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[4910-13-P]

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

**[Docket No. FAA-2018-0393; Product Identifier 2018-NM-010-AD; Amendment 39-19536; AD 2018-26-06]**

**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 all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. This AD was prompted by reports of loose, worn, or missing attachment bolts for the main landing gear (MLG) center door assemblies. This AD requires repetitive detailed inspections of the forward and aft MLG center door assembly attachments for loose, missing, damaged, or bottomed-out attachment bolts, and any wear to the retention clip assemblies as applicable; and applicable on-condition actions. This AD also provides an optional terminating action for the repetitive inspections. 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

Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; internet <https://www.myboeingfleet.com>. 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. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0393.

### **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-2018-0393; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The address for Docket Operations (phone: 800-647-5527) is 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 ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3527; 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 all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. The NPRM published in the Federal Register on May 11, 2018 (83 FR 21948). The NPRM was prompted by reports of loose, worn, or missing attachment bolts for the MLG center door assemblies. The NPRM proposed to require repetitive detailed inspections of the forward and aft MLG center

door assembly attachments for loose, missing, damaged, or bottomed-out attachment bolts, and any wear to the retention clip assemblies as applicable; and applicable on-condition actions. The NPRM also provided an optional terminating action for the repetitive inspections.

We are issuing this AD to address loose, missing, damaged, or bottomed-out attachment bolts, and any wear to the retention clip assemblies, which could result in departure of the center and inboard MLG door assemblies, subsequent damage to the main flap and horizontal stabilizer, and loss of control of the airplane.

### **Comments**

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

### **Support for the NPRM**

Boeing and The Air Line Pilots Association, International, each stated that it concurred with the intent of the NPRM.

### **Request for Changes to Service Information**

Alaska Airlines (Alaska) requested that changes be made to Boeing Special Attention Service Bulletin 737-52-1170, Revision 1, dated December 19, 2017 ("BSASB 737-52-1170, R1"). Alaska noted that operators cannot comply with the requirements specified in paragraph (g) of the proposed AD in cases where BSASB 737-52-1170, R1, directs the operator to inspect a Group 3 airplane using Figure 3 or Figure 4 of BSASB 737-52-1170, R1, because those figures are not applicable to Group 3 airplanes.

We agree with the commenter's observations concerning Figure 3 and Figure 4 of BSASB 737-52-1170, R1. We contacted Boeing and have determined that the actions for Group 2 airplanes are appropriate for all airplanes to comply with the requirements of paragraph (g) of this AD. We have revised paragraph (h) of this AD, "Exceptions to

Service Information Specifications,” by adding paragraph (h)(2), which states that “Where BSASB 737-52-1170, R1, limits use of Figures 3 and 4 to Group 2 airplanes, for the purposes of this AD, those figures apply to all airplane groups.”

#### **Request for Clarification of the Requirements of Paragraph (j) of the Proposed AD**

Alaska requested clarification of the requirements specified in paragraph (j) of the proposed AD and clarification of which airplane groups would be affected by these requirements. Alaska asked if “all actions for Group 3” means that this paragraph is for Group 3 airplanes only or for all airplane groups. Alaska also noted that an inspection of the “door assembly” implies an inspection of the door, but BSASB 737-52-1170, R1, describes procedures for inspection of the “door installation.”

We agree with the commenter’s request and have revised paragraph (j) of this AD as follows:

As of the effective date of this AD, no person may install an MLG assembly or MLG center door assembly on any airplane identified in paragraphs (c)(1) through (c)(4) of this AD unless all actions for Group 3 airplanes pertaining to that MLG center door attachment, and identified as RC in, and in accordance with, the Accomplishment Instructions of BSASB 737-52-1170, R1, have been accomplished on that MLG assembly or MLG center door assembly within the compliance times specified in Tables 4, 5, and 6, as applicable, of paragraph 1.E., “Compliance,” of BSASB 737-52-1170, R1. The actions for Group 3 airplanes apply to all airplanes for the requirement of this paragraph.

#### **Request to Include Identification Method for Post-Modification Door**

American Airlines (American) requested that BSASB 737-52-1170, R1, be revised to include an identifying stencil or placard that could be placed on an affected MLG center door assembly once it has been modified. The commenter stated that the MLG center door assembly is a rotatable part. However, neither the NPRM nor BSASB 737-52-1170, R1, addresses the issue of a post-modification MLG center door assembly

being removed from an airplane and replaced with a pre-modification MLG center door assembly.

