

**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES**

**LARGE AIRCRAFT  
BIWEEKLY 2019-04**

*2/4/2019 - 2/17/2019*



Federal Aviation Administration  
Continued Operational Safety Policy Section, AIR-141  
P.O. Box 25082  
Oklahoma City, OK 73125-0460

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## LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
Information Key: E – Emergency; COR – Correction; R – Replaces, A – Affects			
<b>Biweekly 2019-01</b>			
2018-22-07		Engine Alliance	GP7270, GP7272, and GP7277 model turbofan engines
2018-23-12	COR	Zodiac Aero Evacuation Systems	Fusible plugs installed on emergency evacuation equipment
2018-25-08	R 2017-22-07	Airbus SAS	A319, A320, A321 airplanes
2018-26-01	R 2018-18-01	CFM International S.A.	CFM56-7B turbofan engines
2018-26-03		The Boeing Company	757-200 series airplanes
2018-26-04		Airbus SAS	A350-941 and -1041 airplanes
2018-26-05	A 2015-19-01	The Boeing Company	777-200, 777-200LR, 777-300, 777-300ER, and 777F series airplanes
2018-26-06		The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series airplanes
<b>Biweekly 2019-02</b>			
2019-01-01		The Boeing Company	787-8 airplanes
<b>Biweekly 2019-03</b>			
2019-01-01	COR	The Boeing Company	787-8 airplanes
<b>Biweekly 2019-04</b>			
2018-23-04		Bombardier, Inc.	DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes
2018-24-01		International Aero Engines	PW1133G-JM, PW1133GA-JM, PW1130G-JM, PW1127G-JM, PW1127GA-JM, PW1127G1-JM, PW1124G-JM, PW1124G1-JM, and PW1122G-JM turbofan engines
2019-01-03	R 2016-18-01	The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series airplanes
2019-01-04		The Boeing Company	787 series airplanes
2019-01-05	A 2017-05-10	Airbus SAS	A330-201, A330-202, A330-203, A330-223, A330-243, A330-223F, A330-243F, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342, and A330-343 airplanes
2019-01-06		The Boeing Company	737-100, -200, -200C, -300, -400, and -500 series airplanes
2019-01-07		Airbus SAS	A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes
2019-01-08		The Boeing Company	777-200, -200LR, -300, and -300ER series airplanes
2019-02-01	R 2018-16-07	General Electric Company	GEnx-1B54, -1B58, -1B64, -1B67, -1B70, -1B54/P1, -1B58/P1, -1B64/P1, -1B67/P1, -1B70/P1, -1B54/P2, -1B58/P2, -1B64/P2, -1B67/P2, -1B70/P2, -1B70C/P1, -1B70/72/P1, -1B70/75/P1, -1B74/75/P1, -1B75/P1, -1B70C/P2, -1B70/72/P2, -1B70/75/P2, -1B74/75/P2, -1B75/P2, -1B76/P2, -1B76A/P2, -1B78/P2, -2B67, -2B67B, and -2B67/P turbofan engines
2019-02-03		The Boeing Company	787-8, 787-9, and 787-10 airplane
2019-02-04	R 2018-22-05	Engine Alliance	GP7270, GP7272, and GP7277 turbofan engines
2019-03-01		Pratt & Whitney Division	PW4074, PW4074D, PW4077, PW4077D, PW4084D, PW4090, and PW4090-3 turbofan engines



**2018-23-04 Bombardier, Inc.:** Amendment 39-19490; Docket No. FAA-2018-0635; Product Identifier 2017-NM-183-AD.

**(a) Effective Date**

This AD is effective March 15, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Bombardier, Inc., Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes, certificated in any category, serial numbers 003 through 540 inclusive, on which Bombardier Service Bulletin 8-74-02, dated March 3, 2000; or Revision A, dated January 27, 2014; has been accomplished concurrently with or after accomplishment of Bombardier Service Bulletin 8-76-35 or 8-76-24.

**(d) Subject**

Air Transport Association (ATA) of America Code 74, Ignition; 76, Engine Controls.

**(e) Reason**

This AD was prompted by a report that a certain modification to the auto relight system is incompatible with a certain beta lockout system modification and could result in de-activation of the auto ignition feature of the No. 2 engine. We are issuing this AD to address unintentional de-activation of the auto ignition feature of the No. 2 engine when the beta lockout system is activated, which could result in an uncommanded in-flight shutdown of the No. 2 engine.

