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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-7270; Product Identifier 2015-NM-116-AD; Amendment 39-19025; AD 2017-18-16]

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 certain The Boeing Company Model 737-700 and -700C series airplanes. This AD was prompted by a report that, for certain airplanes, the nose-up pitch trim limit and associated warning will allow the horizontal stabilizer position to be set outside acceptable limits for a mis-trimmed takeoff condition. This AD requires, depending on airplane configuration, replacing certain pitch trim light plates, relocating certain position warning horn switches, revising certain software, removing a certain placard, and doing 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 October 16, 2017.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of October 16, 2017.

ADDRESSES: For Aviation Partners Boeing service information identified in this final rule, contact Aviation Partners Boeing, 2811 South 102nd Street, Suite 200, Seattle, WA 98168; phone: 206-830-7699; fax: 206-767-3355; email: leng@aviationpartners.com; Internet: http://www.aviationpartnersboeing.com.

For Boeing 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 referenced service information at the FAA, Transport Standards Branch, 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-2016-7270.

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-2016-7270; 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: Fnu Winarto, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6659; fax: 425-917-6590; email: fnu.winarto@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 737-700 and -700C series airplanes. The NPRM published in the Federal Register on June 28, 2016 (81 FR 41894). The NPRM was prompted by a report that, for airplanes with blended winglets, the nose-up pitch trim limit and associated warning for the horizontal stabilizer control system will allow the stabilizer position to be set outside acceptable limits for a mis-trimmed takeoff condition. The NPRM proposed to require, depending on airplane configuration, replacing the pitch trim light plates on the flight deck control stand, relocating the position warning horn switches of the horizontal stabilizer, revising the software, removing the placard, and doing related investigative and corrective actions if necessary. We are issuing this AD to prevent a stabilizer position set outside acceptable limits for a mis-trimmed takeoff condition. Settings outside of the appropriate pitch trim limits could result in loss of controllability of the airplane during takeoff.

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.

Support for the NPRM

Air Line Pilots Association, International (ALPA) stated its support for the NPRM. United Airlines stated that it has no technical objections with the NPRM.

Request To Use the Latest Service Information

Aviation Partners Boeing requested that the NPRM be updated to include the latest service information, which is Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 3, dated July 19, 2016.

We agree with the commenter's request. Since the NPRM was issued, we have reviewed Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017, which provides minor changes. We have updated this AD to refer to Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017. We have also added credit for Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 3, dated July 19, 2016.

Request To Revise Boeing Service Information

Southwest Airlines (SWA) requested that Boeing Alert Service Bulletin 737-27A1306, dated September 10, 2015, be revised to reference revised Aviation Partners Boeing service information. SWA stated that Boeing Alert Service Bulletin 737-27A1306, dated September 10, 2015, specifies concurrent accomplishment of Aviation Partners Boeing Service Bulletin AP737-27-002, March 31, 2015. SWA stated that this concurrent requirement should call for the use of Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 2, dated March 1, 2016, as stated throughout the NPRM.

We acknowledge the commenter's request. After we issued the NPRM, Boeing published Boeing Alert Service Bulletin 737-27A1306, Revision 1, dated December 14, 2016, which identifies Aviation Partners Boeing Service Bulletins "AP737-27-002, Original Issue, Revision 1, Revision 2, or Revision 3," as concurrent requirements. Aviation Partners Boeing has since published Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017. We have revised paragraph (g)(2) of this AD to refer to Boeing Alert Service Bulletin 737-27A1306, dated September 10, 2015, as revised by Boeing Alert Service Bulletin 737-27A1306, Revision 1, dated December 14, 2016. As we stated previously, Aviation Partners Boeing has published Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017. Paragraphs (g)(1) and (g)(2) of this AD also refer to Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017.

Request To Make Service Information Available or Revise the Applicability

Delta Air Lines (DAL) requested that we either make Aviation Partners Boeing Service Bulletin AP737-34-005, dated July 17, 2015, available to all operators or revise paragraph (c)(3) of the applicability in the proposed AD to identify specifically affected airplanes. DAL stated that, during its review of the NPRM, it was not able to obtain a copy of Aviation Partners Boeing Service Bulletin AP737-34-005, dated July 17, 2015. DAL commented that it requested Aviation Partners Boeing Service Bulletin AP737-34-005, dated July 17, 2015, from Boeing and was advised that the Aviation Partners Boeing service information was not applicable to DAL airplanes, and, therefore, the service information would not be made available to DAL. DAL stated that, as a result, it was unable to independently verify that there are no DAL airplanes identified in Aviation Partners Boeing Service Bulletin AP737-34-005, dated July 17, 2015. DAL commented that paragraph 1.A.1., "Aircraft Affected," of Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 2, dated March 1, 2016, does identify airplanes having line numbers 384 and 3128 as affected by Aviation Partners Boeing Service Bulletin AP737-34-005, dated July 17, 2015. DAL stated that, however, paragraph (c)(3) of the proposed AD does not mention Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 2, dated March 1, 2016, as a method to identify airplanes.