We acknowledge the commenter's concern that BSASB 737-52-1170, R1, does not address the rotability of an MLG center door assembly. We addressed the issue of rotability in this AD in two ways. First, the applicability in paragraph (c) of this AD includes all Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, not just the airplanes specified in the effectivity of BSASB 737-52-1170, R1. Second, we added paragraph (j) of this AD, "Parts Installation Limitation".

While marking or part marking might provide some benefit for operator awareness and recordkeeping, the issue of rotability is approached in different ways by different operators. When there have been similar issues regarding rotatable parts, operators expressed a preference to not have a requirement to mark and/or part mark, although operators may do this at their own discretion. We also note that this AD addresses not only the MLG center door assembly but also the attachments to the MLG strut assemblies. We have not changed this AD in regard to this issue.

### **Request to Extend the Compliance Time**

Delta Air Lines (DAL) and SunExpress (SXS) requested that the compliance time specified in paragraph (g) of the proposed AD be extended. SXS requested that the compliance time for the initial inspection be extended from 12,000 total flight cycles to 20,000 total flight cycles, or from 800 flight cycles after the effective date of the proposed AD to 1,500 flight cycles after the effective date of the proposed AD, and that the interval for the repetitive inspection be extended from 5,500 flight cycles to 6,600 flight cycles. SXS stated that 41 airplanes in its fleet have exceeded 12,000 total flight cycles, and it would have a short period of time to perform the required inspection as described in BSASB 737-52-1170, R1, and it would have to operate some airplanes a long time without the MLG shock strut doors. SXS noted that performing operations

without a MLG shock strut door incurs a fuel burn penalty, which is approximately 0.77% more fuel burned per flight.

DAL stated that the compliance time for the initial inspection would require them to inspect approximately 80 airplanes in a 200-day period, requiring them to accomplish the work for most of its airplanes in the line environment, which increases the risk for an “airplane on ground” situation if there is a finding on the MLG structure. DAL noted that BSASB 737-52-1170, R1, does not provide relief for operators when a crack or corrosion is found in the MLG lug after removal of the bushing. For an MLG that requires re-work, DAL typically removes the MLG, replaces it with another MLG, and sends the discrepant MLG to a shop for repair. We infer that DAL is requesting that the compliance time for the initial inspection be extended.

In addition, DAL pointed out that the procedures in BSASB 737-52-1170, R1, would restrict an operator from dispatching an affected airplane until corrective is taken to repair the MLG. DAL requested that this situation be considered in the final rule by providing a limited return to service. DAL stated that if several MLG lugs are found with discrepancies, there is the potential of the operator grounding airplanes outside of a heavy maintenance check to either replace the MLG gear or go through its spare parts inventory.

We do not agree with the commenters’ requests. We appreciate the impact that the required actions and the associated compliance times will have on operators. However, both the FAA and Boeing have identified this issue as an unsafe condition, and the commenters have not provided substantiating data for their proposals. In addition, a limited return to service would not be appropriate for dispatching airplanes with known cracking or corrosion. As SXS has noted, airplanes may be operated with the MLG shock strut center and inner doors removed until repairs can be made.

We have reviewed the related service information and note that while repair of the MLG lug parts is required for compliance (“RC”), certain steps are either labeled as “RC Exempt,” or contain technical instructions that are prefaced by “Refer to.” Paragraph (l)(4) of this AD and paragraph 3A., “General Information,” of BSASB 737-52-1170, R1 specify the actions labeled as “RC Exempt” are not required in order to show compliance to this AD. When the words “refer to” are used within an RC step and the operator has an accepted alternative procedure, the accepted alternative procedure can be used. When the words “in accordance with” are included in an RC step, the procedure in the Boeing document must be used. In addition, for proposals that provide an acceptable level of safety and have substantiating data, operators may apply for an AMOC using the procedures specified in paragraph (l) of this AD. We have not changed this AD in regard to this issue.

#### **Request to Allow Installation of New, Overhauled, or Serviceable MLG**

DAL requested that operators be allowed to install a new, overhauled, or serviceable MLG instead of repairing a damaged lug and installing a new bushing if excessive wear, galling, or cracking is found during a detailed inspection/measurement of the MLG shock strut bushing. DAL stated that it would have to remove the damaged MLG and send it to the shop for repair, and it would be easier to install a new, overhauled, or serviceable MLG than to wait for the damaged MLG to be repaired. DAL explained that installing a new, overhauled, or serviceable MLG provides an equivalent level of safety because the intent of the proposed AD is to repair and install new bushings. DAL observed that the damaged MLG would be repaired and then be ready for use on another airplane.