**(f) Compliance**

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

**(g) Inspection and Corrective Action**

Within 6,000 flight hours or 36 months, whichever occurs first, after the effective date of this AD, inspect and, as applicable, rectify the auto ignition system in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-74-07, dated April 13, 2016.

### **(h) Credit for Previous Actions**

This paragraph provides credit for rectification required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier In-Service Modification Summary Package IS8Q7400001, Revision C, dated November 27, 2015.

### **(i) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York 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 ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. 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.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

### **(j) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF-2017-21R1, dated June 28, 2017, for related information. This MCAI may be found in the AD docket on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0635.

(2) For more information about this AD, contact Joe Catanzaro, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7366; fax 516-794-5531; email [9-avs-nyaco-cos@faa.gov](mailto:9-avs-nyaco-cos@faa.gov).

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

### **(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Bombardier Service Bulletin 8-74-07, dated April 13, 2016.

(ii) [Reserved]

(3) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); internet <http://www.bombardier.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>.

Issued in Des Moines, Washington, on October 26, 2018.  
Michael Kaszycki,  
Acting Director, System Oversight Division,  
Aircraft Certification Service.



**2018-24-01 International Aero Engines:** Amendment 39-19505; Docket No. FAA-2018-0735; Product Identifier 2018-NE-26-AD.

**(a) Effective Date**

This AD is effective March 15, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to International Aero Engines (IAE) PW1133G-JM, PW1133GA-JM, PW1130G-JM, PW1127G-JM, PW1127GA-JM, PW1127G1-JM, PW1124G-JM, PW1124G1-JM, and PW1122G-JM turbofan engines with a low-pressure turbine (LPT) 3rd-stage disk with a serial number (S/N) listed in Figure 1 to paragraph (g) of this AD or an LPT 1st-stage disk with an S/N listed in Figure 2 to paragraph (g) of this AD, installed.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7250, Turbine Section.

**(e) Unsafe Condition**

This AD was prompted by a report of manufacturing defects found on delivered LPT 1st- and 3rd-stage disks. We are issuing this AD to prevent failure of the LPT 1st- or 3rd-stage disk. The unsafe condition, if not addressed, could result in uncontained LPT 1st- or 3rd-stage disk release, damage to the engine, and damage to the airplane.

**(f) Compliance**

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

**(g) Required Actions**

Remove from service the LPT 1st- and 3rd-stage disk within 30 days after the effective date of this AD, or as identified in paragraphs (g)(1) or (2) of this AD, whichever occurs later, and replace with a part eligible for installation.

(1) Remove the LPT 3rd-stage disk with a serial number (S/N) listed in Figure 1 to paragraph (g) of this AD at the next piece-part exposure, not to exceed 4,800 cycles since new (CSN).

**Figure 1 to Paragraph (g) of this AD – S/Ns of LPT 3<sup>rd</sup>-stage disk**

LLDLAJ4516
LLDLAJ4498
LLDLAJ4518
LLDLAJ4499
LLDLAJ4505
LLDLAJ4511
LLDLAJ4512
LLDLAJ4484
LLDLAJ4494
LLDLAJ4495
LLDLAJ4482
LLDLAJ4500

(2) Remove the LPT 1st-stage disk with an S/N listed in Figure 2 to paragraph (g) of this AD at the next piece-part exposure, not to exceed 2,240 CSN.

**Figure 2 to Paragraph (g) of this AD – S/Ns of LPT 1<sup>st</sup>-stage disk**

LLDLAJ6110
LLDLAJ6111
LLDLAJ6114

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

(1) The Manager, ECO 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 (i) of this AD. You may email your request to: ANE-AD-AMOC@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.

**(i) Related Information**

For more information about this AD, contact Kevin M. Clark, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7088; fax: 781-238-7199; email: kevin.m.clark@faa.gov.

**(j) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts on January 31, 2019.  
Robert J. Ganley,  
Manager, Engine and Propeller Standards Branch,  
Aircraft Certification Service.



**FAA**  
**Aviation Safety**

## **AIRWORTHINESS DIRECTIVE**

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[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

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**2019-01-03 The Boeing Company:** Amendment 39-19542; Docket No. FAA-2018-0162; Product Identifier 2017-NM-116-AD.

### **(a) Effective Date**

This AD is effective March 19, 2019.

### **(b) Affected ADs**

This AD replaces AD 2016-18-01, Amendment 39-18631 (81 FR 59830, August 31, 2016) (“AD 2016-18-01”).

