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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2016-5468; Directorate Identifier 2015-NM-021-AD; Amendment 39-18806; AD 2017-04-11]

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) all The Boeing Company Model 737-600, -700, -700C, -800, and -900 series airplanes. This AD was prompted by reports of paint deterioration on the surface of the main landing gear (MLG) and the early onset of corrosion in the trunnion bore of the MLG outer cylinder. This AD requires identifying affected parts, repetitive external surface detailed inspections for damage of affected parts, and related investigative and corrective actions if necessary. For certain airplanes, this AD also requires a detailed inspection and bushing replacement of the trunnion bore, and related investigative and corrective actions if necessary. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective March 29, 2017.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of March 29, 2017.

**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;

telephone: 562-797-1717; 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-2016-5468.

#### 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-2016-5468; 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:** Alan Pohl, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6450; fax: 425-917-6590; 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, and -900 series airplanes. The NPRM published in the **Federal Register** on April 12, 2016 (81 FR 21497) ("the NPRM"). The NPRM was prompted by reports of paint deterioration on the surface of the MLG and the early onset of corrosion in the trunnion bore of the MLG outer cylinder. The NPRM proposed to require identifying affected parts, repetitive external surface detailed inspections for damage of affected parts, and related investigative and corrective actions, if necessary. For certain airplanes, the NPRM also proposed to

require a detailed inspection and bushing replacement of the trunnion bore, and related investigative and corrective actions, if necessary. We are issuing this AD to prevent stress corrosion cracking of the external surfaces of the MLG, which could result in a fracture of the MLG and consequent MLG collapse.

#### Comments

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

#### Request To Withdraw the NPRM

Messier Services Asia Pte Ltd (MS Asia) explained that this maintenance, repair, and overhaul (MRO) facility, located in Singapore, has disclosed to Boeing that between November 2007 and December 2011, painting performed by MS Asia on certain landing gear legs as part of its overhaul service for Boeing did not fully conform to Boeing instructions and specifications. MS Asia stated that this painting error was disclosed to Boeing for Model 737 airplane landing gears identified in Boeing Special Attention Service Bulletin 737-32-1486, dated November 6, 2014, as revised by Boeing Special Attention Service Bulletin 737-32-1486, Revision 1, dated April 1, 2015 ("SASB 737-32-1486, R1").

MS Asia refuted and continues to refute that the painting has generated the potential onset of corrosion discovered on the MLG. MS Asia explained that it had the opportunity to demonstrate to Boeing the absence of links between these two events and is willing to reiterate its technical demonstration to the FAA. MS Asia asserted that the NPRM makes an incorrect statement and conclusion, and is without technical evidence that the root cause of the corrosion detected on the trunnion bore and the associated risk of fracture is the consequence of the incorrect paint scheme application.

MS Asia also stated that the NPRM is creating confusion when it refers to SAFRAN Messier-Bugatti-Dowty, and that the painting issues only affect gears overhauled by MS Asia during the period of November 2007 to December 2011. MS Asia asserted that no painting issues have affected landing gears overhauled by the MRO entity of Messier-Bugatti-Dowty outside the

period of November 2007 to December 2011.

From these statements, we infer that MS Asia is requesting we withdraw the NPRM. We do not agree.

Landing gear components include materials that are very sensitive to corrosion and cracking and are not tolerant of improper maintenance. In particular, high strength steel, once corroded, can readily develop cracks which could then propagate very rapidly and render inspection programs ineffectual. This is why it is imperative that protective finishes be applied as specified.

The determination of a connection between improper finish application and the potential onset of corrosion was made by Boeing in Boeing Special Attention Service Bulletin 737–32–1486, dated November 6, 2014, with review and concurrence by the FAA. This connection has also been validated by extensive fleet experience.

MS Asia provided no definitive data to substantiate its statement that there is not such a connection between its painting (application of unqualified primer) and corrosion. It should also be noted that this painting was only one of several discrepancies noted that indicated improper maintenance. There is no refutation of the finding that the components were not overhauled in accordance with Boeing instructions and specifications. These instructions and specifications, or their equivalent, are in turn included in operators' maintenance programs that are approved by the governing regulatory authority.

