amendment 39-14049; AD 2005-07-24]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 777-200 and -300 Series Airplanes Equipped With Rolls Royce Model RB211 TRENT 800 Engines

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Boeing Model 777-200 and -300 series airplanes. This AD requires inspecting the thrust reversers for damage of the insulation blankets, the inner wall, and the compression and drag link fittings; and repair if necessary. This AD also requires applying sealant to certain areas of the thrust reverser. This AD is prompted by two reports of thrust reverser failure; investigation revealed that the inner wall of the thrust reversers had collapsed from exposure to hot engine core compartment air. We are issuing this AD to prevent failure of a thrust reverser and adjacent components and their consequent separation from the airplane, which could result in a rejected takeoff (RTO) and cause asymmetric thrust and consequent loss of control of the airplane during reverse thrust operation. If an RTO does not occur, these separated components could cause structural damage to the airplane or damage to other airplanes and possible injury to people on the ground.

DATES: Effective April 26, 2005.

The incorporation by reference of certain publications listed in the AD is approved by the Director of the Federal Register as of April 26, 2005.

We must receive comments on this AD by June 10, 2005.

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

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
- Government-wide Rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street SW., Nassif Building, room PL-401, Washington, DC 20590.

- Fax: (202) 493-2251.
- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. For service information identified in this AD, contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207.

You can examine the contents of this AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, on the plaza level of the Nassif Building, Washington, DC. This docket number is FAA-2005-20885; the directorate identifier for this docket is 2005-NM-050-AD.

Examining the Dockets

You can examine the AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the DOT street address stated in the ADDRESSES section. Comments will be available in the AD docket shortly after the DMS receives them.

FOR FURTHER INFORMATION CONTACT: Margaret Langsted, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6500; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION: We have received two reports indicating failure of the thrust reversers during takeoff on certain Boeing Model 777-200 and -300 series airplanes. Investigation of both incidents revealed that the composite inner wall of the thrust reverser collapsed as a result of the migration of hot engine core compartment air underneath the insulation blankets, which overheated the composite structure. In the second incident, the outer sleeve of the primary nozzle had detached from the airplane and impacted an automobile on the ground, causing significant damage. Investigation of the first incident revealed that debris from the right engine had departed the airplane and was left on the runway. The flightcrew was not aware of the failure until arrival at the destination airport. Extensive damage was found to the inner wall of the thrust reverser, with large sections of the composite structure missing. Both failures occurred on airplanes that had each accumulated more than 6,000 total flight cycles. Subsequent inspection of the thrust reversers on airplanes that had accumulated between 6,000 and 9,000 total flight cycles indicated areas of delamination and annealed compression pads of the inner wall. The cause of the delamination is exposure to hot engine core compartment air, which can also cause thermal damage to the compression and drag link fittings. These conditions, if not corrected, could result in a rejected takeoff (RTO) and cause asymmetric thrust and consequent loss of control of the airplane during reverse thrust operation. If an RTO does not occur, these separated components could cause structural damage to the airplane or damage to other airplanes and possible injury to people on the ground.

Relevant Service Information

We have reviewed Boeing Alert Service Bulletin 777-78A0059, dated February 24, 2005. The service bulletin describes procedures for one-time detailed and special detailed inspections of the thrust reversers, as applicable, for damage of the insulation blankets, inner wall, and compression and drag link fittings; and repair if necessary. The compliance times for the inspections range from 3 months to 24 months, depending on the number of total flight cycles on the airplane. The damage includes over-temperature conditions such as brown to blackened scorching and disbonding. The repair includes repair or replacement of any damaged insulation blankets with new blankets, and

replacement of any damaged fittings with new fittings. The service bulletin recommends reporting the inspection schedule and results to Boeing.

The service bulletin also recommends prior or concurrent accomplishment of Boeing Special Attention Service Bulletin 777-78-0060, dated February 24, 2005. That service bulletin describes procedures for applying sealant to the seams of the thrust reverser insulation blankets and around the HP3 ducts, and insulating and sealing the compression pad fittings.

Accomplishing the actions specified in the service information is intended to adequately address the unsafe condition.

FAA's Determination and Requirements of This AD

The unsafe condition described previously is likely to exist or develop on other airplanes of the same type design. Therefore, we are issuing this AD to prevent failure of a thrust reverser and adjacent components and their consequent separation from the airplane, which could result in a rejected takeoff (RTO) and cause asymmetric thrust and consequent loss of control of the airplane during reverse thrust operation. If an RTO does not occur, these separated components could cause structural damage to the airplane or damage to other airplanes and possible injury to people on the ground. This AD requires accomplishing the actions specified in the service information described previously, except as discussed under "Differences Between the AD and the Service Information."

