

[Federal Register: April 30, 2007 (Volume 72, Number 82)]  
[Rules and Regulations]  
[Page 21079-21083]  
From the Federal Register Online via GPO Access [wais.access.gpo.gov]  
[DOCID:fr30ap07-2]

---

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2006-23842; Directorate Identifier 2005-NM-145-AD; Amendment 39-15034; AD 2007-09-04]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Boeing Model 777-200, 777-300, and 777-300ER Series Airplanes**

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

**ACTION:** Final rule.

---

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Boeing Model 777-200, 777-300, and 777-300ER series airplanes. This AD requires repetitive inspections for discrepancies of the splined components that support the inboard end of the inboard trailing edge flap; related investigative, corrective, and other specified actions if necessary; a one-time modification of the inboard support of the inboard trailing edge flap by installing a new isolation strap and attachment hardware; and repetitive replacement of the torque tube assembly. For certain Boeing Model 777-200 series airplanes, this AD also specifies prior or concurrent accomplishment of one-time inspections of the flap seal panels for cracking and minimum clearances, and of the torque tubes for damage; and related investigative and corrective actions if necessary. This AD also provides a terminating action (modification of the inboard main flap) for the repetitive inspections. This AD results from reports of corrosion on the torque tube and closeout rib fittings that support the inboard end of the inboard trailing edge flap, as well as a structural reassessment of the torque tube joint that revealed the potential for premature fatigue cracking of the torque tube that would not be detected using reasonable inspection methods. We are issuing this AD to detect and correct corrosion or cracking of the torque tube and closeout rib fittings that support the inboard end of the inboard trailing edge flap. Cracking in these components could lead to a fracture, which could result in loss of the inboard trailing edge flap and consequent reduced controllability of the airplane.

**DATES:** This AD becomes effective June 4, 2007.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of June 4, 2007.

**ADDRESSES:** You may examine the 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., Nassif Building, Room PL-401, Washington, DC.

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for service information identified in this AD.

**FOR FURTHER INFORMATION CONTACT:** Gary Oltman, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6443; fax (425) 917-6590.

## **SUPPLEMENTARY INFORMATION:**

### **Examining the Docket**

You may 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 street address stated in the ADDRESSES section.

### **Discussion**

The FAA issued a supplemental notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to certain Boeing Model 777-200 and 777-300 series airplanes. That supplemental NPRM was published in the Federal Register on October 3, 2006 (71 FR 58314). That supplemental NPRM proposed to require repetitive inspections for discrepancies of the splined components that support the inboard end of the inboard trailing edge flap; related investigative, corrective, and other specified actions if necessary; a one-time modification of the inboard support of the inboard trailing edge flap by installing a new isolation strap and attachment hardware; and repetitive replacement of the torque tube assembly. That supplemental NPRM also specified prior or concurrent accomplishment, for certain Boeing Model 777-200 series airplanes, of one-time inspections of the flap seal panels for cracking and minimum clearances, and of the torque tubes for damage; and related investigative and corrective actions if necessary. That supplemental NPRM also provided a terminating action (modifying the inboard main flap) for the repetitive inspections.

### **Comments**

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

### **Support for the Supplemental NPRM**

Boeing, Continental Airlines, and United Airlines concur with the contents of the supplemental NPRM.

### **Request To Clarify Inspection Threshold**

United Airlines would like to know if the inspection threshold limits specified in paragraph (1)(2) of the supplemental NPRM should be applied from the airplane manufacture date or after the accomplishment of the torque tube assembly replacement done in accordance with paragraph (1)(1). The compliance times in the proposed rule are accomplished in accordance with the service bulletin, which requires the inspections to be accomplished at the times and intervals noted in the Boeing 777 Maintenance Planning Document (MPD). The MPD has inspection thresholds based on the time in service rather than the torque tube assembly replacement done in accordance with paragraph (1)(1) of the supplemental NPRM.

We agree that this threshold for inspection needs clarification. Therefore, we have added a clarification in the AD to permit the use of a threshold measured from the actions done in accordance with paragraph (l)(1) of this AD, rather than delivery of the airplane, as specified in paragraph (l)(2) of the AD. However, the conservative method of measuring the threshold from delivery of the airplane may still be used.

### **Request To Clarify Inspection Requirement**

Continental Airlines states that the supplemental NPRM seems to indicate that the initial inspection in paragraph (h) must be accomplished for the splined components before the modification done in accordance with Boeing Service Bulletin 777-57-0054, dated February 23, 2006, can be performed. Continental does not believe it is necessary to perform the initial inspection when the splined component will be replaced with new or improved parts per the modification. Continental believes that the AD should have a provision to allow upfront modification of the splined components without doing the inspections in accordance with Boeing Service Bulletin 777-57A0048, Revision 1, dated June 9, 2005.

We agree that it is not necessary in this circumstance to do the initial inspection. Replacing certain parts with new or improved parts in accordance with Boeing Service Bulletin 777-57-0054 terminates the inspections specified in Boeing Service Bulletin 777-57A0048, Revision 1. Therefore, we have clarified paragraphs (h) and (l)(1) of the AD to help avoid potential confusion and unnecessary inspection.

