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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2002-NM-318-AD; Amendment 39-13027; AD 2003-03-03]**

**RIN 2120-AA64**

### **Airworthiness Directives; Boeing Model 777 Series Airplanes Equipped With Rolls-Royce Model Trent 800 Series Engines**

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

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

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**SUMMARY:** This amendment adopts a new airworthiness directive (AD) that is applicable to certain Boeing Model 777 series airplanes. This action requires revising the Airplane Flight Manual to specify that the engine anti-ice must be "on" during all ground and flight operations when icing conditions exist or are anticipated. This action is necessary to prevent ingestion of ice that could cause shutdown of both engines during operation in icing conditions, and result in a forced landing of the airplane.

**DATES:** Effective February 12, 2003.

Comments for inclusion in the Rules Docket must be received on or before March 31, 2003.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2002-NM-318-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9 a.m. and 3 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: [9-anm-iarcomment@faa.gov](mailto:9-anm-iarcomment@faa.gov). Comments sent via fax or the Internet must contain "Docket No. 2002-NM-318-AD" in the subject line and need not be submitted in triplicate. Comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

The information pertaining to this AD may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington.

**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) 227-1335; fax (425) 227-1181.

**SUPPLEMENTARY INFORMATION:** The FAA has received a report of an engine surge and automatic shutdown on a Boeing Model 777 series airplane equipped with Rolls-Royce Trent 800 series engines, while in light icing conditions during descent. Investigation revealed that the airplane total air temperature (TAT) and the engine T2 probes were iced over. In addition, both engines were operating at minimum flight idle and the engine anti-ice systems had not activated. Boeing Model 777 series airplanes have a primary in-flight icing detection system (PIIDS) that senses icing conditions and automatically activates the engine and wing anti-ice systems, if the flight deck anti-ice switch is in the AUTO position (normal procedure). Activation of the engine anti-ice system sends hot air to the engine inlet lip to keep it free of ice buildup; raises the minimum allowable engine speed from "minimum flight idle" to "approach idle," which improves the engine operating characteristics; and turns on the engine igniters to facilitate relight if a flameout should occur. The investigation indicated that the PIIDS did not detect icing and activate the engine anti-ice system; the engine surge was the result of ice ingestion; and the engine did not automatically recover from the engine surge. Such ingestion of ice could cause shutdown of both engines during operation in icing conditions, and result in a forced landing of the airplane.

### **Explanation of the Requirements of the Rule**

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of the same type design, this AD is being issued to prevent ingestion of ice that could cause shutdown of both engines during operation in icing conditions, and result in a forced landing of the airplane. This AD requires revision of the Limitations Section of the Airplane Flight Manual (AFM) to remove certain procedures and to add certain other procedures that specify that engine anti-ice must be "on" during all ground and flight operations when icing conditions exist or are anticipated, except when the outside air temperature (OAT) is below -40 degrees Centigrade.

### **Interim Action**

This is considered to be interim action until final action is identified, at which time the FAA may consider further rulemaking.

### **Determination of Rule's Effective Date**

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

### **Comments Invited**

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, 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 shall 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.

Submit comments using the following format:

- Organize comments issue-by-issue. For example, discuss a request to change the compliance time and a request to change the service bulletin reference as two separate issues.

- For each issue, state what specific change to the AD is being requested.
- Include justification (e.g., reasons or data) for each request.

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 rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2002-NM-318-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 an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency 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, 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:

# 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"*

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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).

**2003-03-03 Boeing:** Amendment 39-13027. Docket 2002-NM-318-AD.

**Applicability:** Model 777-200 and -300 series airplanes, equipped with Rolls-Royce Model Trent 800 series engines; certificated in any category.

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

To prevent ingestion of ice that could cause shutdown of both engines during icing conditions, and result in a forced landing of the airplane; accomplish the following:

## **Airplane Flight Manual (AFM) Revision**

(a) Within 14 days after the effective date of this AD, revise the Limitations Section of the AFM per the following actions specified in paragraphs (a)(1) and (a)(2) of this AD (this may be accomplished by inserting a copy of this AD into the AFM):

(1) Remove the following wording from the Limitations Section of the AFM: "Engine anti-ice must be ON during all ground operations, and either ON or in AUTO during flight, when icing conditions exist or are anticipated, except when the temperature is below -40 degrees C OAT. The primary ice detection system (if operative) will automatically turn the engine anti-ice system on and off as required in response to ice detection signals (flight mode only). Do not use anti-ice if OAT or TAT exceeds 10 degrees C (50 degrees F)."

(2) Insert the following wording into the Limitations Section of the AFM: "Engine anti-ice must be ON during all ground and flight operations when icing conditions exist or are anticipated, except when the temperature is below -40 degrees C OAT. Do not use anti-ice if OAT or TAT exceeds 10 degrees C (50 degrees F)."

## **Alternative 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, Seattle Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

**Note:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

## **Special Flight Permits**

(c) 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 accomplished.

## **Effective Date**

(d) This amendment becomes effective on February 12, 2003.

Issued in Renton, Washington, on January 21, 2003.

Vi L. Lipski,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 03-1816 Filed 1-27-03; 8:45 am]

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