DAL commented that it would prefer that Aviation Partners Boeing Service Bulletin AP737-34-005, dated July 17, 2015, be available to all operators so that each operator can determine whether or not their airplanes are affected. DAL also stated that if the manufacturer cannot support this, DAL suggested that paragraph (c)(3) in the AD should indicate that Aviation Partners Boeing Service Bulletin AP737-34-005, dated July 17, 2015, is only applicable to airplanes having line numbers 384 and 3128.

We partially agree with the commenter's request. We disagree with revising the applicability of this AD. However, the service information specified in paragraphs (c), (g), and (h) of this AD is incorporated by reference in this AD, and it should be available to all operators, as well as the general public, after the AD is published. We have provided availability information for the required service information in both the preamble and regulatory text of this AD.

We have also clarified the actions for the airplane having line number 3128. Boeing Alert Service Bulletin 737-27A1306, dated September 10, 2015, as specified in paragraph (c)(2) of this AD, also references line number 3128. Paragraph (g)(2) of this AD refers to Boeing Alert Service

Bulletin 737-27A1306, dated September 10, 2015, for accomplishing actions. Paragraph (h) of this AD refers to Aviation Partners Boeing Service Bulletin AP737-34-005, dated July 17, 2015, for accomplishing actions. For line number 3128, the actions in paragraph (h) of this AD should be done instead of paragraph (g)(2) of this AD. We have revised paragraph (g)(2) of this AD to exclude line number 3128.

In addition, we have clarified the actions for airplanes identified in paragraph (c)(2) of this AD by excluding those airplanes from paragraph (g)(1) of this AD. Paragraph (g)(1) of this AD specifies actions for airplanes identified in paragraph (c)(1) of this AD, which includes airplanes that are identified in paragraph (c)(2) of this AD. However, for airplanes identified in paragraph (c)(2) of this AD, the actions specified in paragraph (g)(2) of this AD must be done.

Request To Exclude Certain Airplanes From the Applicability

SWA requested that any airplane modified per Supplemental Type Certificate (STC) ST00830SE, Amendment dated April 21, 2015, dated August 26, 2015, or subsequent be excluded from the applicability of the proposed AD. SWA stated that it has recently incorporated STC ST00830SE (Amendment dated April 21, 2015) on airplanes that have not previously had blended winglets installed. SWA commented that the Amendment dated April 21, 2015, of the STC incorporates the intent of Aviation Partners Boeing Service Bulletin AP737-27-002. SWA stated that it is currently incorporating STC ST00830SE, Amendment dated August 26, 2015, on airplanes that have not previously had blended winglets installed.

We partially agree with the commenter's request. We concur with the assertion that installation of STC ST00830SE at Amendment dated April 21, 2015, fulfills the equivalent actions specified in Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017. In addition, there are later amendments that apply to Model 737-700 series airplanes that fulfill the actions specified in Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017. We have revised paragraph (c) of this AD to exclude airplanes on which winglets are installed as specified in STC ST00830SE, Amendment dated on or after April 21, 2015.

Request To Include Certain Line Numbers in the Applicability

SWA requested that we include certain line numbers in the applicability of the proposed AD. SWA stated that paragraph 1.A.1., “Aircraft Affected,” of Aviation Partners Boeing Service Bulletin AP737-27-002 defines the effectivity of Group 2 airplanes as “. . . manufacturing line number 3100 and on . . . .” SWA commented that it is unclear if this modification is being incorporated on the Boeing production line. SWA stated that, if this modification is being incorporated on the Boeing production line, then the manufacturing line number should be identified as the upper end of the effectivity of Aviation Partners Boeing Service Bulletin AP737-27-002 and in the upper end of the proposed applicability.

We agree that operators need to know which airplanes are affected. However, we disagree with including line numbers in the applicability of this AD, because the Aviation Partners Boeing kit configuration identified in section 1.A.1., “Aircraft Affected,” of Aviation Partners Boeing Service Bulletin AP737-27-002 clearly identifies the airplanes that need the modification. Airplanes delivered from Boeing with other kit configuration numbers are outside the effectivity, and therefore, do not require the accomplishment of Aviation Partners Boeing Service Bulletin AP737-27-002. We have not changed this AD in this regard.

