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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2003-NM-137-AD; Amendment 39-13304; AD 2003-19-02]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 777 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to certain Boeing Model 777 series airplanes. This action requires inspections of the outboard leading edge slats on the wings for installation of seal assemblies with undersized seal inserts and missing or gapped inserts, and follow-on and corrective actions if necessary. This action also provides for an optional replacement of the seal assembly in lieu of the inspections. This action is necessary to find and fix such discrepancies, which could result in cracking of the slats, subsequent separation of the cove skin, structural damage or loss of the trailing edge wedge, and consequent reduced controllability of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective October 8, 2003.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of October 8, 2003.

Comments for inclusion in the Rules Docket must be received on or before November 24, 2003.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2003-NM-137-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. Comments sent via fax or the Internet must contain "Docket No. 2003-NM-137-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 or 2000 or ASCII text.

The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Gary Oltman, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6443; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Related AD

This AD is related to AD 2002-11-06, amendment 39-12767 (67 FR 38587, June 5, 2002), applicable to certain Boeing Model 777 series airplanes. Boeing Alert Service Bulletin 777-57A0034, Revision 2, dated November 19, 1998; Revision 3, dated May 4, 2000; Revision 4, dated July 20, 2000; and Revision 5, dated January 25, 2001; were referenced as the appropriate sources of service information for accomplishment of the required actions. That AD supersedes AD 2000-19-08, amendment 39-11909 (65 FR 57282, September 22, 2000), to continue to require repetitive detailed visual inspections to detect cracking of the cove skin on the outboard leading edge slats, and corrective actions, if necessary. AD 2002-11-06 also continues to provide for an optional modification that significantly increases the repetitive inspection interval, and expands the applicability of AD 2000-19-08 by mandating the currently required inspections, and corrective actions, if necessary, for additional airplanes. Also, for airplanes on which the optional modification has been accomplished, AD 2002-11-06 requires a new one-time inspection for undersized (incorrect diameter) seal inserts installed in the spanwise bulb seals on certain slats, and replacement of seal assemblies with new assemblies if necessary.

Since the Issuance of That AD

Since the issuance of AD 2002-11-06, the FAA has received information from the manufacturer indicating that Group 4 airplanes may have seal assemblies on the outboard leading edge slats on the wings that were installed during production with undersized (incorrect diameter) inserts. In addition, those inserts may have receded into the ends of the seal assemblies.

We also have received reports of the installation of seal assemblies with missing and gapped inserts. These seal assemblies are installed on Model 777 series airplanes on which the seal insert installation was done per Revision 3, 4, 5, or 6 of the referenced service bulletin, and on which the seal inserts were installed during production. Investigation revealed that, during installation, the inserts were stretched and did not return to the original shape before being trimmed and bonded into place. Subsequently, the insert recedes into the ends of the seal assembly, and can become unbonded and detach from the seal assembly. Additionally, when the seal is stretched during installation, the insert can separate at a location along its length which allows the seal to recede from the center of the seal assembly. Such conditions, if not found and fixed, could result in cracking of the slats, subsequent separation of the cove skin, structural damage or loss of the trailing edge wedge, and consequent reduced controllability of the airplane.

Explanation of Relevant Service Information

We have reviewed and approved Boeing Alert Service Bulletin 777-57A0034, Revision 7, dated May 22, 2003, which describes procedures for inspections of the outboard leading edge slats on the wings for installation of seal assemblies with undersized (incorrect diameter) seal inserts and missing or gapped inserts, and follow-on and corrective actions if necessary. The applicable inspections and follow-on and corrective actions are specified in Part 5 and Part 6 of the Work Instructions of the service bulletin, described below:

Part 5–Seal Insert Diameter Inspection and Seal Replacement: Describes procedures for airplanes on which the seal insert installation has been done per Part 4 of the service bulletin. (Part 5 was added to Revision 6 of the referenced service bulletin for Groups 1 and 2 airplanes that had done Part 4 of the service bulletin referenced in the existing AD.) The procedures specify a one-time inspection of the seal assemblies for correct diameter seal inserts on slat numbers 4, 5, 10, and 11; if the correct diameter insert was installed and the insert has receded into the ends of the seal assembly, install an insert segment into the ends of the seal assembly; if incorrect diameter seal inserts are installed or the inspection was inconclusive, replace the seal assembly with a new seal assembly. If the correct diameter insert is installed and the insert has not receded into the ends of the seal assembly, no further action is specified for Part 5.

Part 6–Seal Insert Gap Inspection and Seal Assembly Replacement: Describes procedures for all airplanes on which the seal insert installation has been done. The procedures specify a one-time inspection of the seal assemblies for missing or gapped inserts.