We are willing to review data MS Asia might wish to submit regarding this AD. However, this issue has been determined to be a safety issue by both Boeing and the FAA, and the FAA has also determined that it is not appropriate to withdraw the NPRM. If a future review of submitted data substantiates MS Asia's claim that the root cause of the corrosion detected on the trunnion bore and the associated risk of fracture is not the consequence of the incorrect paint scheme application, then we may grant relief through either additional rulemaking or a global alternative method of compliance (AMOC).

We have not revised this final rule regarding a connection between improper finish application and the potential onset of corrosion.

We note that the dates of the discrepant overhaul specified in paragraph (g) of this AD differ from the dates given in Boeing Special Attention Service Bulletin 737–32–1486, dated November 6, 2014, and in MS Asia's

comments. The dates in paragraph (g) of this AD were determined by an investigation of MS Asia's maintenance records by an FAA inspector. After that review of maintenance records by an FAA field office, we concur with MS Asia's statement that this improper rework is limited to their facility in Singapore. We have revised this final rule to refer to MS Asia instead of SAFRAN Messier-Bugatti-Dowty to avoid confusion regarding affected parts.

#### **Requests for Clarification Regarding the Nose Landing Gear (NLG)**

Boeing and the European Aviation Safety Agency (EASA) requested that we clarify why the NPRM did not address actions specified in the service information for the NLG.

We agree that there is a need to clarify. The discrepant rework described in the Boeing service information does specify the NLG as well as the MLG. We note that in the Boeing service information, inspections of the MLG were specified for safety and were so labeled. However, inspections of the NLG were not determined by Boeing to be a safety issue. Those NLG inspections were labeled as economic inspections. This determination is consistent with the FAA's safety determination. Issues involving potential collapse of the NLG are evaluated on a case-by-case basis, but are typically determined not to be safety issues. In the event of failure of the NLG, the flight crew normally retains adequate directional control of the airplane via differential braking, engine thrust, and/or rudder. This is not the case for MLG collapses. We have not changed this AD in this regard.

#### **Request To Revise Corrective Action in Paragraph (i) of the Proposed AD**

Boeing requested that we include Part 7 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737–32–1486, dated November 6, 2014, in the applicable investigative and corrective actions identified in paragraph (i) of the proposed AD. Boeing stated that the replacement of the MLG outer cylinder in accordance with Part 7 should be allowed as an option for compliance with the requirements of paragraph (i) of the proposed AD.

We have confirmed that Boeing's requested change to paragraph (i) of this AD is not needed since Part 7 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737–32–1486, dated November 6, 2014, is already cited in paragraph (j)(3) of this AD as terminating action for the actions

required by paragraph (i) of this AD. We have not changed this AD in this regard.

#### **Request To Clarify "New" Part**

EASA stated that the NPRM does not explicitly state that replacement with a new part is acceptable unless the new part belongs to "Appendix D (wrong batch)."

We are not sure what EASA intended by the term "new." This would ordinarily indicate a brand new part obtained from the design approval holder or authorized supplier that has never previously been placed into service. However, we infer from EASA's statement that it intends the term to mean a different part than what is currently installed on the airplane. If this is the case, then this issue is already addressed in the service information. For example, for replacement of the entire MLG, Part 8 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737–32–1486, dated November 6, 2014, specifies that such replacement be accomplished with a serviceable MLG. By definition, the components listed in Appendix D of SASB 737–32–1486, R1 are not serviceable. We have not changed this AD in this regard.

#### **Requests To Clarify/Revise Overhaul Procedures and Clarify Component Installations**

SunExpress requested clarification that overhaul of affected components/assemblies specified in the service information is terminating action for inspections. SunExpress stated that the service information has a note specifying to not reinstall a removed component and/or MLG on another airplane until overhaul is completed.

United Airlines (UAL) requested that we revise paragraph (l) of the proposed AD to allow operators to install affected parts as long as they have been overhauled using the component maintenance manual and Boeing Special Attention Service Bulletin 737–32–1486, dated November 6, 2014, as revised by SASB 737–32–1486, R1. UAL stated that the wording in paragraph (l) of the proposed AD implies that all affected serial numbers would need FAA approval for repair/overhaul.

