



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2019-0326; Product Identifier 2018-NM-166-AD;**

**Amendment 39-19808; AD 2019-23-14]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

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

**ACTION:** Final rule; correction.

**SUMMARY:** The FAA is correcting an airworthiness directive (AD) that published in the Federal Register. That AD applies to all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. As published, the service information reference specified in a certain paragraph of the regulatory text is incorrect. This document corrects that error. In all other respects, the original document remains the same.

**DATES:** This correction is effective January 21, 2020.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 21, 2020 (84 FR 68326, December 16, 2019).

**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; phone: 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 <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0326.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov>; 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 Docket Operations 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:** Serj Harutunian, Aerospace Engineer, Propulsion Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5254; fax: 562-627-5210; email: [serj.harutunian@faa.gov](mailto:serj.harutunian@faa.gov).

**SUPPLEMENTARY INFORMATION:** As published, AD 2019-23-14, Amendment 39-19808 (84 FR 68326, December 16, 2019), requires revising the existing maintenance or inspection program, as applicable, to include new or revised airworthiness limitations (AWLs) for all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes.

### **Need for the Correction**

As published, the service information reference specified in the paragraph (g)(2)(ix) of the regulatory text is incorrect. Paragraph (g)(2)(ix) of the regulatory text incorrectly references the actions specified in Boeing Service Bulletin 737-28A1228 for the initial compliance time to accomplish AWL No. 28-AWL-31, “Cushion Clamps and Teflon Sleeving Installed on Out-of-Tank Wire Bundles Installed on Brackets that are Mounted Directly on the Fuel Tanks,” however, the correct reference for that initial compliance time is Boeing Service Bulletin 737-57A1321. Boeing Service Bulletin 737-28A1228 does not refer to AWL No. 28-AWL-31. AWL No. 28-AWL-31 is only referenced in Boeing Service Bulletin 737-57A1321.

### **Related Service Information under 1 CFR part 51**

The FAA reviewed Boeing 737-100/200/200C/300/400/500 Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D6-38278-CMR, dated March 2019. This service information describes AWLs that include airworthiness limitation instructions (ALI) and critical design configuration control limitations (CDCCL) tasks related to fuel tank ignition prevention and the nitrogen generation 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.

### **Correction of Publication**

This document corrects an error and correctly adds the AD as an amendment to 14 CFR 39.13. Although no other part of the preamble or regulatory information has been corrected, the FAA is publishing the entire rule in the Federal Register.

The effective date of this AD remains January 21, 2020.

Since this action only corrects a reference, it has no adverse economic impact and imposes no additional burden on any person. Therefore, the FAA has determined that notice and public comment procedures are unnecessary.

**List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

**Adoption of the Correction**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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 [Corrected]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**2019-23-14 The Boeing Company:** Amendment 39-19808; Docket No.

FAA-2019-0326; Product Identifier 2018-NM-166-AD.

**(a) Effective Date**

This AD is effective January 21, 2020.

**(b) Affected ADs**

This AD affects the ADs specified in paragraphs (b)(1) through (7) of this AD.

(1) AD 2008-10-09 R1, Amendment 39-16148 (74 FR 69264, December 31, 2009) (“AD 2008-10-09 R1”).

(2) AD 2011-12-09, Amendment 39-16716 (76 FR 33988, June 10, 2011) (“AD 2011-12-09”).

(3) AD 2013-13-15, Amendment 39-17503 (78 FR 42415, July 16, 2013) (“AD 2013-13-15”).

(4) AD 2013-25-05, Amendment 39-17701 (78 FR 78701, December 27, 2013) (“AD 2013-25-05”).

(5) AD 2016-18-16, Amendment 39-18647 (81 FR 65864, September 26, 2016) (“AD 2016-18-16”).

(6) AD 2017-17-09, Amendment 39-18999 (82 FR 40477, August 25, 2017) (“AD 2017-17-09”).

(7) AD 2018-04-12, Amendment 39-19208 (83 FR 9178, March 5, 2018) (“AD 2018-04-12”).

**(c) Applicability**

This AD applies to all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, certificated in any category.

**(d) Subject**

Air Transport Association (ATA) of America Code 28, Fuel; 47, Nitrogen Generation System.

**(e) Unsafe Condition**

This AD was prompted by a determination that new or revised airworthiness limitations (AWLs) are necessary related to fuel tank ignition prevention and the nitrogen generation system. The FAA is issuing this AD to address the potential of ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

**(f) Compliance**

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

**(g) Maintenance or Inspection Program Revision**

(1) For The Boeing Company Model 737-100, -200, and -200C series airplanes: Within 60 days after the effective date of this AD, revise the existing maintenance or inspection program, as applicable, to incorporate the information specified in Section C, including Subsections C.1, C.2, and C.3 of Boeing 737-100/200/200C/300/400/500 Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D6-38278-CMR, dated March 2019, except as provided in paragraph (h) of this AD. The initial compliance time for the ALI tasks are within the applicable compliance times specified in paragraphs (g)(1)(i) through (x) of this AD.