### **Requests Regarding Service Information**

The Modification and Replacement Parts Association (MARPA) requests that service documents essential to the accomplishment of the supplemental NPRM be (1) incorporated by reference into the regulatory document, and (2) published in the docket management system (DMS).

We infer that MARPA would like to have documents incorporated by reference during the NPRM phase of rulemaking. We do not agree that documents should be incorporated by reference during the NPRM phase of rulemaking. The Office of the Federal Register (OFR) requires that documents that are necessary to accomplish the requirements of the AD be incorporated by reference during the final rule phase of rulemaking. This final rule incorporates by reference the document necessary for the accomplishment of the actions required by this AD. Further, we point out that while documents that are incorporated by reference do become public information, they do not lose their copyright protection. For that reason, we advise the public to contact the manufacturer to obtain copies of the referenced service information.

In regard to the commenter's request to post service bulletins on the Department of Transportation's DMS, we are currently in the process of reviewing issues surrounding the posting of service bulletins on DMS as part of an AD docket. Once we have thoroughly examined all aspects of this issue and have made a final determination, we will consider whether our current practice needs to be revised. No change to the final rule is necessary in response to this comment.

### **Request To Reference Defective Parts Manufacturer Approval (PMA) Parts**

The same commenter also requests that the supplemental NPRM be modified to consider the possibility of defective PMA parts and permit the use of PMA parts that meet the "new and improved" criteria pursuant to existing laws and regulations and the issues set forth in the current proposed regulatory action.

We recognize the need for standardization of this issue and we are currently in the process of reviewing issues that address the use of PMAs in ADs at the national level. However, the Transport Airplane Directorate considers that to delay this particular AD action would be inappropriate, since we have determined that an unsafe condition exists and that replacement of certain parts must be

accomplished to ensure continued safety. Therefore, no change has been made to the AD in this regard.

## Conclusion

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

## Costs of Compliance

There are about 353 airplanes of the affected design in the worldwide fleet. The following table provides the estimated costs for U.S. operators to comply with this AD, at an average labor rate of \$80 per work hour.

**Estimated Costs**

<b>Action</b>	<b>Work hours</b>	<b>Parts</b>	<b>Cost per airplane</b>	<b>Number of U.S.-registered airplanes</b>	<b>Fleet cost</b>
Detailed inspection for discrepancies of the splined components	20	None	\$1,600, per inspection cycle	132	\$211,200, per inspection cycle
Modification (installing isolation strap and hardware)	Negligible	\$17,156	\$17,156	132	\$2,264,592
Replacement of torque tube assembly	Negligible <sup>1</sup>	\$24,230	\$24,230	132	\$3,198,360, per replacement cycle
Modification (terminating action)	32 to 36, depending on airplane configuration	\$145,659	\$148,219 to \$148,539	132	\$19,564,908 to \$19,607,148
Prior or concurrent inspection	1	None	\$80	Up to 132	As much as \$10,560

<sup>1</sup>Provided that the replacement is performed at the same time as a scheduled inspection.

## 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 this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866;
- (2) Is not a “significant rule” under 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 and placed it in the AD docket. 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 Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):



**2007-09-04 Boeing:** Amendment 39-15034. Docket No. FAA-2006-23842; Directorate Identifier 2005-NM-145-AD.

**Effective Date**

(a) This AD becomes effective June 4, 2007.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Boeing Model 777-200, -300, and -300ER series airplanes, certificated in any category; as identified in Boeing Service Bulletin 777-57-0054, dated February 23, 2006.

**Unsafe Condition**

(d) This AD results from reports of corrosion on the torque tube and closeout rib fittings that support the inboard end of the inboard trailing edge flap, as well as a structural reassessment of the torque tube joint that revealed the potential for premature fatigue cracking of the torque tube that would not be detected using reasonable inspection methods. We are issuing this AD to detect and correct corrosion or cracking of the torque tube and closeout rib fittings that support the inboard end of the inboard trailing edge flap. Cracking in these components could lead to a fracture, which could result in loss of the inboard trailing edge flap and consequent reduced controllability of the airplane.

**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.

**Service Bulletin Reference**

(f) The term “service bulletin,” as used in paragraphs (g), (h), (i), (j), and (k) of this AD, means Boeing Service Bulletin 777-57A0048, Revision 1, dated June 9, 2005.

(g) Where the service bulletin specifies a compliance time after the issuance of the service bulletin, this AD requires compliance within the specified compliance time after the effective date of this AD.

## **Initial Inspection**

(h) For all airplanes: Do a detailed inspection for any discrepancy of the splined components of the inboard trailing edge flap, in accordance with the Accomplishment Instructions of the service bulletin. The splined components of the inboard trailing edge flap include the torque tube, closeout rib fitting assembly, carrier beam pillow block fitting assembly, and drive crank support. Discrepancies of the torque tube and closeout rib fitting include light contact wear, corrosion pits, corrosion, cracking, or fracture. Discrepancies of the carrier beam pillow block fitting assembly and drive crank support consist of light contact wear and damage to the cadmium plating. Do the initial inspection at the applicable time specified in Table 7 under paragraph 1.E., "Compliance," of the service bulletin, except as provided by paragraph (g) of this AD. Doing the modification in paragraph (l)(1) of this AD terminates the inspection requirements of this paragraph.

