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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-5038; Directorate Identifier 2016-NM-029-AD; Amendment 39-18455; AD 2016-07-10]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for all The Boeing Company Model 787-8 and 787-9 airplanes. This AD requires revising the airplane flight manual (AFM) to instruct the flightcrew to avoid abrupt flight control inputs in response to sudden drops in airspeed, and to reinforce the need to disconnect the autopilot before making any manual flight control inputs. This AD was prompted by reports indicating that in certain weather conditions with high moisture content or possible icing, erroneous low airspeed may be displayed to the flightcrew before detection and annunciation via engine-indicating and crew-alerting system (EICAS) messages. We are issuing this AD to ensure that the flightcrew avoids abrupt pilot control inputs in response to an unrealistic, sudden drop in displayed airspeed at high actual airspeed. Abrupt pilot control inputs in this condition could exceed the structural capability of the airplane.

DATES: This AD is effective April 14, 2016.

We must receive comments on this AD by May 16, 2016.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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-2016-5038; 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 street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Fnu Winarto, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6659; fax: 425-917-6590; email: fnu.winarto@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We have received three reports of in-service displayed airspeed anomalies on Model 787 airplanes. We continue to investigate this issue with Boeing; however, the anomalous behavior is consistent with significant water ingestion or simultaneous icing of two or three of the three pitot probes. During each of the reported events, the displayed airspeed rapidly dropped significantly below the actual airplane airspeed. In normal operations, the air data reference system supplies the same airspeed to both the captain and first officer primary flight displays. During one in-service event, with autopilot engaged, the pilot overrode the engaged autopilot in response to the displayed erroneous low airspeed and made significant nose-down manual control inputs. In this situation, there is the potential for large pilot control inputs at high actual airspeed, which could cause the airplane to exceed its structural capability.

FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

AD Requirements

This AD requires revising the AFM to add a "Non-normal Procedure" for "Airspeed Drop" that instructs the flightcrew to avoid abrupt flight control inputs, and reinforces the need to disconnect the autopilot prior to making any manual flight control inputs.

Interim Action

We consider this AD interim action. The airplane manufacturer is currently developing modifications to the display and crew alerting system, flight control system, and air data system that will address the unsafe condition identified in this AD. Once these modifications are developed, approved, and available, we may consider additional rulemaking.

FAA's Justification and Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule

because large, abrupt pilot control inputs in response to an unrealistic, sudden drop in displayed airspeed at high actual airspeed could exceed the structural capability of the airplane. Therefore, we find that notice and opportunity for prior public comment are impracticable and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2016-5038 and Directorate Identifier 2016-NM-029-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

Costs of Compliance

We estimate that this AD affects 43 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
AFM revision	1 work-hour × \$85 per hour = \$85	\$0	\$85	\$3,655

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):



2016-07-10 The Boeing Company: Amendment 39-18455; Docket No. FAA-2016-5038; Directorate Identifier 2016-NM-029-AD.

(a) Effective Date

This AD is effective April 14, 2016.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company Model 787-8 and 787-9 airplanes, certificated in any category.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by reports indicating that in certain weather conditions with high moisture content or possible icing, erroneous low airspeed data may be displayed to the flightcrew before detection and annunciation via engine-indicating and crew-alerting system (EICAS) messages. We are issuing this AD to ensure that the flightcrew avoids abrupt pilot control inputs in response to an unrealistic, sudden drop in displayed airspeed at high actual airspeed. Abrupt pilot control inputs could exceed the structural capability of the airplane.

(f) Compliance

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

(g) Airplane Flight Manual (AFM) Revision: Operating Procedures

Within 15 days after the effective date of this AD, revise the applicable Boeing 787 AFM to add a "Non-normal Procedure" that includes the information in figure 1 to paragraph (g) of this AD. This may be done by inserting a copy of this AD into the AFM.

Figure 1 to Paragraph (g) of this AD

Airspeed Drop

In the event of a sudden, unrealistic drop in indicated airspeed, do not apply large, abrupt control column inputs. Fly the airplane with normal pitch and power settings. If manual flight is needed, disconnect the autopilot prior to making manual flight control inputs.

(h) 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 (i) 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.

(i) Related Information

For more information about this AD, contact Fnu Winarto, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6659; fax: 425-917-6590; email: fnu.winarto@faa.gov.

(j) Material Incorporated by Reference

None.

Issued in Renton, Washington, on March 25, 2016.
Michael Kaszycki,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.