### **(c) Applicability**

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

(i) Airplanes in Groups 1 and 2, Configuration 1, as identified in Boeing Special Attention Service Bulletin 737-32-1448, Revision 2, dated August 2, 2017 (“BSASB 737-32-1448, R2”).

(ii) Airplanes in Groups 1 and 2, Configuration 2, as identified in BSASB 737-32-1448, R2.

(iii) Airplanes in Group 3, as identified in BSASB 737-32-1448, R2.

(iv) Airplanes in Groups 4 and 5, Configuration 1, as identified in BSASB 737-32-1448, R2, except where this service bulletin specifies the groups as line numbers 3527 through 6510 inclusive, this AD specifies those groups as line number 3527 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.

(v) Airplanes in Groups 4 and 5, Configuration 2, as identified in BSASB 737-32-1448, R2, except where this service bulletin specifies the groups as line numbers 3527 through 6510 inclusive, this AD specifies those groups as line number 3527 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.

(vi) Airplanes in Groups 6 as identified in BSASB 737-32-1448, R2, except where this service bulletin specifies the groups as line numbers 3527 through 6510 inclusive, this AD specifies those groups as line number 3527 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.

(vii) 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.

(2) 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 32, Landing Gear.

**(e) Unsafe Condition**

This AD was prompted by reports of heavy corrosion and chrome damage on the forward and aft trunnion pin assemblies of the right and left main landing gears (MLGs). We are issuing this AD to address heavy corrosion and chrome damage on the forward and aft trunnion pin assemblies of the right and left MLGs, which could result in cracking of these assemblies and collapse of the MLGs.

**(f) Compliance**

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

**(g) Inspection To Determine Part Numbers**

For airplanes identified in paragraphs (c)(1)(i), (c)(1)(iii), (c)(1)(iv), or (c)(1)(vi) of this AD: Except as required by paragraph (l) of this AD, at the applicable time specified in Table 1, Table 2, Table 4, or Table 5, of paragraph 1.E., "Compliance," of BSASB 737-32-1448, R2, do an inspection to determine if any of the existing part numbers identified in paragraph 2.C.3., "Parts Modified and Reidentified," of BSASB 737-32-1448, R2, are installed. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number of each existing part number can be conclusively determined from that review. Repetitive lubrication and inspection as required by and at the times specified in paragraphs (h) and (i) of this AD are also acceptable in lieu of this inspection to determine the MLG trunnion pin assembly part number.

**(h) Repetitive Lubrication of MLG Trunnion Pin Assemblies**

For airplanes identified in paragraphs (c)(1)(i), (c)(1)(iii), (c)(1)(iv), or (c)(1)(vi) of this AD, having any part number identified in paragraph 2.C.3., "Parts Modified and Reidentified," of BSASB 737-32-1448, R2, installed: Except as required by paragraph (l) of this AD, at the applicable time specified in Table 1, Table 2, Table 4, or Table 5, of paragraph 1.E., "Compliance," of BSASB 737-32-1448, R2, lubricate the applicable forward and aft trunnion pin assemblies of the right and left MLGs, in accordance with Work Package 1 of the Accomplishment Instructions of BSASB 737-32-1448, R2. Repeat the lubrication thereafter at intervals not to exceed those specified in Table 1, Table 2, Table 4, or Table 5, of paragraph 1.E., "Compliance," of BSASB 737-32-1448, R2. Accomplishment of the actions specified in paragraph (j) of this AD terminates the repetitive lubrication required by this paragraph.

**(i) Repetitive Inspections, Corrective Actions, and Lubrication**

For airplanes identified in paragraphs (c)(1)(i), (c)(1)(iii), (c)(1)(iv), or (c)(1)(vi) of this AD, having any part number identified in paragraph 2.C.3., "Parts Modified and Reidentified," of BSASB 737-32-1448, R2, installed: Except as required by paragraph (l) of this AD, at the applicable time specified in Table 1, Table 2, Table 4, or Table 5, of paragraph 1.E., "Compliance," of BSASB 737-32-1448, R2, do a general visual inspection of the left and right MLGs at the forward and aft trunnion pin locations and the visible surfaces of the forward and aft trunnion pin assemblies for discrepancies including signs of corrosion or chrome plating damage, and lubricate the forward and aft trunnion pin assemblies as applicable, in accordance with Work Package 2 of the Accomplishment Instructions of

BSASB 737-32-1448, R2. Repeat the general visual inspection thereafter at intervals not to exceed those specified in paragraph 1.E., “Compliance,” of BSASB 737-32-1448, R2. If any discrepancy is found during any inspection required by this paragraph, before further flight, do all applicable related investigative and corrective actions in accordance with Work Package 2 of the Accomplishment Instructions of BSASB 737-32-1448, R2. Accomplishment of the actions required by paragraph (j) of this AD terminates the repetitive inspections required by this paragraph.