We agree with the commenter’s request for the reasons provided by the commenter. We have revised paragraph (g) of this AD to clarify that replacement of an entire MLG assembly within the required compliance time satisfies the requirements of

paragraph (g), provided that the requirements of paragraph (j) of this AD, “Parts Installation Limitation,” are satisfied for that MLG assembly.

Since the unsafe condition is also affected by rotability, we have revised paragraph (j) of this AD to clarify that an MLG assembly cannot be installed on any airplane identified in paragraphs (c)(1) through (c)(4) of this AD unless all actions for Group 3 airplanes have been accomplished on the MLG assembly. Paragraph (j) of this AD states that:

As of the effective date of this AD, no person may install an MLG assembly or MLG center door assembly on any airplane identified in paragraphs (c)(1) through (c)(4) of this AD unless all actions for Group 3 airplanes pertaining to that MLG center door attachment, and identified as RC in, and in accordance with, the Accomplishment Instructions of BSASB 737-52-1170, R1, have been accomplished on that MLG assembly or MLG center door assembly within the compliance times specified in Tables 4, 5, and 6, as applicable, of paragraph 1.E., “Compliance,” of BSASB 737-52-1170, R1. The actions for Group 3 airplanes apply to all airplanes for the requirement of this paragraph.

In the proposed AD, paragraph (j) specified only an MLG center door assembly.

#### **Request for Clarification of Intent of Parts Installation Paragraph (j)**

DAL stated that paragraph (j), “Parts Installation Paragraph,” of the proposed AD was confusing because it stated that an operator may not install an MLG center door assembly on an airplane unless all actions identified as RC in BSASB 737-52-1170, R1, are accomplished within the compliance times specified in Tables 4, 5, and 6, as applicable, of paragraph 1.E., “Compliance,” of BSASB 737-52-1170, R1. DAL observed that if an operator receives a spare door with an FAA Form 8130, “Authorized Release Certificate – Airworthiness Approval Tag,” attached, the tag might include the AD number but the number of flight cycles at the last inspection or total flight cycles of the door would not be provided. DAL suggested that operators ensure that the inspection

and corrective actions are accomplished before the spare part is installed on the airplane. Therefore, if the flight cycles on the door are unknown, the operator would still be in compliance with the intent of the NPRM by inspecting the door before installation, and that it would be an equivalent level of safety that meets the intent of the NPRM.

We appreciate the commenter's concern and the opportunity to clarify the intent of the "Parts Installation Limitation" paragraph. The compliance times specified in Tables 4, 5, and 6, as applicable, of paragraph 1.E., "Compliance," of BSASB 737-52-1170, R1, are in airplane flight cycles. There is no requirement in this AD or any statement in BSASB 737-52-1170, R1, that it is necessary to determine the flight cycles accumulated on the MLG door assembly. The compliance times in this AD are based on flight cycles of the airplane instead of the MLG door assembly. Our strategy in addressing the unsafe condition is to first inspect all affected airplanes, and then to address future possible unsafe conditions with the requirements in the "Parts Installation Limitation" paragraph.

We have not made any changes to this AD in regard to this issue.

#### **Request to Delay Issuance of Final Rule Until Service Information is Corrected**

American, subsequent to its earlier comments, requested that the final rule not be issued until discrepancies in BSASB 737-52-1170, R1, are rectified and the instructions made clearer. The commenter stated that operators cannot comply with the requirements specified in the NPRM because of discrepancies in BSASB 737-52-1170, R1. The commenter identified the following discrepancies.

1. BSASB 737-52-1170, R1, has quantities listed in Figures 1 and 2 that are double what is actually on the aircraft. Although there is a note that says "The QTY numbers shown below are the number of parts necessary for each airplane," there is a Figure 1 for the left and a Figure 2 for the right. Each side has only one of each bolt, not two. Note that all of the other figures list the quantity of parts that is needed for only the left side or the right side, as applicable.

Figures 1 and 2 are different than the other figures in this regard.

2. In Figure 5 (and Figures 6, 7, and 8), step 6 says to remove three laminated shims. The airplane only has two laminated shims.
3. In Figure 13 (and Figure 14) step #4 has you install and torque the bolt. However, the bolt in #4 has to go through the kept bracket and if you install the bolt first, you have to take it back out to install the bracket. Steps #4 and #5 should be reversed.
4. In Figure 13 (and Figure 14), step #6 states to install 3 each shims, but only 2 were removed, so do we install 3 each in the new configuration or just put 2 back?
5. In Figure 13 (and Figure 14), once we installed the forward bolt in step 4, with the correct washers installed, the bolt bottomed out in the barrel nut housing, since the bolt is too long. New bolts are slightly longer than old. The bolt needs another thick washer to fix the issue. The kits that are being delivered do not have an adequate amount of the necessary washers.