Request To Revise the Description of the Unsafe Condition

Boeing requested that we revise the unsafe condition statement throughout the NPRM, so that it is more consistent with the description specified in the service information. Boeing clarified that accomplishing the proposed requirements will not prevent takeoffs with incorrect trim settings, but

rather allows for acceptable takeoff limits at specific airplane configurations in which the stabilizer trim has been set at a maximum mis-trim, as specified in 14 CFR part 25.

We agree to revise the unsafe condition statement as suggested by Boeing for the reason provided. We have revised this final rule accordingly.

Request To Revise the Proposed Compliance Time

ALPA requested that we reduce the proposed compliance time from "72 months after the effective date of this AD" to "36 months after the effective date of this AD." ALPA commented that it is of the upmost importance to ensure the airplane is taking off in the correct trim setting and the associated warning system has to work properly in order to alert the flight crew of a possible misconfiguration before takeoff.

We do not agree to reduce the compliance time for the requirements of this AD. We agree that it is important to have the correct configuration of the airplane for takeoff, because of the potential unsafe conditions that incorrect configurations might pose. However, this AD does not address that safety concern. After considering the available information, we have determined that the compliance time, as proposed, represents an appropriate interval of time in which the required actions can be performed in a timely manner within the affected fleet, while still maintaining an adequate level of safety. In developing an appropriate compliance time, we considered the safety implications, parts availability, and normal maintenance schedules for timely accomplishment of the modifications. Further, we arrived at the proposed compliance time with the manufacturer's concurrence. To reduce the proposed compliance time would necessitate (under the provisions of the Administrative Procedure Act) reissuing the notice, reopening the period for public comment, considering additional comments subsequently received, and eventually issuing a final rule. In light of this, and in consideration of the amount of time that has already elapsed since issuance of the original notice, we have determined that further delay of this final rule is not appropriate. However, if additional data are presented that would justify a shorter compliance time, we may consider further rulemaking on this issue. We have not changed this AD in this regard.

Request To Clarify Certain Acceptable Operator-Supplied Parts

DAL requested that we clarify the NPRM to specify whether certain alternative lockwire part numbers (P/Ns) are acceptable alternatives to those specified in Aviation Partners Boeing Service Bulletin AP737-27-002. DAL stated that table 3 of Aviation Partners Boeing Service Bulletin AP737-27-002 calls for the use of lockwire having P/N MS20995NC20 and P/N MS20995NC32. DAL stated that review of parts available on MyBoeingFleet Part Page shows that those part numbers are no longer available. DAL commented that the Part Page provides substitute P/Ns M000200850 and P/N M000320850, respectively. DAL stated that Aviation Partners Boeing Service Bulletin AP737-27-002 includes a note in the Accomplishment Instructions, which refers operators to chapter 51 of the Boeing 737 Structural Repair Manual (SRM) for use of approved fastener and process material substitutions. DAL commented that this SRM reference does not detail any substitutes for the lockwire. DAL stated that, lacking an approval source other than the Boeing Part Page, an alternative method of compliance (AMOC) would be required to use lockwire having P/N M000200850 and P/N M000320850. DAL commented that specifying these would facilitate operator procurement efforts and minimize potential AMOC requests.

We agree to clarify. Part Number M000200850 and P/N M000320850 are the Boeing stock numbers, which meet the MS20995 lockwire specifications in Aviation Partners Boeing Service Bulletin AP737-27-002. In addition, specific lockwire part numbers are not included in the Required for Compliance (RC) steps of Aviation Partners Boeing Service Bulletin AP737-27-002. Therefore, we find that it is not necessary to revise this AD to address this issue, and we have not changed this AD in this regard.

Request To Clarify Recordkeeping Requirements

DAL requested that we exclude the explicit instruction in Note 3 of the Accomplishment Instructions of Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 2, dated March 1, 2016, that specifies making a recordkeeping entry in the airplane records once the service information is completed. DAL requested that, if the exclusion of Note 3 cannot be granted in the AD, the final rule provide an allowance for operators to use their existing recordkeeping procedures to record completion of Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 2, dated March 1, 2016.

DAL commented that its recordkeeping process would track compliance with a specific engineering document number used to embody a specified service bulletin on the airplane. DAL stated that it would not typically record service bulletin accomplishment using a phrase similar to that given in Note 3 of the Accomplishment Instructions of Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 2, dated March 1, 2016. DAL commented that the requirement to show compliance with the subject service information does not require such explicit requirements. DAL stated that recording the service information exactly as detailed in the note does not improve airplane safety, and therefore, latitude should be given to operators regarding their method for recording compliance with Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 2, dated March 1, 2016. DAL stated that this will prevent the need for future AMOC requests.