In addition, SunExpress requested clarification as to whether each sub-part or sub-assembly under an MLG component installation is also affected individually. SunExpress asked if, for example, a sub-part (e.g., inner cylinder) that was previously installed on an MLG assembly affected by the proposed AD would be subject to the AD requirements if it is installed on a different unaffected MLG assembly.

We partially agree with the commenters' requests. We find that the instructions in the service information for overhaul, as specified in the NPRM, already address the commenters' concerns. However, we agree that additional clarification would be helpful. We have revised paragraph (l) of this AD to specify, in part, that an MLG may not be installed unless that MLG has been overhauled as specified in the applicable corrective actions of paragraphs (h) and (i) of this AD, or using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

In addition, to address SunExpress's comment concerning component installations, we provide the following clarification. Based on accepted maintenance practices, a part number would include all of the components that make up that part. It is incumbent upon the operator to either inspect or do a records review to identify those parts affected by this AD. Any parts identified, including all components of those parts, are affected. As stated previously, we have revised paragraph (l) of this AD to provide clarification.

#### Request To Extend Proposed Compliance Time

SunExpress requested that we revise the proposed compliance time for the MLG inspections from 24 months to 36 months to accommodate its maintenance schedule. SunExpress pointed out that the longer compliance time would be financially beneficial for operators.

We do not agree with SunExpress's request to extend the compliance time. The operator provided no technical justification for revising this compliance time. Stress corrosion cracking of the external surfaces of the MLG is a significant safety issue, and we have determined that the proposed

inspection threshold is warranted, based on the effectiveness of the inspection procedure and the FAA transport airplane risk assessment.

In developing an appropriate compliance time for this AD, we considered the safety issues as well as the recommendations of the manufacturer, the availability of necessary parts, and the practical aspect of accomplishing the required inspection within an interval of time that corresponds to the normal maintenance schedules of most affected operators. We considered the manufacturer's recommendation as well as the time necessary to complete the rulemaking process, and found that a 24-month initial compliance time should fall well within the time that the majority of operators have regular maintenance visits scheduled. In light of these factors, we have determined that the 24-month initial compliance time, as proposed, is appropriate. We have not changed this AD in this regard.

#### Effect of Winglets on Accomplishment of the Proposed Actions

Aviation Partners Boeing stated that accomplishing Supplemental Type Certificate (STC) ST00830SE does not affect the actions specified in the NPRM.

We concur with the commenter. We have redesignated paragraph (c) of the proposed AD as (c)(1) and added new paragraph (c)(2) 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" 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 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 for correcting 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 AD.

#### Related Service Information Under 1 CFR Part 51

We reviewed Boeing Special Attention Service Bulletin 737-32-1486, dated November 6, 2014, as revised by SASB 737-32-1486, R1. The service information describes procedures for identifying affected parts, repetitive external surface detailed inspections for damage of affected parts, and related investigative and corrective actions if necessary. For certain airplanes, the service information describes procedures for a detailed inspection and bushing replacement of the trunnion bore, and related investigative and corrective actions. The service information also describes procedures for certain airplanes for a detailed inspection of the trunnion bore, and corrective actions. 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 33 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
External surface detailed inspection .....	Up to 16 work-hours × \$85 per hour = \$1,360 per inspection cycle.	\$0	\$1,360 per inspection cycle.	Up to \$44,880 per inspection cycle.
Outer cylinder assembly trunnion bore detailed inspection and bushing replacement (Groups 1–2, configuration 1).	70 work-hours × \$85 per hour = \$5,950	Negligible	\$5,950 .....	\$196,350.

We estimate the following costs to do any necessary replacements that would

be required based on the results of the inspections. We have no way of

determining the number of aircraft that might need this replacement.

## ON-CONDITION COSTS

Action	Labor cost	Cost per product
Outer cylinder assembly replacement (if required as a result of the outer cylinder assembly trunnion bore detailed inspection).	28 work-hours × \$85 per hour = \$2,380 .....	\$2,380

We have received no definitive data that would enable us to provide cost estimates for certain on-condition actions (MLG external surface repair, MLG component replacement, outer cylinder repair, and MLG replacement) 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 costs in our cost estimate.