Alaska also noted that Figure 13 and Figure 14 of BSASB 737-52-1170, R1, depict view C with a pre-modification installation in lieu of a post-modification installation.

We acknowledge the commenters' concerns regarding the information in the service information that requires clarification. The amount of clarification needed would be overly complex for inclusion in this AD. We expect to work with Boeing to issue a global AMOC addressing any known errors as soon as possible. In addition, we have revised paragraph (h) of this AD, "Exceptions to Service Information Specifications," by adding paragraph (h)(3) to provide operators with information regarding how to address any other issues, if needed.

In light of the critical nature of the identified unsafe condition, we do not consider it warranted to delay the issuance of this final rule. When Boeing provides a revision to

BSASB 737-52-1170, R1, we will review it in consideration of an AMOC to this AD or may consider future rulemaking action.

### **Request to Revise Compliance Time Specifications**

DAL noted that paragraph (h) of the proposed AD states that “For purposes of determining compliance with the requirements of this AD: Where BSASB 737-52-1170, Revision 1, uses the phrase ‘the original issue date of this service bulletin’, this AD requires using ‘the effective date of this AD.’” DAL pointed out that in Table 4 of BSASB 737-52-1170, R1, the compliance times for the Group 3 airplanes, states that the actions should be completed “Within 800 flight cycles after the Revision 1 date of this service bulletin.” DAL asked if the AD effective date should also replace the Revision 1 date of the service information. We infer that DAL is requesting a revision to paragraph (h) of the proposed AD to clarify that for purposes of determining compliance with the requirements of the final rule that the effective date of the AD should be used instead of the original issue date or the Revision 1 date of the service information.

We agree with the commenter’s request for the reasons provided by the commenter. We have re-designated paragraph (h) of the proposed AD as paragraph (h)(1) in this AD, and revised the text to state that for purposes of determining compliance with the requirement of this AD, where BSASB 737-52-1170, Revision 1, uses the phrase “the original issue date of this service bulletin” or “the Revision 1 date of this service bulletin” this AD requires using “the effective date of this AD.”

### **Observations Regarding Service Information**

American stated that BSASB 737-52-1170, R1, is confusing and unnecessarily complex. American observed that BSASB 737-52-1170, R1, provides for 14 possible conditions, multiple options for corrective actions, 3 multi-page logic diagrams, and 10 different parts of instructions. American stated that the complexity could be simplified if the service information pointed the operator straight to the modification of the MLG

center door assembly retention clip assemblies and, if needed, repair to the lugs and replacement of the bushings. American declared that the unnecessary complexity of the service bulletin invites non-compliance issues.

We acknowledge the commenter's concerns regarding BSASB 737-52-1170, R1. The reason BSASB 737-52-1170, R1, includes 14 possible conditions, multiple options for corrective actions, 3 multi-page logic diagrams, and 10 different parts of instructions is to provide a comprehensive set of procedures to address the unsafe condition that exists in the affected fleet of airplanes. We suggest that the commenter provide its comments regarding improvements to this document directly to Boeing. We have not changed this AD in regard to this issue.

### **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 ability to accomplish the actions specified in the NPRM.

We concur with the commenter. We have added paragraph (c)(5) to this AD to state that installation of STC ST00830SE does not affect the ability to accomplish the actions required by this final rule. 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.

### **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule 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 addressing 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 final rule.

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

We reviewed Boeing Special Attention Service Bulletin 737-52-1170, Revision 1, dated December 19, 2017. The service information describes procedures for repetitive detailed inspections of the forward and aft MLG center door assembly attachments for loose, missing, damaged, or bottomed-out attachment bolts, and any wear to the retention clip assemblies as applicable; and applicable on-condition actions. The service information also describes procedures for modification of the MLG center door assembly retention clip assemblies as an optional terminating action for the repetitive inspections. 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 1,814 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

#### **Estimated costs for required actions**

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	2 work-hours X \$85 per hour = \$170 per inspection cycle	\$0	\$170 per inspection cycle	\$308,380 per inspection cycle

#### **Estimated costs for optional terminating action**

Action	Labor cost	Parts cost	Cost per product
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Action	Labor cost	Parts cost	Cost per product
Modification	Up to 6 work-hours X \$85 per hour = \$510	\$2,900	Up to \$3,410

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 known 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 and associated appliances 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):

**2018-26-06 The Boeing Company:** Amendment 39-19536; Docket No. FAA-2018-0393; Product Identifier 2018-NM-010-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**

This AD applies to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, certificated in any category, as specified in paragraphs (c)(1) through (c)(4) of this AD.