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

## **No Discrepancy/Other Specified Actions**

(i) If no discrepancy is found during the inspection required by paragraph (h) of this AD, perform all applicable specified actions, including the modification to install a new isolation strap and attachment hardware, in accordance with the Accomplishment Instructions of the service bulletin. Then, repeat the inspection at the applicable time specified in Table 7 under paragraph 1.E., "Compliance," of the service bulletin. Doing the modification in paragraph (l)(1) of this AD terminates the repetitive inspection requirements of this paragraph.

## **Related Investigative/Corrective/Other Specified Actions and Repetitive Inspections**

(j) For any discrepancy found during any inspection required by paragraphs (h) and (i) of this AD: Before further flight, accomplish all applicable related investigative, corrective, and other specified actions, including the modification to install a new isolation strap and attachment hardware, in accordance with the Accomplishment Instructions of the service bulletin. Then, evaluate the spline rework to determine the appropriate repetitive interval, in accordance with the Accomplishment Instructions of the service bulletin. Thereafter, repeat the inspection at the applicable interval specified in Table 7 under paragraph 1.E., "Compliance," of the service bulletin. Doing the modification in paragraph (l)(1) of this AD terminates the repetitive inspection requirements of this paragraph.

## **Replacement of Torque Tube Assembly**

(k) For all airplanes: Replace the torque tube assembly with a new torque tube assembly, in accordance with the Accomplishment Instructions of the service bulletin. Do the initial replacement at the applicable compliance time specified in Notes (c) and (d), as applicable, of Table 7 in paragraph 1.E., "Compliance," of the service bulletin, except as provided by paragraph (g) of this AD. Repeat the replacement thereafter at the applicable interval specified in Notes (c) and (d), of Table 7 under paragraph 1.E., "Compliance," of the service bulletin. Doing the modification in paragraph (l)(1) of this AD terminates the repetitive replacement requirements of this paragraph.

## **Modification**

(l) For all airplanes: Within 60 months after the effective date of this AD, do the actions in paragraphs (l)(1) and (l)(2) of this AD.

(1) Modify the inboard main flap in accordance with the Accomplishment Instructions of Boeing Service Bulletin 777-57-0054, dated February 23, 2006. Doing this modification terminates the repetitive requirements of paragraphs (i), (j), and (k), of this AD; and inspection requirements of the splined components of the torque tube and the closeout rib fitting assemblies, as required by paragraph (h) of this AD.

(2) Revise the FAA-approved maintenance inspection program for performing periodic inspections and maintenance of the torque tube splined joints in accordance with the Accomplishment Instructions of Boeing Service Bulletin 777-57-0054, dated February 23, 2006. For the purpose of the inspections required by this paragraph, the inspection threshold may be measured from the installation of the modification required by paragraph (l)(1) of this AD.

## **Concurrent Requirement**

(m) For Boeing Model 777-200 series airplanes, as identified in Boeing Service Bulletin 777-27-0034, Revision 1, dated April 20, 2006: Prior to or concurrently with the actions in paragraph (l) of this AD, do a general visual inspection of the flap seal panels for cracking and minimum clearances, and a detailed inspection of the torque tubes for damage; and do all applicable related investigative and corrective actions before further flight. Do all actions in accordance with the Accomplishment Instructions of Boeing Service Bulletin 777-27-0034, Revision 1, dated April 20, 2006; except where the service bulletin specifies the corrective action of replacing the torque tube, the replacement must be done in accordance with the Accomplishment Instructions of Boeing Service Bulletin 777-57-0054, dated February 23, 2006.

Note 2: For the purposes of this AD, a general visual inspection is: “A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to ensure visual access to all surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked.”

## **Actions Done in Accordance With Previous Issues of Service Bulletins**

(n) Actions done before the effective date of this AD in accordance with Boeing Service Bulletin 777-27-0034, dated February 11, 1999; or Boeing Alert Service Bulletin 777-57A0048, dated September 9, 2004; are acceptable for compliance with the corresponding actions of this AD.

## **Alternative Methods of Compliance (AMOCs)**

(o)(1) The Manager, Seattle Aircraft Certification Office (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) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

(3) 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 Commercial Airplanes Delegation Option Authorization 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.

**Material Incorporated by Reference**

(p) You must use the service information specified in Table 1 of this AD to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for a copy of this service information. You may review copies at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at 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/cfr/ibr-locations.html>.

**Table 1 – Material Incorporated by Reference**

<b>Boeing Service Bulletin</b>	<b>Revision Level</b>	<b>Date</b>
777-27-0034	1	April 20, 2006
777-57-0054	Original	February 23, 2006
777-57A0048	1	June 9, 2005

Issued in Renton, Washington, on April 17, 2007.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E7-7853 Filed 4-27-07; 8:45 am]