We agree that operators may use their existing recordkeeping processes to document maintenance actions performed using Aviation Partners Boeing Service Bulletin AP737-27-002. For this AD, recordkeeping is not a critical step that addresses the unsafe condition. As DAL pointed out, the actions specified in Note 3 are not called out in an RC step in the Accomplishment Instructions. We have added paragraph (j)(2) to this AD to clarify that recordkeeping is not required by this AD.

Request To Clarify the Requirements for the Onboard Performance Tool (OPT)

DAL requested that we clarify the requirements for incorporating the OPT. DAL stated that Aviation Partners Boeing Service Bulletin AP737-27-002 specifies concurrent actions recommending that users of the OPT contact Boeing for an updated database and instructions on how to incorporate this database into the OPT. DAL commented that it does not use the OPT and that the proposed AD does not give any guidance with respect to this concurrent requirement. DAL commented that the concurrent requirement is actually written as a recommendation, which would imply that it is not a mandatory action and that compliance is optional.

We agree to provide clarification regarding the OPT. We infer that DAL meant to refer to Aviation Partners Boeing Service Bulletin AP737-34-005, as there are no concurrent actions specified in Aviation Partners Boeing Service Bulletin AP737-27-002. The usage of the OPT, as specified in the concurrent requirements section of Aviation Partners Boeing Service Bulletin AP737-34-005, dated July 17, 2015, is optional and is not a requirement of this AD. We have not changed this AD in this regard.

Request To Use Later-Approved Software Versions

SWA requested that the proposed AD allow for the installation of later-approved versions of the Flight Management Computer (FMC) Model Engine Database (MEDB) and/or FMC Operational Program Software (OPS). SWA stated that Part 4 of Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 2, dated March 1, 2016, specifies the installation of FMC MEDB software having P/N BCG-01T-A0 with compatible FMC OPS Versions U10.8A, U11, or U12. SWA commented that if any later versions of FMC MEDB or FMC OPS are installed at a future date an AMOC would be needed to stay in compliance with the AD.

We disagree with the commenter's request. This AD requires, for certain airplanes, the actions specified in Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24,

2017, which identifies specific software that must be installed. That software must be installed to address the identified unsafe condition. However, under the provisions of paragraph (k) of this AD, we will consider requests for approval of new software if sufficient data are submitted to substantiate that the new software would provide an acceptable level of safety. We have not changed the final rule in this regard.

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 final rule.

Related Service Information Under 1 CFR Part 51

We reviewed the following Aviation Partners Boeing service information.

- Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017. This service information describes procedures for replacing the pitch trim light plates on the flight deck control stand, relocating the horizontal stabilizer position warning horn switches, and updating the software for the MEDB of the FMC.
- Aviation Partners Boeing Service Bulletin AP737-34-005, dated July 17, 2015. This service information describes procedures for updating the software in the MEDB for the FMC and removing a certain placard on the control stand.

We also reviewed the following Boeing service information.

- Boeing Alert Service Bulletin 737-27A1306, dated September 10, 2015. This service information describes procedures for replacing the pitch trim light plates on the flight deck control stand, relocating the position warning horn switches of the horizontal stabilizer, and installing new software for the MEDB for the FMC.
- Boeing Alert Service Bulletin 737-27A1306, Revision 1, dated December 14, 2016. This service information is a short form revision that specifies changes to the concurrent requirements and the affected publications identified in Boeing Alert Service Bulletin 737-27A1306, dated September 10, 2015.

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 569 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
Relocation	Up to 4 work-hours × $85 per hour = $340	$0	Up to $340	Up to $193,460.

Replacement	Up to 3 work-hours × $85 per hour = $255	1,973	Up to $2,228	Up to $1,267,732.
Software installation	2 work-hours × $85 per hour = $170	0	$170	$96,730.
Placard removal (2 airplanes)	1 work-hour × $85 per hour = $85	0	$85	$170.

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 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 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):

2017-18-16 The Boeing Company: Amendment 39-19025; Docket No. FAA-2016-7270; Product Identifier 2015-NM-116-AD.

(a) Effective Date

This AD is effective October 16, 2017.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 737-700 and -700C series airplanes identified in paragraphs (c)(1), (c)(2), and (c)(3) of this AD, certificated in any category, except for airplanes on which winglets are installed as specified in Supplemental Type Certificate (STC) ST00830SE, Amendment dated on or after April 21, 2015.

(1) Airplanes having STC ST00830SE installed (Aviation Partners Boeing blended winglets), as identified in Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017.