**(j) Modification of MLG Trunnion Pin Assemblies**

For airplanes identified in paragraphs (c)(1)(i), (c)(1)(iii), (c)(1)(iv), or (c)(1)(vi) of this AD, having any part number identified in paragraph 2.C.3., “Parts Modified and Reidentified,” of BSASB 737-32-1448, R2, installed: Except as required by paragraph (l) of this AD, at the time specified in Table 1, Table 2, Table 4, or Table 5, as applicable, of paragraph 1.E., “Compliance,” of BSASB 737-32-1448, R2, modify the left and right MLG trunnion pin assemblies, including all applicable related investigative and corrective actions, in accordance with Work Package 3 of the Accomplishment Instructions of BSASB 737-32-1448, R2. All applicable related investigative and corrective actions must be done at the time specified in paragraph 1.E., “Compliance,” of BSASB 737-32-1448, R2. Accomplishment of the actions in Work Package 3 of the Accomplishment Instructions of BSASB 737-32-1448, R2, terminates the repetitive lubrication required by paragraph (h) of this AD and the repetitive inspections required by paragraph (i) of this AD.

**(k) Replacement of MLG Forward Trunnion Pin Housing Assembly, Seal, and Retainer**

For airplanes identified in paragraphs (c)(1)(ii) and (c)(1)(v) of this AD: Except as required by paragraph (l) of this AD, at the time specified in Table 3 or Table 6, as applicable, of paragraph 1.E., “Compliance,” of BSASB 737-32-1448, R2, replace the seal, retainer, and support ring assembly with a new seal and retainer configuration; install the forward trunnion pin assembly into the housing assembly; and lubricate the forward and aft trunnion pin assemblies for the left and right MLGs; in accordance with Work Package 4 of the Accomplishment Instructions of BSASB 737-32-1448, R2.

**(l) Exception to Service Information Specification**

Where paragraph 1.E., “Compliance,” of BSASB 737-32-1448, R2, specifies a compliance time “after the Revision 2 date of this service bulletin,” this AD requires compliance within the specified compliance time after the effective date of this AD.

**(m) Parts Installation Limitation**

As of the effective date of this AD, no person may install existing parts identified in paragraph 2.C.3., “Parts Modified and Reidentified,” of BSASB 737-32-1448, R2, on any airplane identified in paragraphs (c)(1)(i) through (c)(1)(vii) of this AD, unless the actions required by paragraph (j) or (k), as applicable, of this AD have been accomplished on the parts.

**(n) Credit for Previous Actions**

(1) This paragraph provides credit for the requirements of paragraph (h) of this AD, if those actions were performed before the effective date of this AD using Boeing Special Attention Service Bulletin 737-32-1448, dated May 19, 2011; or Boeing Special Attention Service Bulletin 737-32-1448, Revision 1, dated May 29, 2015.

(2) This paragraph provides credit for the requirements of paragraphs (i), (j), and (k) of this AD, if those actions were performed before the effective date of this AD using Boeing Special Attention Service Bulletin 737-32-1448, Revision 1, dated May 29, 2015.

**(o) 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 (p)(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) AMOCs approved previously for AD 2016-18-01 are approved as AMOCs for the corresponding provisions of this AD.

**(p) 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; telephone 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 (q)(3) and (q)(4) of this AD.

**(q) 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 737-32-1448, Revision 2, dated August 2, 2017.

(ii) [Reserved].

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; internet <https://www.myboeingfleet.com>.

(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>.

Issued in Des Moines, Washington, on December 21, 2018.

Jeffrey E. Duven,  
Director, System Oversight Division,  
Aircraft Certification Service.



**2019-01-04 The Boeing Company:** Amendment 39-19543; Docket No. FAA-2018-0902; Product Identifier 2018-NM-047-AD.

**(a) Effective Date**

This AD is effective March 22, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all The Boeing Company Model 787 series airplanes, certificated in any category.

**(d) Subject**

Air Transport Association (ATA) of America Code 34, Navigation.

**(e) Unsafe Condition**

This AD was prompted by a report of an uncommanded descent and turn that occurred after an inflight switch to the spare flight management function (FMF), due to the retention of stale flight data in the spare FMF. We are issuing this AD to address the retention of stale flight data in the spare FMF, which, if not addressed, could result in controlled flight into terrain or a mid-air collision.