(1) Airplanes in Group 1, and in Group 2, Configuration 1, as identified in Boeing Special Attention Service Bulletin 737-52-1170, Revision 1, dated December 19, 2017 (“BSASB 737-52-1170, R1”).

(2) Airplanes in Group 2, Configuration 2, as identified in BSASB 737-52-1170, R1.

(3) Airplanes in Group 3, as identified in BSASB 737-52-1170, R1, except where this service bulletin specifies the groups as line numbers 4275 through 6724 inclusive, and 6736, this AD specifies those groups as line number 4275 through any line number of an airplane with an original Certificate of Airworthiness or an original Export Certificate of Airworthiness dated on or before the effective date of this AD.

(4) All Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes with an original Certificate of Airworthiness or an original Export Certificate of Airworthiness dated after the effective date of this AD.

(5) Installation of Supplemental Type Certificate (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.

**(d) Subject**

Air Transport Association (ATA) of America Code 52, Doors.

**(e) Unsafe Condition**

This AD was prompted by reports of loose, worn, or missing attachment bolts for the main landing gear (MLG) center door assemblies. We are issuing this AD to address loose, missing, damaged, or bottomed-out attachment bolts, and any wear to the retention clip assemblies, which could result in departure of the center and inboard MLG door assemblies, subsequent damage to the main flap and horizontal stabilizer, and loss of control of the airplane.

**(f) Compliance**

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

**(g) Required Actions**

For airplanes identified in paragraphs (c)(1), (c)(2), or (c)(3) of this AD: Except as required by paragraph (h) of this AD, at the applicable time specified in Tables 1 through 6, as applicable, of paragraph 1E, “Compliance,” of BSASB 737-52-1170, R1, do all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of BSASB 737-52-1170, R1. Replacement of an entire MLG assembly within the required compliance time satisfies the requirements of this paragraph, provided that the requirements of paragraph (j) of this AD are satisfied for that MLG assembly.

**(h) Exceptions to Service Information Specifications**

(1) For purposes of determining compliance with the requirements of this AD: Where BSASB 737-52-1170, R1, uses the phrase “the original issue date of this service

bulletin” or “the Revision 1 date of this service bulletin” this AD requires using “the effective date of this AD.”

(2) Where BSASB 737-52-1170, R1, limits use of Figures 3 and 4 to Group 2 airplanes, for the purposes of this AD, those figures apply to all airplane groups.

(3) If any action(s) identified as RC in BSASB 737-52-1170, R1, cannot be accomplished as specified therein, those action(s) must be accomplished using a method approved in accordance with the procedures specified in paragraph (l) of this AD.

**(i) Optional Terminating Action for Repetitive Inspections**

Accomplishment of the modification of the MLG center door retention clip assemblies specified in Part 5 of the Accomplishment Instructions of BSASB 737-52-1170, R1, terminates the repetitive inspections required by paragraph (g) of this AD for that MLG center door retention clip only. The requirements of paragraph (j) of this AD continue to apply.

**(j) Parts Installation Limitation**

As of the effective date of this AD, no person may install an MLG assembly or MLG center door assembly on any airplane identified in paragraphs (c)(1) through (c)(4) of this AD unless all actions for Group 3 airplanes pertaining to that MLG center door attachment, and identified as RC in, and in accordance with, the Accomplishment Instructions of BSASB 737-52-1170, R1, have been accomplished on that MLG assembly or MLG center door assembly within the compliance times specified in Tables 4, 5, and 6, as applicable, of paragraph 1.E., “Compliance,” of BSASB 737-52-1170, R1. The actions for Group 3 airplanes apply to all airplanes for the requirement of this paragraph.

**(k) 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 Special Attention Service Bulletin 737-52-1170, dated July 29, 2014.

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

(1) The Manager, Seattle 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 (m)(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, 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) Except as required by paragraph (h) of this AD: For service information that contains steps that are labeled as RC, the provisions of paragraphs (l)(4)(i) and (l)(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.

**(m) Related Information**

(1) For more information about this AD, contact Alan Pohl, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3527; 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 (n)(3) and (n)(4) of this AD.

**(n) 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 Special Attention Service Bulletin 737-52-1170, Revision 1, dated December 19, 2017.

(ii) [Reserved]

(3) For service information identified in this AD, 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>.

(4) 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.

(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>.

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

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