If the assembly insert is not missing and no gaps are found, the procedures in the service bulletin recommend eventual replacement of the seal assembly with a new seal assembly as specified in Figure 8 of the service bulletin at the time specified in Figure 1 of the service bulletin, regardless of apparent condition.

If the seal assembly insert is missing or gaps are found, the procedures specify doing the following:

For airplanes on which the installation specified in Part 4 has been done: Do a cove skin inspection for cracking as specified in Part 1 of the service bulletin. If no cracking is found, repeat the inspection at the intervals specified. If any cracking is found, the procedures in the service bulletin specify the applicable actions as specified below:

- For any crack that is 1.5 inches in length or less, the follow-on actions include stop-drilling the cracking, doing an internal inspection for cracking as specified in Part 2 of the service bulletin, repairing any cracking found, doing a slat adjustment check, and repeating the cove skin and internal inspections at the intervals specified.
- For any crack that is more than 1.5 inches in length, the follow-on actions include doing an internal inspection for cracking as specified in Part 2 of the service bulletin, repairing any cracking found, doing a slat adjustment check, and repeating the cove skin and internal inspections at the intervals specified.
- As an alternative for all cracks: Replace the slat and do a slat adjustment check, then repeat the cove skin and internal inspections at the intervals specified.

If any cracking exceeds certain limits specified in the 777 Structural Repair Manual, or if internal cracking is found, the service bulletin specifies contacting the manufacturer for repair instructions.

For airplanes on which the seal insert installation was done during production, the procedures also include eventual replacement of the seal assembly with a new seal assembly as specified in Figure 8 of the service bulletin, at the time specified in Figure 1 of the service bulletin, regardless of apparent condition.

Accomplishment of the actions specified in the service bulletin is intended to adequately address the identified unsafe condition.

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 find and fix discrepancies of the seal assemblies of the outboard leading edge slats on the wings, which could result in cracking of the slats, subsequent separation of the cove skin, structural damage or loss of the trailing edge wedge, and consequent reduced controllability of the airplane. This AD requires inspections of the outboard leading edge slats on the wings for installation of seal assemblies with undersized (incorrect diameter) seal inserts and missing or gapped inserts, and follow-on and corrective actions if necessary. This AD also provides for an optional replacement of the seal assembly in lieu of the inspections. The actions are required to be accomplished in accordance with the service bulletin described previously, except as discussed below.

Interim Action

At this time we are considering a separate rulemaking action to supersede this AD to address the procedures for long-term follow-on inspections to find additional cracking, and repair of any cracking found, as described in the service bulletin. Due to the urgency of the need to inspect the fleet and repair any cracking found, this AD will address only the sections in the service bulletin that pertain to the inspections and follow-on and corrective actions specified in Part 5 and Part 6 of the service bulletin.

In addition to superseding this AD, that rulemaking action would also supersede AD 2002-11-06 to mandate replacement of the seal assemblies with new seal assemblies for all 777 series airplanes. However, the planned compliance time for these actions is sufficiently long so that prior notice and time for public comment will be practicable.

Differences Between This AD and the Service Bulletin

The service bulletin specifies that the manufacturer may be contacted for disposition of certain repair conditions; however, this AD requires the repair of those conditions to be accomplished per a method approved by the FAA, or per data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle Aircraft Certification Office, to make such findings.

Clarification of Part Numbers for Installation

Boeing Alert Service Bulletin 777-57A0034, Revision 7, dated May 22, 2003, contains certain incorrectly identified part numbers (P/N) in the "Existing Part Number" and "New Part Number" columns of the table under Appendix A, rows 20 and 27 of page 79, and rows 8 and 10 of page 80; respectively. We have been advised that the manufacturer will issue a revision to this alert service bulletin to correct the error. The part numbers are corrected in the tables below:

TABLE: PART NUMBERS

Existing P/N	Name	Correct P/N
114W4140-21	Slat Assy—No. 11.	114W4140-22
114W4705-42	Seal	114W4705-41

TABLE: PART NUMBERS

New P/N	Name	Correct P/N
114W4150-23	Slat Assy—No. 5.	114W4150-29
114W4150-24	Slat Assy—No. 10.	114W4150-30

Changes to 14 CFR Part 39/Effect on the AD

On July 10, 2002, the FAA issued a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's airworthiness directives system. The regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. Because we have now included this material in part 39, we no longer need to include it in each individual AD; however, this AD identifies the office authorized to approve alternative methods of compliance.

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 2003-NM-137-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, 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:

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).