**(f) Compliance**

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

**(g) Required Actions**

(1) For Boeing Model 787 series airplanes that have an original certificate of airworthiness or export certificate of airworthiness issued on or before the effective date of this AD: Within 12 months after the effective date of this AD, inspect the flight management system (FMS) to determine if operational program software (OPS) part number (P/N) HNP5F-AL11-5010 or HNP58-AL11-5006 is installed. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number of the FMS OPS can be conclusively determined from that review.

(2) If, during any inspection or records review required by paragraph (g)(1) of this AD, FMS OPS P/N HNP5F-AL11-5010 or HNP58-AL11-5006 is found: Within 12 months after the effective date of this AD, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin B787-81205-SB340038-00 RB, Issue 001, dated November 16, 2017; except where Boeing Alert Requirements Bulletin B787-81205-SB340038-00

RB, Issue 001, dated November 16, 2017, specifies installing 34 FMS OPS Block Point 3B, P/N HNP5E-AL11-5011, this AD requires installing P/N HNP5E-AL11-5011 or later-approved software versions. Later-approved software versions are only those Boeing software versions that are approved as a replacement for the applicable software, and are approved as part of the type design by the FAA or the Boeing Commercial Airplanes Organization Designation Authorization (ODA) after issuance of Boeing Alert Requirements Bulletin B787-81205-SB340038-00 RB, Issue 001, dated November 16, 2017.

Note 1 to paragraph (g) of this AD: Guidance for accomplishing the actions required by paragraph (g) of this AD can be found in Boeing Alert Service Bulletin B787-81205-SB340038-00, Issue 001, dated November 16, 2017, which is referred to in Boeing Alert Requirements Bulletin B787-81205-SB340038-00 RB, Issue 001, dated November 16, 2017.

#### **(h) Concurrent Requirements**

For airplanes identified in Boeing Service Bulletin B787-81205-SB340013-00, Issue 002, dated May 6, 2016: Prior to or concurrently with the action required by paragraph (g) of this AD, install FMS, Thrust Management System (TMS), and Communication Management Function (CMF) software identified in Boeing Service Bulletin B787-81205-SB340013-00, Issue 002, dated May 6, 2016, and do a software check, in accordance with the Accomplishment Instructions of Boeing Service Bulletin B787-81205-SB340013-00, Issue 002, dated May 6, 2016; except where Boeing Service Bulletin B787-81205-SB340013-00, Issue 002, dated May 6, 2016, specifies installing software, this AD requires installing that software or later-approved software versions. Later-approved software versions are only those Boeing software versions that are approved as a replacement for the applicable software, and are approved as part of the type design by the FAA or the Boeing Commercial Airplanes ODA after issuance of Boeing Service Bulletin B787-81205-SB340013-00, Issue 002, dated May 6, 2016. If the software check fails, before further flight, accomplish corrective actions and repeat the software check and applicable corrective actions until the software check is passed.

#### **(i) Parts Installation Prohibition**

As of the effective date of this AD, installation on any airplane of FMS OPS version HNP5F-AL11-5010 or HNP58-AL11-5006 is prohibited, except as required by paragraph (h) of this AD.

#### **(j) Credit for Previous Actions**

This paragraph provides credit for the actions specified in paragraph (h) of this AD, if those actions were performed before the effective date of this AD using Boeing Service Bulletin B787-81205-SB340013-00, Issue 001, dated December 23, 2015.

#### **(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 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.

**(l) Related Information**

(1) For more information about this AD, contact Nelson Sanchez, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3543; email: nelson.sanchez@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) and (m)(4) 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) Boeing Alert Requirements Bulletin B787-81205-SB340038-00 RB, Issue 001, dated November 16, 2017.

(ii) Boeing Service Bulletin B787-81205-SB340013-00, Issue 002, dated May 6, 2016.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; internet <https://www.myboeingfleet.com>.

(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>.

Issued in Des Moines, Washington, on January 10, 2019.

Jeffrey E. Duven,  
Director, System Oversight Division,  
Aircraft Certification Service.



**FAA**  
**Aviation Safety**

## **AIRWORTHINESS DIRECTIVE**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

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**2019-01-05 Airbus SAS:** Amendment 39-19544; Docket No. FAA-2018-0788; Product Identifier 2018-NM-004-AD.

**(a) Effective Date**

This AD is effective March 22, 2019.

