



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2016-9112; Product Identifier 2016-NM-091-AD; Amendment 39-18982; AD 2017-16-05]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

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

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 737- 600, -700, -700C, -800, -900, and -900ER series airplanes. This AD was prompted by a report of a Krueger flap bullnose departing an airplane during taxi, which caused damage to the wing structure and thrust reverser. This AD requires a one-time detailed visual inspection for discrepancies in the Krueger flap bullnose attachment hardware, and related investigative and corrective actions, if necessary. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister 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 Staff, 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-2016-9112.

### **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-2016-9112; 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:** Alan Pohl, Aerospace Engineer, Airframe Section, FAA, Seattle Aircraft Certification Office (ACO) Branch, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6450; fax: 425-917-6590; email: [alan.pohl@faa.gov](mailto:alan.pohl@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 certain The Boeing Company Model 737- 600, -700, -700C, -800, -900, and -900ER series airplanes. The NPRM published in the Federal Register on September 29, 2016 (81 FR 66874) (“the NPRM”). The NPRM was prompted by a report of a Krueger flap bullnose departing an airplane during taxi, which caused damage to the wing structure and thrust reverser. The NPRM proposed to require a one-time detailed visual inspection for discrepancies in the Krueger flap bullnose

attachment hardware, and related investigative and corrective actions, if necessary. We are issuing this AD to detect and correct missing Krueger flap bullnose hardware. Such missing hardware could result in the Krueger flap bullnose departing the airplane during flight, which could damage empennage structure and lead to the inability to maintain continued safe flight and landing.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA's response to each comment.

### **Support for the NPRM**

Vincent Romano, a private citizen, and United Airlines (UAL), stated their support for the NPRM.

### **Effect of Winglets on Accomplishment of the Proposed Actions**

Aviation Partners Boeing stated that accomplishing the Supplemental Type Certificate (STC) ST00830SE does not affect the actions specified in the NPRM.

We concur with the commenter. We have redesignated paragraph (c) of the NPRM as paragraph (c)(1) and added paragraph (c)(2) to this AD to state that installation of STC ST00830SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST00830SE is installed, a "change in product" alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

### **Request to Reference the Latest Service Information**

All Nippon Airways (ANA), American Airlines (AAL), Boeing, Jet2.com, TUIfly GmbH (HAP), UAL, and Kennedy Juma, requested revising the NPRM to reference Boeing Alert Service Bulletin 737-57A1327, Revision 1, dated September 28, 2016. Some commenters pointed out that the original issue had some errors in the illustrations

and needed certain clarifications. ANA and Boeing also requested that we provide credit for accomplishing the original issue of the service information.

We agree that this final rule should reference the latest service information. Since we issued the NPRM, Boeing issued Boeing Alert Service Bulletin 737-57A1327, Revision 1, dated September 28, 2016. We have revised paragraphs (c)(1) (paragraph (c) of the proposed AD) and (g) of this AD to reference Boeing Alert Service Bulletin 737-57A1327, Revision 1, dated September 28, 2016, for accomplishment of the required actions. We have also revised this AD to provide credit for using Boeing Alert Service Bulletin 737-57A1327, dated May 20, 2016, to accomplish the required actions before the effective date of this AD.

#### **Request to Correct the Latest Service Information**

AAL requested that Boeing Alert Service Bulletin 737-57A1327, Revision 1, dated September 28, 2016, be corrected to address errors in Figures 1, 2, 3, and 4. AAL stated that these errors affect the depiction of how the clevis assembly, clevis, and bullnose hinge lug are attached to each other, and suggested that revising the figures to correct the errors would clarify which parts must be subject to the detailed inspection.

We acknowledge that Figures 1, 2, 3, and 4 of Boeing Alert Service Bulletin 737-57A1327, Revision 1, dated September 28, 2016, contain errors in the labeling of parts in the illustrations. However, the instructions in the tables in the figures correctly identify the parts and actions to be accomplished. Since the instructions are correct, the service bulletin adequately addresses the unsafe condition. We do not revise manufacturers' service information. However, Boeing might decide to revise Boeing Alert Service Bulletin 737-57A1327, Revision 1, dated September 28, 2016, to correct the errors. We have not changed the AD in this regard.

