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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2014-0575; Directorate Identifier 2014-NM-086-AD; Amendment 39-18181; AD 2015-12-07]**

**RIN 2120-AA64**

#### **Airworthiness Directives; The Boeing Company Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for all The Boeing Company Model 747-8F and 747-8 series airplanes. This AD was prompted by reports of delamination damage to leading edge (LE) variable camber krueger (VCK) flaps. This AD requires repetitive inspections to detect delamination damage of the lightning strike applique (LSA) on certain LE VCK flaps, and corrective actions if necessary. We are issuing this AD to detect and correct delamination damage to certain LE VCK flaps, which can reduce the lightning strike protection capability on certain LE VCK flaps and result in an uncommanded motion of the trailing edge flap system; such uncommanded flap motion, without shutdown of the trailing edge or leading edge flaps, could cause unexpected changes in lift, potentially resulting in asymmetric lift and loss of control of the airplane.

**DATES:** This AD is effective July 21, 2015.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of July 21, 2015.

**ADDRESSES:** For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA 2014-0575.

## **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-2014-0575; 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 AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Kelly McGuckin, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6490; fax: 425-917-6590; email: [kelly.mcguickin@faa.gov](mailto:kelly.mcguickin@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all The Boeing Company Model 747-8F and 747-8 series airplanes. The NPRM published in the Federal Register on August 26, 2014 (79 FR 50875). The NPRM was prompted by reports of delamination damage to LE VCK flaps. The NPRM proposed to require repetitive inspections to detect delamination damage of the LSA on the LE VCK flaps at positions 6 through 9 (left wing) and 18 through 21 (right wing), and corrective actions if necessary. We are issuing this AD to detect and correct delamination damage to certain LE VCK flaps, which can reduce the lightning strike protection capability on the LE VCK flaps and result in an uncommanded motion of the trailing edge flap system. Such uncommanded flap motion, without shutdown of the trailing edge or leading edge flaps, could cause unexpected changes in lift, potentially resulting in asymmetric lift and loss of control of the airplane.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (79 FR 50875, August 26, 2014) and the FAA's response to each comment.

### **Request To Revise Component Description**

Boeing requested that we revise the NPRM (79 FR 50875, August 26, 2014) to describe the affected LE flaps with lightning strike applique installed as the LE VCK flaps at positions 6 through 9 (left wing) and 18 through 21 (right wing). Boeing pointed out that only the affected flaps should be specified, instead of all LE VCK flaps.

We agree with the commenter's request. Not all LE VCK flaps are affected by the identified unsafe condition. We have revised the SUMMARY section of this final rule and paragraph (e) of this AD to specify "certain" LE VCK flaps. We have also revised the DISCUSSION section of this final rule and paragraph (g) of this AD to specify LE VCK flaps at position 6 through 9 (left wing) and 18 through 21 (right wing).

## Request To Correct Typographical Errors

Boeing requested that we revise the service bulletin title in the "Differences Between this Proposed AD and the Service Information" section and paragraphs (g) and (h) of the NPRM (79 FR 50875, August 26, 2014) from Boeing Alert Service Bulletin 747-57-2338, dated January 14, 2014; to Boeing Special Attention Service Bulletin 747-57-2338, dated January 14, 2014.

Boeing also requested that we revise "Original issue" in paragraph (h) of the NPRM (79 FR 50875, August 26, 2014) to "Original Issue."

We agree with the commenter's request to correct the identified typographical errors. We have revised paragraphs (g) and (h) of this AD accordingly. However, because the "Differences Between this Proposed AD and the Service Information" section is not repeated in the final rule, no change is necessary in this regard.

## Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (79 FR 50875, August 26, 2014) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (79 FR 50875, August 26, 2014).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

## Related Service Information Under 1 CFR Part 51

We reviewed Boeing Special Attention Service Bulletin 747-57-2338, dated January 14, 2014. The service information describes procedures for inspections to detect delamination damage of the LSA on the LE VCK flaps and corrective 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 of this AD.

## Costs of Compliance

We estimate that this AD affects 6 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated Costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	8 work-hours × \$85 per hour = \$680 per inspection cycle	\$0	\$680 per inspection cycle	\$4,080 per inspection cycle

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this AD.

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

## **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**

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),
- (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.

## **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):



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**2015-12-07 The Boeing Company:** Amendment 39-18181; Docket No. FAA-2014-0575; Directorate Identifier 2014-NM-086-AD.

**(a) Effective Date**

This AD is effective July 21, 2015.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all The Boeing Company Model 747-8F and 747-8 series airplanes, certificated in any category.

**(d) Subject**

Air Transport Association (ATA) of America Code 57, Wings.

**(e) Unsafe Condition**

This AD was prompted by reports of delamination damage to leading edge (LE) variable camber krueger (VCK) flaps. We are issuing this AD to detect and correct delamination damage to certain LE VCK flaps, which can reduce the lightning strike protection capability on certain LE VCK flaps and result in an uncommanded motion of the trailing edge flap system. Such uncommanded flap motion, without shutdown of the trailing edge or leading edge flaps, may cause unexpected changes in lift, potentially resulting in asymmetric lift and loss of control of the airplane.

**(f) Compliance**

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

**(g) Inspections and Corrective Actions**

Except as specified in paragraph (h) of this AD, at the applicable time specified in paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 747-57-2338, dated January 14, 2014: Do a general visual inspection to detect delamination damage of the lightning strike applique (LSA) on the LE VCK flaps at positions 6 through 9 (left wing) and 18 through 21 (right wing); and do all applicable corrective actions before further flight; in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-57-2338, dated January 14, 2014. Repeat the inspection of the LSA on the LE VCK flaps at positions 6 through 9 (left wing) and 18 through 21 (right wing) thereafter at the applicable intervals specified in paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 747-57-2338, dated January 14, 2014.

## **(h) Exception to Service Information**

Where Paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 747-57-2338, dated January 14, 2014, specifies a compliance time "after the Original Issue date of this service bulletin," this AD requires compliance within the specified compliance time after the effective date of this AD.

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

(1) The Manager, Seattle Aircraft Certification Office (ACO), 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 ACO, 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 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, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane.

## **(j) Related Information**

For more information about this AD, contact Kelly McGuckin, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6490; fax: 425-917-6590; email: kelly.mcguickin@faa.gov.

## **(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Special Attention Service Bulletin 747-57-2338, dated January 14, 2014.

(ii) Reserved.

(3) For Boeing service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>.

(4) You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference 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>.

Issued in Renton, Washington on June 3, 2015.

Jeffrey E. Duven,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.