



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0961; Product Identifier 2018-NM-121-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. This proposed AD was prompted by reports indicating that the pitot heat switch is not always set to ON, which could result in misleading air data. This proposed AD would require replacement of pitot anti-icing system components, installation of a junction box and wiring provisions, repetitive testing of the anti-icing system, and applicable on-condition actions. We are proposing this AD to address the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

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: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster 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 Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0961.

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-2018-0961; 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 NPRM, 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: Frank Carreras, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3539; email: frank.carreras@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2018-0961; Product Identifier 2018-NM-121-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM 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 proposed AD.

Discussion

We have received reports indicating that the pitot heat switch is not always set to ON. The failure to activate the manually activated pitot anti-icing system likely resulted in misleading air data that contributed to an accident and three incidents involving Boeing Model 737 airplanes. This condition, if not addressed, could result in the air data sensors not being heated, which could allow ice to form on the sensors and cause

erroneous air data. This erroneous air data can lead to loss of crew situational awareness and an inability to maintain continued safe flight and landing of the airplane.

Related Service Information under 1 CFR part 51

We reviewed Boeing Alert Service Bulletin 737-30A1064, Revision 1, dated October 18, 2017. The service information describes procedures for replacement and repetitive testing of the P5-9 window and pitot heat module, changing the anti-icing system to automatically supply power to heat the air data sensors. If flight crews fail to activate it manually, the anti-icing system will come on automatically after engine start.

We also reviewed the following concurrent service information.

- Boeing Service Bulletin 737-30-1067, Revision 1, dated May 4, 2017. This service information describes procedures for installing a new J18 junction box to change the anti-icing system.

- Boeing Service Bulletin 737-30-1068, Revision 1, dated May 4, 2017. This service information describes procedures for installing wiring provisions to the anti-icing system.

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.

Minimum Equipment List (MEL) Provision

Operators are required by 14 CFR part 91 to have an MEL to operate with inoperable equipment. Paragraph (l) of this proposed AD allows for the operation of the airplane even if the modified air data probe heat (ADPH) system is inoperable, so long as the operator's MEL has a provision to allow for this inoperability.

FAA’s Determination

We are proposing 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.

Proposed AD Requirements

This proposed AD would require accomplishment of the actions identified as “RC” (required for compliance) in the Accomplishment Instructions of Boeing Alert Service Bulletin 737-30A1064, Revision 1, dated October 18, 2017, described previously, except for any differences identified as exceptions in the regulatory text of this proposed AD.

This proposed AD would also require accomplishing the actions specified in Boeing Service Bulletin 737-30-1067, Revision 1, dated May 4, 2017; and Boeing Service Bulletin 737-30-1068, Revision 1, dated May 4, 2017, described previously.

For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0961.

Costs of Compliance

We estimate that this proposed AD affects 296 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
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Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacement (Boeing Alert Service Bulletin 737-30A1064)	6 work-hours X \$85 per hour = \$510	\$0	\$510	\$150,960
Repetitive tests (Boeing Alert Service Bulletin 737-30A1064)	5 work-hours X \$85 per hour = \$425 per inspection cycle	\$0	\$425 per inspection cycle	\$125,800 per inspection cycle
J18 Junction box installation (Boeing Service Bulletin 737- 30-1067)	Up to 75 work-hours X \$85 per hour = \$6,375	\$23,614	Up to \$29,989	Up to \$8,876,744
Installation of wire provisions (Boeing Service Bulletin 737- 30-1068)	Up to 193 work- hours X \$85 per hour = \$16,405	\$4,800	Up to \$21,205	Up to \$6,276,680

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

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 proposed 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

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the 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.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

The Boeing Company: Docket No. FAA-2018-0961; Product Identifier 2018-NM-121-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 737-30A1064, Revision 1, dated October 18, 2017.

(d) Subject

Air Transport Association (ATA) of America Code 30, Ice and rain protection.

(e) Unsafe Condition

This AD was prompted by reports indicating that the pitot heat switch is not always set to ON, which could result in misleading air data. We are issuing this AD to address misleading air data, which can lead to loss of crew situational awareness and could ultimately result in the inability to maintain continued safe flight and landing.

(f) Compliance

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

(g) Actions for Group 5

For airplanes identified as Group 5 in Boeing Alert Service Bulletin 737-30A1064, Revision 1, dated October 18, 2017: Within 120 days after the effective date of this AD, inspect the airplane and do all applicable on-condition actions using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

(h) Required Actions for Groups 1 Through 4

Except as specified by paragraph (j) of this AD, for airplanes identified as Groups 1 through 4 in Boeing Alert Service Bulletin 737-30A1064, Revision 1, dated October 18, 2017: At the applicable times specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-30A1064, Revision 1, dated October 18, 2017, do all applicable actions identified as "RC" (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Alert Service Bulletin 737-30A1064, Revision 1, dated October 18, 2017.

(i) Concurrent Requirements

For airplanes identified as Groups 1 through 4 in Boeing Alert Service Bulletin 737-30A1064, Revision 1, dated October 18, 2017: Prior to or concurrently with the action required by paragraph (h) of this AD, install a new J18 junction box to change the anti-icing system, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-30-1067, Revision 1, dated May 4, 2017, and install wiring provisions to the anti-icing system, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-30-1068, Revision 1, dated May 4, 2017.

(j) Exceptions to Service Information Specifications

For purposes of determining compliance with the requirements of this AD: Where Boeing Alert Service Bulletin 737-30A1064, Revision 1, dated October 18, 2017, uses the phrase “the original issue date of this service bulletin,” this AD requires using “the effective date of this AD.”

(k) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (h) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 737-30A1064, dated May 4, 2017, provided that step 15 for Groups 1 through 4, as applicable, of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-30A1064, Revision 1, dated October 18, 2017, is done at the applicable times specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-30A1064, Revision 1, dated October 18, 2017, or within 180 days after the effective date of this AD, whichever occurs later.

(l) Minimum Equipment List (MEL)

In the event that the air data probe heat (ADPH) system as modified by this AD is inoperable, an airplane may be operated as specified in the operator's MEL, provided the MEL includes provisions that address the modified ADPH system.

(m) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles 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 (n)(2) of this AD. Information may be emailed to: 9-ANM-LAACO-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, Los Angeles ACO Branch, FAA, 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 RC, the provisions of paragraphs (m)(4)(i) and (m)(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 substep is labeled “RC Exempt,” then the RC requirement is removed from that step or substep. 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.

(n) Related Information

(1) For more information about this AD, contact Frank Carreras, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3539; email: frank.carreras@faa.gov.

(2) For information about AMOCs, contact Jeffrey W. Palmer, Aerospace Engineer, Systems and Equipment Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5851; fax: 562-627-5210; email: jeffrey.w.palmer@faa.gov.

(3) For 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>. You may view this referenced service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued in Des Moines, Washington, on November 7, 2018.

Chris Spangenberg,
Acting Director,
System Oversight Division,
Aircraft Certification Service.
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