2003-19-02 Boeing: Amendment 39-13304. Docket 2003-NM-137-AD.

Applicability: Model 777 series airplanes, line numbers 1 through 412 inclusive, certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent cracking of the leading edge outboard slats, which could result in separation of the cove skin, structural damage or loss of the trailing edge wedge, and consequent reduced controllability of the airplane, accomplish the following:

Inspections and Follow-On Actions

(a) For all airplanes: Within 90 days after the effective date of this AD; do a detailed inspection of the seal assemblies of the outboard leading edge slats on the wings for missing or gapped inserts; then do the applicable follow-on actions by doing all the actions per paragraphs 1. through 7. of Part 6, "Seal Insert Gap Inspection and Seal Assembly Replacement," of the Work Instructions of Boeing Alert Service Bulletin 777-57A0034, Revision 7, dated May 22, 2003 (including replacing the seal assembly, doing a cove skin inspection for cracking, doing an internal inspection for cracking, doing a slat adjustment check, repeating the cove skin and internal inspections, replacing the slat and doing a slat adjustment check). Any applicable follow-on actions must be done at the applicable time specified in Figure 1, Sheets 12 through 15 inclusive, of the service bulletin.

Note 1: For the purposes of this AD, a detailed inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(b) For airplanes identified as "Group 4" in Boeing Alert Service Bulletin 777-57A0034, Revision 7, dated May 22, 2003: Within 500 flight cycles after the effective date of this AD; do a detailed inspection of the seal inserts of the seal assemblies of the outboard leading edge slats on the wings for undersized (incorrect diameter) seal inserts; do the applicable follow-on and corrective actions by doing all the actions per paragraphs 1. through 8. of Part 5, "Seal Insert Inspection and Seal Replacement," of the Work Instructions of the service bulletin. Any applicable follow-on actions must be done at the applicable time specified in Figure 1, Sheet 11, of the service bulletin.

Note 2: For airplanes identified as "Group 4" in Boeing Alert Service Bulletin 777-57A0034, Revision 7, dated May 22, 2003 (outboard slat numbers 4, 5, 10, and 11): If a seal insert has receded, when accomplishing paragraph (a) of this AD, operators should be careful not to install a repair segment prior to inspecting for an undersized diameter insert, as required by paragraph (b) of this AD.

Corrective Actions

(c) If any discrepancy is found during any inspection required by this AD: Before further flight, do all applicable corrective actions specified in Part 1, Part 2, Part 3, Part 5, and Part 6 of the Work Instructions of Boeing Alert Service Bulletin 777-57A0034, Revision 7, dated May 22, 2003. Do the applicable corrective actions per the service bulletin. If the service bulletin specifies to contact the manufacturer for appropriate action: Before further flight, repair per a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, or per data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle ACO, to make such findings.

Part Installation

(d) As of the effective date of this AD, no one may install a seal assembly with a part number listed in the "Existing Part Number" column of the table under Appendix A of Boeing Alert Service Bulletin 777-57A0034, Revision 7, dated May 22, 2003; on any airplane.

Clarification of Part Numbers for Installation

(e) Boeing Alert Service Bulletin 777-57A0034, Revision 7, dated May 22, 2003, contains certain incorrectly identified part numbers (P/N) in the "Existing Part Number" and "New Part Number" columns of the table under Appendix A, rows 20 and 27 of page 79, and rows 8 and 10 of page 80; respectively. This AD requires operators to remove/install parts having the correct part numbers, as specified in Tables 1 and 2 of this AD:

TABLE 1: PART NUMBERS

Existing P/N	Name	Correct P/N
114W4140-21	Slat Assy—No. 11.	114W4140-22
114W4705-42	Seal	114W4705-41

TABLE 2: PART NUMBERS

New P/N	Name	Correct P/N
114W4150-23	Slat Assy—No. 5.	114W4150-29
114W4150-24	Slat Assy—No. 10.	114W4150-30

Alternative Methods of Compliance

(f)(1) In accordance with 14 CFR 39.19, the Manager, Seattle ACO, is authorized to approve alternative methods of compliance for this AD.

(2) An AMOC that provides an acceptable level of safety may be used for a repair required by this AD, if it is approved by a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle ACO, to make such findings.

Incorporation by Reference

(g) Unless otherwise specified in this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin 777-57A0034, Revision 7, dated May 22, 2003. 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 Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(h) This amendment becomes effective on October 8, 2003.

Issued in Renton, Washington, on September 10, 2003.

Vi L. Lipski,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 03-23932 Filed 9-22-03; 8:45 am]

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