The previous information is based on known affected airplanes. However, the MLG may have been overhauled outside of the Boeing Exchange Program as specified in the “Clarification of Affected MLGs” section of this 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.

#### 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):

**2017–04–11 The Boeing Company:**  
Amendment 39–18806; Docket No. FAA–2016–5468; Directorate Identifier 2015–NM–021–AD.

#### (a) Effective Date

This AD is effective March 29, 2017.

#### (b) Affected ADs

None.

#### (c) Applicability

(1) This AD applies to all The Boeing Company Model 737–600, –700, –700C, –800, and –900 series airplanes, certificated in any category.

(2) Installation of Supplemental Type Certificate (STC) ST00830SE ([http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rqstc.nsf/0/184DE9A71EC3FA5586257EAE00707DA6?OpenDocument&HighLight=st00830se](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rqstc.nsf/0/184DE9A71EC3FA5586257EAE00707DA6?OpenDocument&HighLight=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 32, Landing Gear.

#### (e) Unsafe Condition

This AD was prompted by reports of paint deterioration on the surface of the main landing gear (MLG) and early onset of corrosion in the trunnion bore of the MLG outer cylinder. We are issuing this AD to prevent stress corrosion cracking of the external surfaces of the MLG, which could result in a fracture of the MLG and consequent MLG collapse.

#### (f) Compliance

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

#### (g) Inspection for Affected Part/Serial Numbers

At the applicable time specified in table 1 of paragraph 1.E., “Compliance,” of Boeing Special Attention Service Bulletin 737–32–1486, dated November 6, 2014, as revised by Boeing Special Attention Service Bulletin 737–32–1486, Revision 1, dated April 1, 2015 (“SASB 737–32–1486, R1”), except as required by paragraph (k)(1) of this AD: Do the actions specified in paragraphs (g)(1) and (g)(2) of this AD in order to identify affected parts.

(1) Inspect the MLG to determine if it has any component installation or side strut assembly having a part number and serial number listed in Appendix D of Boeing Special Attention Service Bulletin 737–32–1486, dated November 6, 2014, as revised by SASB 737–32–1486, R1; except that the “Variable Number” column of Appendix D is to be disregarded in determining affected part and serial numbers. An MLG that has any MLG component installation or side strut assembly having a part number and serial number listed in Appendix D of Boeing Special Attention Service Bulletin 737–32–1486, dated November 6, 2014, as revised by SASB 737–32–1486, R1 is an affected part. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number and serial number of the MLG component installation and side strut assembly can be conclusively identified from that review.

(2) Do a records review to determine if the MLG has been overhauled by Messier Services Asia Pte Ltd (MS Asia) outside of the Boeing Exchange program from June 1, 2009, to July 31, 2013. If it is determined that the MLG has been overhauled by MS Asia outside of the Boeing Exchange program from

June 1, 2009, to July 31, 2013, that MLG is an affected part. If from the records review it cannot be conclusively determined that an overhauled MLG was overhauled by a maintenance, repair, and overhaul (MRO) facility other than MS Asia, or if from the records review it cannot be conclusively determined that an MLG overhauled by MS Asia was part of the Boeing Exchange Program from June 1, 2009, to July 31, 2013, that MLG is an affected part.

#### (h) Requirements for Affected Parts

If any affected part is identified during the inspection or records review required by paragraph (g) of this AD: At the applicable time specified in table 3 of paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 737-32-1486, dated November 6, 2014, as revised by SASB 737-32-1486, R1, except as required by paragraph (k)(1) of this AD, do detailed inspections of the external surfaces of the MLG, and do all applicable related investigative and corrective actions, in accordance with Parts 1, 3, and 4 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-32-1486, dated November 6, 2014, as revised by SASB 737-32-1486, R1, except as required by paragraph (k)(2) of this AD. Repeat the inspections thereafter at the applicable time specified in table 3 of paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 737-32-1486, dated November 6, 2014, as revised by SASB 737-32-1486, R1. All applicable related investigative and corrective actions must be done before further flight.