## **Request to Allow Alternate Replacement Procedure**

AAL and Southwest Airlines (SWA) requested that we revise the NPRM to provide an option to replace cracked or deformed bullnose hinge lugs or clevis assemblies with bullnose hinge lugs or clevis assemblies instead of replacement with a Krueger flap assembly, as specified in paragraph 3.B.2.a.(1)(a)1) of Boeing Alert Service Bulletin 737-57A1327, Revision 1, dated September 28, 2016. AAL suggested that the replacement option could be done using certain sections of a component maintenance manual (CMM). SWA suggested the use of Boeing production installation drawings. Both AAL and SWA also stated that replacing only the affected bullnose hinge lugs or clevis assemblies would also reduce the cost of repair or replacement. SWA also stated that there is a limited inventory of Krueger flap assemblies and that limited inventory, combined with a 6-month compliance time could significantly impair operators.

We understand that the suggested replacement option might reduce the burden on operators. However, we do not agree to revise this AD to include the suggested changes. The repairs provided by the suggested sections of the CMM address normal wear-and-tear, and these repairs may not be appropriate for addressing damage that might result from an improperly attached Krueger flap. Boeing informed us that there is no procedure in the CMM that would provide step-by-step instructions to remove only the bullnose other than by use of the drawing system. Engineering instructions would be needed to ensure that the remainder of the flap assembly is serviceable and not damaged in addition to the damaged bullnose hinge lugs or clevis assembly, and that level of instruction would be too much detail for an AD. However, once we issue this AD, any person may request approval of an AMOC under the provisions of paragraph (i) of this AD. We have not changed the AD 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 for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

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 Alert Service Bulletin 737-57A1327, Revision 1, dated September 28, 2016. The service information describes procedures for a one-time detailed visual inspection for discrepancies in the Krueger flap bullnose attachment hardware, and related investigative 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.

## **Costs of Compliance**

We estimate that this AD affects 1,495 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 of the Krueger flap bullnose hardware	3 work-hours X \$85 per hour = \$255	None	\$255	\$381,225

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 available 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.

This 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**

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):

**2017-16-05 The Boeing Company:** Amendment 39-18982; Docket No. FAA-2016-9112; Product Identifier 2016-NM-091-AD.

#### **(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

(1) This AD applies to The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 737-57A1327, Revision 1, dated September 28, 2016.

(2) Installation of Supplemental Type Certificate (STC) ST00830SE ([http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/354588EE63741A068625807D006726F6?OpenDocument&Highlight=st00830se](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/354588EE63741A068625807D006726F6?OpenDocument&Highlight=st00830se)) does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST00830SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by a report of a Krueger flap bullnose departing an airplane during taxi, which caused damage to the wing structure and thrust reverser. We are issuing this AD to detect and correct missing Krueger flap bullnose hardware. Such missing hardware could result in the Krueger flap bullnose departing the airplane during flight, which could damage empennage structure and lead to the inability to maintain continued safe flight and landing.

**(f) Compliance**

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

**(g) Inspection of the Krueger Flap Bullnose**

Within 6 months after the effective date of this AD, do a detailed inspection for discrepancies of the Krueger flap bullnose attachment hardware, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-57A1327, Revision 1, dated September 28, 2016. Do all applicable related investigative and corrective actions before further flight.

**(h) Credit for Previous Actions**

This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 737-57A1327, dated May 20, 2016.

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

(1) The Manager, Seattle Aircraft Certification Office (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 Required for Compliance (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 sub-step is labeled “RC Exempt,” then the RC requirement is removed from that step or sub-step. 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 Alan Pohl, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6450; fax: 425-917-6590; email: alan.pohl@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (k)(3) and (k)(4) of this AD.

**(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 Alert Service Bulletin 737-57A1327, Revision 1, dated September 28, 2016.

(ii) Reserved.

(3) For Boeing service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at FAA, Transport Standards Branch, 1601 Lind Ave 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 July 26, 2017.

Jeffrey E. Duven,  
Director,  
System Oversight Division,  
Aircraft Certification Service.

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