(2) Airplanes identified in Boeing Alert Service Bulletin 737-27A1306, dated September 10, 2015, as revised by Boeing Alert Service Bulletin 737-27A1306, Revision 1, dated December 14, 2016.

(3) Airplanes identified in Aviation Partners Boeing Service Bulletin AP737-34-005, dated July 17, 2015.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight controls; Code 34, Navigation.

(e) Unsafe Condition

This AD was prompted by a report that for airplanes with blended winglets, the nose-up pitch trim limit and associated warning for the horizontal stabilizer control system will allow the stabilizer position to be set outside acceptable limits for a mis-trimmed takeoff condition. We are issuing this AD to prevent takeoff with a stabilizer position set outside acceptable limits for a mis-trimmed takeoff condition. Settings outside of the appropriate pitch trim limits could result in loss of controllability of the airplane during takeoff.

(f) Compliance

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

(g) Replacement, Relocation, and Applicable Related Investigative and Corrective Actions

(1) For airplanes identified in paragraph (c)(1) of this AD, except for airplanes also identified in paragraph (c)(2) of this AD: Within 72 months after the effective date of this AD, relocate the position warning horn switches of the horizontal stabilizer, replace the pitch trim light plates on the flight deck control stand, revise the software, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017, except as specified in paragraph (j) of this AD. Do all applicable related investigative and corrective actions before further flight.

(2) For airplanes identified in paragraph (c)(2) of this AD, except for the airplane having line number 3128: Within 72 months after the effective date of this AD, relocate the position warning horn switches of the horizontal stabilizer, replace the pitch trim light plates on the flight deck control stand, revise the software, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-27A1306, dated September 10, 2015, as revised by Boeing Alert Service Bulletin 737-27A1306, Revision 1, dated December 14, 2016; and Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017; except as specified in paragraph (j) of this AD. Do all applicable related investigative and corrective actions before further flight.

(h) Software Revision and Placard Removal

For airplanes identified in paragraph (c)(3) of this AD: Within 72 months after the effective date of this AD, revise the software and remove the placard, in accordance with the Accomplishment Instructions of Aviation Partners Boeing Service Bulletin AP737-34-005, dated July 17, 2015.

(i) Credit for Previous Actions

(1) This paragraph provides credit for the actions specified in paragraphs (g)(1) and (g)(2) of this AD for Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017, if those actions were performed before the effective date of this AD using the service information specified in paragraph (i)(1)(i), (i)(1)(ii), (i)(1)(iii), or (i)(1)(iv) of this AD.

(i) Aviation Partners Boeing Service Bulletin AP737-27-002, dated March 31, 2015.

(ii) Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 1, dated August 6, 2015.

(iii) Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 2, dated March 1, 2016.

(iv) Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 3, dated July 19, 2016.

(2) This paragraph provides credit for the actions specified in paragraph (g)(2) of this AD for Boeing Alert Service Bulletin 737-27A1306, dated September 10, 2015, as revised by Boeing Alert Service Bulletin 737-27A1306, Revision 1, dated December 14, 2016, if those actions were performed before the effective date of this AD using the service information specified in Boeing Alert Service Bulletin 737-27A1306, dated September 10, 2015.

(j) Exceptions to the Service Information

(1) Where Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017, specifies to contact Boeing for appropriate action, and specifies that action as Required for Compliance (RC): Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(2) Although Note 3 of paragraph 3.A., “General,” Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017, specifies to make an entry into the airplane's records, that action is not required by this AD.

(k) 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 (l)(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, to make those findings. For a repair method to be approved, the repair, 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 (j) of this AD: For service information that contains steps that are labeled as RC, the provisions of paragraphs (k)(4)(i) and (k)(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. 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.

(l) Related Information

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

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (m)(3), (m)(4), and (m)(5) of this AD.

(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 the AD specifies otherwise.

(i) Aviation Partners Boeing Service Bulletin AP737-27-002, Revision 4, dated April 24, 2017.

(ii) Aviation Partners Boeing Service Bulletin AP737-34-005, dated July 17, 2015.

(iii) Boeing Alert Service Bulletin 737-27A1306, dated September 10, 2015.

(iv) Boeing Alert Service Bulletin 737-27A1306, Revision 1, dated December 14, 2016.

(3) For Aviation Partners Boeing service information identified in this AD, contact Aviation Partners Boeing, 2811 South 102nd Street, Suite 200, Seattle, WA 98168; phone: 206-830-7699; fax: 206-767-3355; email: leng@aviationpartners.com; Internet: http://www.aviationpartnersboeing.com.

(4) For Boeing 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.

(5) You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(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, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

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Jeffrey E. Duven,

Director, System Oversight Division,

Aircraft Certification Service.