#### (i) Additional Actions for Groups 1 and 2, Configuration 1 Airplanes

For airplanes that are identified as Groups 1 and 2, Configuration 1, in Boeing Special Attention Service Bulletin 737-32-1486, dated November 6, 2014, as revised by SASB 737-32-1486, R1, and that have an affected part identified during the inspection or records review required by paragraph (g) of this AD: At the applicable time specified in table 4 of paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 737-32-1486, dated November 6, 2014, as revised by SASB 737-32-1486, R1, except as required by paragraph (k)(1) of this AD, do a detailed inspection and bushing replacement of the MLG trunnion bore, and do all applicable related investigative and corrective actions, in accordance with Parts 2, 5, and 6 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-32-1486, dated November 6, 2014, as revised by SASB 737-32-1486, R1, except as required by paragraph (k)(2) of this AD.

#### (j) Terminating Action

(1) MLG replacement in accordance with Part 8 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-32-1486, dated November 6, 2014, as revised by SASB 737-32-1486, R1, terminates the requirements of paragraphs (g), (h), and (i) of this AD for that MLG only.

(2) MLG component replacement in accordance with Part 4 of the Accomplishment Instructions of Boeing

Special Attention Service Bulletin 737-32-1486, dated November 6, 2014, as revised by SASB 737-32-1486, R1, terminates the requirements of paragraph (h) of this AD for that component only.

(3) MLG outer cylinder replacement in accordance with Part 7 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-32-1486, dated November 6, 2014, as revised by SASB 737-32-1486, R1, terminates the requirements of paragraph (i) of this AD for that component only.

#### (k) Exceptions to Service Information Specifications

(1) Where paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 737-32-1486, dated November 6, 2014, as revised by SASB 737-32-1486, R1, specifies a compliance time "after the original issue date of this service bulletin," this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Although Boeing Special Attention Service Bulletin 737-32-1486, dated November 6, 2014, as revised by SASB 737-32-1486, R1, specifies to contact Boeing for repair instructions, and specifies that action as "RC" (Required for Compliance), this AD requires repair before further flight using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

#### (l) Parts Installation Prohibition

As of the effective date of this AD, no person may install the following on any airplane identified in paragraph (c)(1) of this AD, unless either the MLG or MLG component has first been overhauled as specified in the corrective actions of paragraphs (h) and (i), as applicable, of this AD, or the MLG or MLG component has been overhauled using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

(1) An MLG or MLG component having a part number and serial number identified in Appendix D of SASB 737-32-1486, R1.

(2) An MLG that was overhauled between June 1, 2009, and July 31, 2013, by MS Asia.

#### (m) 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 (n) of this AD. Information may be emailed to: [9-ANM-Seattle-ACO-AMOC-Requests@faa.gov](mailto: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, 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 (k)(2) of this AD: 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

For more information about this AD, contact Alan Pohl, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6450; fax: 425-917-6590; email: [alan.pohl@faa.gov](mailto:alan.pohl@faa.gov).

#### (o) 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 737-32-1486, dated November 6, 2014.

(ii) Boeing Special Attention Service Bulletin 737-32-1486, Revision 1, dated April 1, 2015.

(3) For Boeing 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>.

(4) You may view this 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 February 8, 2017.

Michael Kaszycki,

Acting Manager, Transport Airplane  
Directorate, Aircraft Certification Service.

[FR Doc. 2017-03261 Filed 2-21-17; 8:45 am]

BILLING CODE 4910-13-P

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2016-9305; Directorate  
Identifier 2016-NM-073-AD; Amendment  
39-18804; AD 2017-04-09]

RIN 2120-AA64

#### Airworthiness Directives; Airbus Airplanes

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

**ACTION:** Final rule.

**SUMMARY:** We are superseding Airworthiness Directive (AD) 2012-22-12 for all Airbus Model A330-243, -243F, -341, -342, and -343 airplanes. AD 2012-22-12 required inspecting piccolo tubes and mount links, the aft side of the forward bulkhead, and outer boundary angles (OBAs); and doing corrective actions if necessary. This new AD retains certain requirements of AD 2012-22-12, and adds inspections of certain areas of the forward bulkhead, and related investigative and corrective actions if necessary. This AD was prompted by reports of cracking of air intake cowls, worn and detached attachment links, fractured thermal anti-ice (TAI) piccolo tubes, and loose or missing attachment rivets of the inner boundary angles (IBAs) and OBAs of the forward bulkhead. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective March 29, 2017.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of March 29, 2017.