(i) For AWL No. 28-AWL-01, “External Wires Over Center Fuel Tank”: Within 120 months after the most recent inspection was performed as specified in AWL No. 28-AWL-01, or within 12 months after the effective date of this AD if no initial inspection has been performed.

(ii) For AWL No. 28-AWL-03, “Fuel Quantity Indicating System (FQIS) – Out Tank Wiring Lightning Shield to Ground Termination”: Within 120 months after

accomplishment of the actions specified in Boeing Service Bulletin 737-28A1178, or within 120 months after the most recent inspection was performed as specified in AWL No. 28-AWL-03, whichever is later.

(iii) For AWL No. 28-AWL-21, “Center Tank Fuel Boost Pump Automatic Shutoff System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1228, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-21, whichever is later.

(iv) For AWL No. 28-AWL-22, “Auxiliary Tank Fuel Boost Pump Automatic Shutoff System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1228, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-22, whichever is later.

(v) For AWL No. 28-AWL-23, “Over-Current and Arcing Protection Electrical Design Features Operation – Boost Pump Ground Fault Interrupter (GFI)”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1212, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-23, whichever is later.

(vi) For AWL No. 28-AWL-24, “Center Tank Fuel Boost Pump Power Failed On Protection System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1227, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-24, whichever is later.

(vii) For AWL No. 28-AWL-25, “Auxiliary Fuel Tank Boost Pump Power Failed On Protection System”: Within 12 months after accomplishment of the actions specified

in Boeing Service Bulletin 737-28A1227, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-25, whichever is later.

(viii) For AWL No. 28-AWL-29, “AC Fuel Boost Pump Installation”: Within 72 months after the most recent inspection was performed as specified in AWL No. 28-AWL-29, or within 12 months after the effective date of this AD if no inspection has been performed in the last 72 months.

(ix) For AWL No. 47-AWL-04, “Nitrogen Generation System (NGS) – Thermal Switch”: Within 22,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1005; within 22,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1008; or within 22,500 flight hours after the most recent inspection was performed as specified in AWL No. 47-AWL-04; whichever is latest.

(x) For AWL No. 47-AWL-05, “Nitrogen Generation System (NGS) – Nitrogen Enriched Air (NEA) Distribution Ducting Integrity”: Within 14,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1005; within 14,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1008; or within 14,500 flight hours after the most recent inspection was performed as specified in AWL No. 47-AWL-05; whichever is latest.

(2) For The Boeing Company Model 737-300, -400, and -500 series airplanes: Within 60 days after the effective date of this AD, revise the existing maintenance or inspection program, as applicable, to incorporate the information specified in Section C, including Subsections C.1, C.2, and C.3 of Boeing 737-100/200/200C/300/400/500 Airworthiness Limitations (AWLs) and Certification Maintenance Requirements

(CMRs), D6-38278-CMR, dated March 2019; except as provided in paragraph (h) of this AD. The initial compliance time for the ALI tasks are within the applicable compliance times specified in paragraphs (g)(2)(i) through (xi) of this AD.

(i) For AWL No. 28-AWL-01, “External Wires Over Center Fuel Tank”: Within 120 months after the most recent inspection was performed as specified in AWL No. 28-AWL-01, or within 12 months after the effective date of this AD if no initial inspection has been performed.

(ii) For AWL No. 28-AWL-03, “Fuel Quantity Indicating System (FQIS) – Out Tank Wiring Lightning Shield to Ground Termination”: Within 120 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1175; within 120 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1183; within 120 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1186; or within 120 months after the most recent inspection was performed as specified in AWL No. 28-AWL-03; whichever is latest.

(iii) For AWL No. 28-AWL-20, “Center Tank Fuel Boost Pump Automatic Shutoff System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1216, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-20, whichever is later.

(iv) For AWL No. 28-AWL-21, “Auxiliary Tank Fuel Boost Pump Automatic Shutoff System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1216, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-21, whichever is later.

(v) For AWL No. 28-AWL-22, “Over-Current and Arcing Protection Electrical Design Features Operation – Boost Pump Ground Fault Interrupter (GFI)”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1212, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-22, whichever is later.

(vi) For AWL No. 28-AWL-23, “Center Tank Fuel Boost Pump Power Failed On Protection System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1227, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-23, whichever is later.

