[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0114; Product Identifier 2017-NM-167-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for The Boeing Company Model 787 series airplanes powered by Rolls Royce Trent 1000 engines. This proposed AD was prompted by a report of failures of the inner fixed structure (IFS) forward upper fire seal and damage to thermal insulation blankets in the forward upper area of the thrust reverser (TR). This proposed AD would require an inspection to determine the part number of the IFS forward upper fire seal, and applicable on-condition actions. We are proposing this AD to address the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

• Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.

• Fax: 202-493-2251.

• Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

• Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet https://www.myboeingfleet.com. You may view this referenced service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2018-0114.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2018-0114; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Tak Kobayashi, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA; phone: 206-231-3553; email: Takahisha.Kobayashi@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2018-0114; Product Identifier 2017-NM-167-AD" at the

beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM because of those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We have received a report of IFS forward upper fire seal failures and damage to thermal insulation blankets in the forward upper area of the TR. Investigation revealed that the root cause of the failures is a scrubbing and pinching condition at the upper end cap of the IFS forward upper fire seal during TR closing. The failure of the IFS forward upper fire seal causes the loss of seal pressurization, which then allows fan bypass air to enter the engine core compartment. Fan bypass air entering the engine core compartment could degrade the ability to detect and extinguish an engine fire, resulting in an uncontrolled fire. Furthermore, fan bypass air entering the engine core compartment could cause damage to the TR insulation blanket, resulting in thermal damage to the TR inner wall, the subsequent release of engine exhaust components, and consequent damage to the critical areas of the airplane.

Related Service Information under 1 CFR part 51

We reviewed Boeing Alert Service Bulletin B787-81205-SB780033-00, Issue 001, dated November 1, 2017. This service information describes procedures for an inspection to determine the part number of the IFS forward upper fire seal and applicable on-condition actions. This service information is reasonably available because the

interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishment of the actions identified as "RC" (required for compliance) in the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB780033-00, Issue 001, dated November 1, 2017, described previously, except as discussed under "Differences Between this Proposed AD and the Service Information," and except for any differences identified as exceptions in the regulatory text of this proposed AD.

For information on the procedures and compliance times, see this service information at http://www.regulations.gov by searching for and locating Docket No. FAA-2018-0114.

Differences Between this Proposed AD and the Service Information

Boeing Alert Service Bulletin B787-81205-SB780033-00, Issue 001, dated November 1, 2017, addresses only Model 787-8 and 787-9 airplanes powered by Rolls Royce Trent 1000 engines (excluding the Rolls Royce Trent 1000-TEN engine, which was recently certified). IFS forward upper fire seals having part number (P/N) 725Z3171-127 or P/N 725Z3171-128 can be installed on all Rolls Royce Trent 1000 engines, including the recently certified Rolls Royce Trent 1000-TEN engine. To prevent the installation of a TR with an unsafe fire seal on a Model 787 airplane, this proposed AD would apply to all Model 787 series airplanes (including future Model 787-10) powered by Rolls Royce Trent 1000 engines (including the Rolls Royce Trent 1000-TEN engine).

Costs of Compliance

We estimate that this proposed AD affects 13 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	8 work-hours X $85 per hour = $680	$0	$680	$8,840

We estimate the following costs to do any necessary on-condition actions that would be required. We have no way of determining the number of aircraft that might need these on-condition actions:

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
8 work-hours X $85 per hour = $680 (fire seal replacement, 4 per airplane)	$4,532	$5,212

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.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

Regulatory Findings

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

For the reasons discussed above, I certify 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),

(3) Will not affect intrastate aviation in Alaska, and

(4) 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.

List of Subjects in 14 CFR Part 39

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

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

The Boeing Company: Docket No. FAA-2018-0114; Product Identifier 2017-NM-167-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 787 series airplanes, certificated in any category, powered by Rolls Royce Trent 1000 engines.

(d) Subject

Air Transport Association (ATA) of America Code 78, Engine Exhaust System.

(e) Unsafe Condition

This AD was prompted by reports of failures of the inner fixed structure (IFS) forward upper fire seal and damage to thermal insulation blankets in the forward upper area of the thrust reverser (TR). We are issuing this AD to prevent failure of the IFS forward upper fire seal, which causes the loss of seal pressurization and allows fan bypass air to enter the engine core compartment. Fan bypass air entering the engine core compartment could degrade the ability to detect and extinguish an engine fire, resulting in an uncontrolled fire. Furthermore, fan bypass air entering the engine core compartment could cause damage to the TR insulation blanket, resulting in thermal damage to the TR

inner wall, the subsequent release of engine exhaust components, and consequent damage to critical areas of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

For Model 787-8 and 787-9 series airplanes identified in Boeing Alert Service Bulletin B787-81205-SB780033-00, Issue 001, dated November 1, 2017 ("BASB B787-81205-SB780033-00, Issue 001"): Within 36 months after the effective date of this AD, do all applicable actions identified as "RC" (required for compliance) in, and in accordance with, the Accomplishment Instructions of BASB B787-81205-SB780033-00, Issue 001.

(h) Parts Installation Prohibition

For Model 787 series airplanes powered by Rolls Royce Trent 1000 engines, as of the effective date of this AD, no person may install a thrust reverser with an IFS forward upper fire seal having part number (P/N) 725Z3171-127 or P/N 725Z3171-128.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) For service information that contains steps that are labeled as RC, the provisions of paragraphs (i)(4)(i) and (i)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled "RC Exempt," then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(j) Related Information

(1) For more information about this AD, contact Tak Kobayashi, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA; phone: 206-231-3553; email: Takahisha.Kobayashi@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet https://www.myboeingfleet.com. You may view this referenced service information at the

FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued in Renton, Washington, on February 14, 2018.

Michael Kaszycki,
Acting Director,
System Oversight Division,
Aircraft Certification Service.
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