**ADDRESSES:** For Airbus service information identified in this final rule, contact Airbus SAS—Airworthiness Office—EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); Internet <http://www.airbus.com>.

For Rolls-Royce service information identified in this final rule, contact Rolls-Royce Plc, Technical Publications,

P.O. Box 31, Derby, DE24 8BJ, United Kingdom; telephone 44 (0) 1332 245882; fax 44 (0) 1332 249936; Internet <http://www.Rolls-Royce.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-2016-9305.

#### 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-2016-9305; 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 (telephone 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:

Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1138; fax 425-227-1149.

#### SUPPLEMENTARY INFORMATION:

##### Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2012-22-12, Amendment 39-17248 (77 FR 67263, November 9, 2012) (“AD 2012-22-12”). AD 2012-22-12 applied to all Airbus Model A330-243, -243F, -341, -342, and -343 airplanes. The NPRM published in the **Federal Register** on November 7, 2016 (81 FR 78085). The NPRM was prompted by reports of cracking of air intake cowls on Rolls-Royce Trent engines, worn and detached attachment links, fractured TAI piccolo tubes, and loose or missing attachment rivets of the IBAs and the OBAs of the forward bulkhead. The NPRM proposed to retain certain requirements of AD 2012-22-12, and add repetitive inspections for pulled, loose, and missing attachment rivets of the IBAs and OBAs of the forward bulkhead, and related investigative and corrective actions if necessary. We are

issuing this AD to detect and correct degraded structural integrity of the engine nose cowl, which in the case of forward bulkhead damage in conjunction with a broken piccolo tube, could lead to damage to the engine and operation in icing conditions with reduced TAI performance.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive, 2016-0086R1, dated May 13, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus Model 330-243, -243F, -341, -342, and -343 airplanes. The MCAI states:

During shop visit, cracks were found in several primary structural parts of Rolls Royce (RR) Trent 700 engine air intake cowls, specifically in the forward bulkhead web, web stiffeners and outer boundary angles (OBA). In addition, several attachment links were found severely worn, and some became detached. In two cases, the thermal anti-ice (TAI) piccolo tube was found fractured. Investigation results show that the cracks are most likely due to acoustic excitation and vibration.

A broken piccolo tube, if not detected and corrected, in conjunction with forward air intake cowl bulkhead damage, could lead to in-flight detachment of the outer barrel, possibly resulting in damage to the engine or reduced control of the aeroplane.

To address this potential unsafe condition, Airbus issued Service Bulletin (SB) A330-71-3025, making reference to RR SB RB.211-71-AG416, to provide inspection instructions, and, depending on findings, accomplishment of applicable corrective action(s).

Consequently, EASA issued AD 2011-0062 [which corresponds to FAA AD 2012-22-12] to require repetitive special detailed inspections (SDI) [borescope] of the piccolo tube and affected mount links, the aft side of forward bulkhead, inner boundary angles (IBA) and OBA of the RR Trent 700 air intake cowl assemblies, and, depending on findings, accomplishment of applicable corrective action(s).

Since EASA AD 2011-0062 was issued, some occurrences were reported of finding attachment rivets of the IBA and OBA either pulled, loose, or missing during inspection. It was determined that the affected IBA and OBA rivets may not have been previously inspected if operators accomplished the required inspection in accordance with the instructions of RR SB RB.211-71-AG416 at original issue.

To address this potentially missed inspection, Airbus published SB A330-71-3033, providing instructions for a one-time detailed inspection of the IBA and OBA attachment rivets, to be accomplished if the previous inspection was accomplished using the instructions of RR SB RB.211-71-AG416 at original issue. Airbus also published SB A330-71-3025 Revision 2, adding an inspection of the IBA and OBA attachment