(vii) For AWL No. 28-AWL-24, “Auxiliary Fuel Tank Boost Pump Power Failed On Protection System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1227, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-24, whichever is later.

(viii) For AWL No. 28-AWL-27, “AC Fuel Boost Pump Installation”: Within 72 months after the most recent inspection was performed as specified in AWL No. 28-AWL-27, or within 12 months after the effective date of this AD if no inspection has been performed in the last 72 months.

(ix) For AWL No. 28-AWL-31, “Cushion Clamps and Teflon Sleeving Installed on Out-of-Tank Wire Bundles Installed on Brackets that are Mounted Directly on the Fuel Tanks”: Within 144 months after accomplishment of the actions specified in Boeing Service Bulletin 737-57A1321.

(x) For AWL No. 47-AWL-04, “Nitrogen Generation System (NGS) – Thermal Switch”: Within 22,500 flight hours after accomplishment of the actions specified in

Boeing Service Bulletin 737-47-1005; within 22,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1008; or within 22,500 flight hours after the most recent inspection was performed as specified in AWL No. 47-AWL-04; whichever is latest.

(xi) For AWL No. 47-AWL-05, “Nitrogen Generation System (NGS) – Nitrogen Enriched Air (NEA) Distribution Ducting Integrity”: Within 14,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1005; within 14,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1008; or within 14,500 flight hours after the most recent inspection was performed as specified in AWL No. 47-AWL-05; whichever is latest.

**(h) Additional Acceptable Wire Types and Sleeving**

As an option to accomplishing the actions required by paragraph (g) of this AD, the changes specified in paragraphs (h)(1) and (2) of this AD are acceptable.

(1) Where AWL No. 28-AWL-05 identifies wire types BMS 13-48, BMS 13-58, and BMS 13-60, the following wire types are acceptable: MIL-W-22759/16, SAE AS22759/16 (M22759/16), MIL-W-22759/32, SAE AS22759/32 (M22759/32), MIL-W-22759/34, SAE AS22759/34 (M22759/34), MIL-W-22759/41, SAE AS22759/41 (M22759/41), MIL-W-22759/86, SAE AS22759/86 (M22759/86), MIL-W-22759/87, SAE AS22759/87 (M22759/87), MIL-W-22759/92, and SAE AS22759/92 (M22759/92); and MIL-C-27500 and NEMA WC 27500 cables constructed from these military or SAE specification wire types, as applicable.

(2) Where AWL No. 28-AWL-05 identifies TFE-2X Standard wall for wire sleeving, the following sleeving materials are acceptable: Roundit 2000NX and Varglas Type HO, HP, or HM.

**(i) No Alternative Actions, Intervals, or Critical Design Configuration Control Limitations (CDCCLs)**

After the existing maintenance or inspection program has been revised as required by paragraph (g) of this AD, no alternative actions (e.g., inspections), intervals, or CDCCLs may be used unless the actions, intervals, and CDCCLs are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (k) of this AD.

**(j) Terminating Actions for Certain AD Requirements**

Accomplishment of the revision required by paragraph (g) of this AD terminates the requirements specified in paragraphs (j)(1) through (7) of this AD for that airplane:

- (1) All requirements of AD 2008-10-09 R1.
- (2) The revision required by paragraph (l) of AD 2011-12-09.
- (3) The revision required by paragraph (h) of AD 2013-13-15.
- (4) The revision required by paragraph (j) of AD 2013-25-05.
- (5) The revisions required by paragraphs (l) and (n) of AD 2016-18-16.
- (6) The revision required by paragraph (h) of AD 2017-17-09.
- (7) The revision required by paragraph (h) of AD 2018-04-12.

**(k) 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 (l) 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 Company 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) AMOCs that were previously approved for the ADs specified in paragraph (j) of this AD are not approved as AMOCs for this AD.

**(l) Related Information**

For more information about this AD, contact Serj Harutunian, Aerospace Engineer, Propulsion Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5254; fax: 562-627-5210; email: serj.harutunian@faa.gov.

**(m) 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 this AD specifies otherwise.

(3) The following service information was approved for IBR on January 21, 2020 (84 FR 68326, December 16, 2019).

(i) Boeing 737-100/200/200C/300/400/500 Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D6-38278-CMR, dated March 2019.

(ii) [Reserved]

(4) 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; phone: 562-797-1717; Internet: <https://www.myboeingfleet.com>.

(5) You may view this 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.

(6) 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, email [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on January 9, 2020.

Michael Kaszycki,  
Acting Director,  
System Oversight Division,  
Aircraft Certification Service.

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