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 787-8 airplanes. This AD was prompted by numerous reports of failures of the proximity sensor within the slat skew detection mechanism assembly (DMA) leading to slats up landing events. This AD requires replacing the slat skew DMAs with new slat skew DMAs, and marking the existing identification plates on the slat with the new part number. We are issuing this AD to prevent failure of the proximity sensor, which could result in the slats being shut down and a slats up high speed landing. This condition, in combination with abnormal landing conditions such as a short runway or adverse weather conditions, could result in a runway excursion.

DATES: This AD is effective October 7, 2015.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 7, 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-2014-0777.

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-2014-0777; 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: Douglas Tsuji, Senior Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone: 425-917-6546; fax: 425-917-6590; email: douglas.tsuji@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 787-8 airplanes. The NPRM published in the Federal Register on November 28, 2014 (79 FR 70802). The NPRM was prompted by numerous reports of failures of the proximity sensor within the slat skew DMA leading to slats up landing events. The NPRM proposed to require replacing the slat skew DMAs with new slat skew DMAs, and marking the existing identification plates on the slat with the new part number. We are issuing this AD to prevent failure of the proximity sensor, which could result in the slats being shut down and a slats up high speed landing. This condition, in combination with abnormal landing conditions such as a short runway or adverse weather conditions, could result in a runway excursion.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (79 FR 70802, November 28, 2014) and the FAA's response to each comment.

Support for the NPRM (79 FR 70802, November 28, 2014)

United Airlines (UAL) stated that it supports the NPRM (79 FR 70802, November 28, 2014).

Requests To Correct the Location of the Part Numbers Affected

Boeing and UAL requested a correction of the location of the identified part numbers affected in paragraphs (h)(2) and (h)(3) of the proposed AD (79 FR 70802, November 28, 2014). UAL stated that the part numbers affected in paragraphs (h)(2) and (h)(3) of the proposed AD are the wing leading edge slat assemblies, not the DMA. Boeing also commented that the part numbers are for a complete slat assembly (structure with DMA installed) and not just the DMA.

We agree with the request. The intent of this AD is to prohibit installation of a defective slat skew DMA. Boeing Alert Service Bulletin B787-81205-SB270021-00, Issue 001, dated March 20, 2014, provides instructions to modify the existing slat assembly by replacing the defective slat skew DMA and then marking the existing slat assembly identification plate with a new part number. Therefore, we have revised paragraphs (h)(2) and (h)(3) of this AD to remove the text "slat skew DMA in" and just refer to the existing part numbers of the slat assembly, which contain the defective slat skew DMA.
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 70802, November 28, 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 70802, November 28, 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 Alert Service Bulletin B787-81205-SB270021-00, Issue 001, dated March 20, 2014. The service information describes procedures for replacing the slat skew DMAs with new slat skew DMAs, and marking the existing identification plates on the slat with the new part number. 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 15 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

<table>
<thead>
<tr>
<th>Action</th>
<th>Labor cost</th>
<th>Parts cost</th>
<th>Cost per product</th>
<th>Cost on U.S. operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement</td>
<td>11 work-hours X $85 per hour = $935</td>
<td>$0</td>
<td>$935</td>
<td>$14,025</td>
</tr>
</tbody>
</table>

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:

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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):
2015-17-24 The Boeing Company: Amendment 39-18257; Docket No. FAA-2014-0777; Directorate Identifier 2014-NM-088-AD.

(a) Effective Date

This AD is effective October 7, 2015.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 787-8 airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin B787-81205-SB270021-00, Issue 001, dated March 20, 2014.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight Controls.

(e) Unsafe Condition

This AD was prompted by numerous reports of failures of the proximity sensor within the slat skew detection mechanism assembly (DMA) leading to slats up landing events. We are issuing this AD to prevent failure of the proximity sensor, which could result in the slats being shut down and a slats up high speed landing. This condition, in combination with abnormal landing conditions such as a short runway or adverse weather conditions, could result in a runway excursion.

(f) Compliance

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

(g) Replacement

Within 24 months after the effective date of this AD: Replace the slat skew DMAs in slat number 5 and slat number 8 with new slat skew DMAs, and mark the existing identification plates on the slat with the new part number, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB270021-00, Issue 001, dated March 20, 2014.

(h) Parts Installation Prohibitions

(1) As of the effective date of this AD, no person may install a slat skew DMA, part number P683A0001-03, on any airplane.
(2) As of the effective date of this AD, no person may install on any airplane, a slat assembly number 5, having part number 145Z0201-11-8, 145Z0201-21-4, 145Z0201-21-3, 145Z0201-21-5, 145Z0201-21-8, 145Z0201-21-9, 145Z0201-31-1, or 145Z0201-33-1.

(3) As of the effective date of this AD, no person may install on any airplane, a slat assembly number 8, having part number 145Z0201-12-8, 145Z0201-22-4, 145Z0201-22-3, 145Z0201-22-5, 145Z0201-22-8, 145Z0201-22-9, 145Z0201-32-1, or 145Z0201-34-1.

(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) 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.

(j) Related Information

For more information about this AD, contact Douglas Tsuji, Senior Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone: 425-917-6546; fax: 425-917-6590; email: douglas.tsuji@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.

(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 August 21, 2015.

Kevin Hull,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.