Differences Between the AD and the Service Information

You should note that, although Boeing Alert Service Bulletin 777-78A0059 describes procedures for reporting information to the manufacturer, this AD will not require those actions. We do not need this information.

Boeing Alert Service Bulletin 777-78A0059 recommends prior or concurrent accomplishment of Boeing Special Attention Service Bulletin 777-78-0060; however, this AD requires accomplishment of that service bulletin immediately after each inspection to prevent further damage.

The service bulletins specify that you may contact the manufacturer for repair or replacement instructions, but this AD requires you to repair or replace in one of the following ways:

- Using a method that we approve; or
- Using data that meet the certification basis of the airplane that have been approved by an Authorized Representative for the Boeing Delegation Option Authorization Organization who has been authorized by the FAA to make those findings.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD; therefore, providing notice and opportunity for public comment before the AD is issued is impracticable, and good cause exists to make this AD effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements that affect flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any relevant written data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "Docket No. FAA-2005-20885; Directorate Identifier 2005-NM-050-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the AD. We will consider all comments received by the closing date and may amend the AD in light of those comments.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal

contact with FAA personnel concerning this AD. Using the search function of our docket Web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You can review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78), or you can visit <http://dms.dot.gov>.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in subtitle VII, part A, subpart III, section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD 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.

For the reasons discussed above, I certify that the 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. 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

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

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 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. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2005-07-24 Boeing: Amendment 39-14049. Docket No. FAA-2005-20885; Directorate Identifier 2005-NM-050-AD.

Effective Date

- (a) This AD becomes effective April 26, 2005.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Boeing Model 777-200 and -300 series airplanes; certificated in any category; equipped with Rolls Royce Model RB211 TRENT 800 engines; as identified in Boeing Alert Service Bulletin 777-78A0059, dated February 24, 2005.

Unsafe Condition

(d) This AD was prompted by two reports of thrust reverser failures; investigation revealed that the inner wall of the thrust reversers had collapsed from exposure to hot engine core compartment air. The FAA is issuing this AD to prevent failure of a thrust reverser and adjacent components and their consequent separation from the airplane, which could result in a rejected takeoff (RTO) and cause asymmetric thrust and consequent loss of control of the airplane during reverse thrust operation. If an RTO does not occur, these separated components could cause structural damage to the airplane or damage to other airplanes and possible injury to people on the ground.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Inspections

(f) Accomplish one-time detailed and special detailed inspections, as applicable, of the thrust reversers for damage of the insulation blankets, inner wall, and compression and drag link fittings, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-78A0059, dated February 24, 2005. Accomplish the inspection at the applicable compliance time specified in

paragraph 1.E. "Compliance" of the service bulletin; except, where the service bulletin specifies a compliance time relative to the date after the release of the service bulletin, this AD requires compliance relative to the effective date of this AD.

Repair/Replacement

(g) If any damage is found during any inspection required by this AD: Before further flight, do applicable repairs and replace damaged fittings with new fittings, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-78A0059, dated February 24, 2005. Where the service bulletin specifies to contact Boeing for appropriate action, before further flight, do applicable repairs and replace damaged fittings with new fittings in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or in accordance with data meeting the certification basis of the airplane approved by an Authorized Representative for the Boeing Delegation Option Authorization (DOA) Organization who the Manager, Seattle ACO, has authorized to make this finding. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.

Application of Sealant

(h) Before further flight after accomplishing the inspection and any applicable repair, as required by paragraphs (f) and (g) of this AD: Apply sealant to the seams of the thrust reverser insulation blankets and around the HP3 ducts, and insulate and seal the compression pad fittings, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-78-0060, dated February 24, 2005.

No Reporting

(i) Although Boeing Alert Service Bulletin 777-78A0059, dated February 24, 2005, specifies reporting certain information to Boeing, this AD does not require that action.

Alternative Methods of Compliance (AMOCs)

(j)(1) The Manager, Seattle ACO, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD, if it is approved by an Authorized Representative for the Boeing DOA Organization who has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane and the approval must specifically refer to this AD.

Material Incorporated by Reference

(k) You must use Boeing Alert Service Bulletin 777-78A0059, dated February 24, 2005; and Boeing Special Attention Service Bulletin 777-78-0060, dated February 24, 2005; as applicable; to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approves the incorporation by reference of these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To get copies of the service information, contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207. To view the AD docket go to the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, Nassif Building, Washington, DC. To review copies of the service information, go to

the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on March 31, 2005.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05-6903 Filed 4-8-05; 8:45 am]

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