**(b) Affected ADs**

This AD affects AD 2017-05-10, Amendment 39-18821 (82 FR 13379, March 13, 2017) (“AD 2017-05-10”).

**(c) Applicability**

This AD applies to Airbus SAS Model A330-201, A330-202, A330-203, A330-223, A330-243, A330-223F, A330-243F, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342, and A330-343 airplanes, certificated in any category, with an original certificate of airworthiness or original export certificate of airworthiness issued on or before September 18, 2017.

**(d) Subject**

Air Transport Association (ATA) of America Code 05, Time Limits/Maintenance Checks.

**(e) Reason**

This AD was prompted by a revision of the airworthiness limitations section (ALS), which provides new and more restrictive maintenance requirements and airworthiness limitations for airplane structures and systems. We are issuing this AD to prevent reduced airplane control due to the failure of system components.

**(f) Compliance**

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

**(g) Maintenance Program Revision**

Within 90 days after the effective date of this AD, revise the existing maintenance or inspection program, as applicable, by incorporating Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Revision 06, dated September 18, 2017; or Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Variation 6.1, dated January 16, 2018. The initial compliance times for the actions specified in Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Revision 06, dated September 18, 2017, or the actions specified in Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance

Requirements (SEMR), Variation 6.1, dated January 16, 2018, are within the applicable compliance times specified in Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Revision 06, dated September 18, 2017, or Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Variation 6.1, dated January 16, 2018; or within 90 days after the effective date of this AD; whichever occurs later; except as required by paragraph (h) of this AD.

#### **(h) Exceptions to Initial Compliance Times**

(1) Where Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Revision 06, dated September 18, 2017; or Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Variation 6.1, dated January 16, 2018; defines a calendar compliance time for elevator servo-controls having part number (P/N) SC4800-2, SC4800-3, SC4800-4, SC4800-6, SC4800-7, or SC4800-8 as “August 31, 2004,” the calendar compliance time is June 13, 2007 (34 months after August 13, 2004 (the effective date of AD 2004-13-25, Amendment 39-13707 (69 FR 41394, July 9, 2004))).

(2) Where Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Revision 06, dated September 18, 2017; or Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Variation 6.1, dated January 16, 2018; defines a calendar compliance time for spoiler servo-controls (SSCs) having P/N 1386A0000-01, 1386B0000-01, 1387A0000-01, or 1387B0000-01 as “December 31, 2003,” the calendar compliance time is November 19, 2005 (13 months after October 19, 2004 (the effective date of AD 2004-18-14, Amendment 39-13793 (69 FR 55326, September 14, 2004))).

(3) Where Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Revision 06, dated September 18, 2017; or Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Variation 6.1, dated January 16, 2018; defines a calendar compliance time for elevator servo-controls having P/N SC4800-73, SC4800-93, SC4800-103, and SC4800-113 as “June 30, 2008,” the calendar compliance time is September 16, 2009 (17 months after April 16, 2008 (the effective date of AD 2008-06-07, Amendment 39-15419 (73 FR 13103, March 12, 2008; corrected April 15, 2008 (73 FR 20367))))).

(4) The initial compliance time for replacement of the retraction brackets of the main landing gear (MLG) having a part number specified in paragraphs (h)(4)(i) through (h)(4)(xvi) of this AD is before the accumulation of 19,800 total landings on the affected retraction brackets of the MLG, or within 900 flight hours after April 9, 2012 (the effective date of AD 2012-04-07, Amendment 39-16963 (77 FR 12989, March 5, 2012)), whichever occurs later.

- (i) 201478303.
- (ii) 201478304.
- (iii) 201478305.
- (iv) 201478306.
- (v) 201478307.
- (vi) 201478308.
- (vii) 201428380.
- (viii) 201428381.
- (ix) 201428382.
- (x) 201428383.
- (xi) 201428384.
- (xii) 201428385.
- (xiii) 201428378.
- (xiv) 201428379.

(xv) 201428351.

(xvi) 201428352.

(5) Where Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Revision 06, dated September 18, 2017; or Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Variation 6.1, dated January 16, 2018; defines a calendar compliance time for the modification of SSCs on three hydraulic circuits having P/N MZ4339390-01X, MZ4306000-01X, MZ4339390-02X, MZ4306000-02X, MZ4339390-10X, or MZ4306000-10X as “March 5, 2010,” the calendar compliance time is April 14, 2011 (18 months after October 14, 2009 (the effective date of AD 2009-18-20, Amendment 39-16017 (74 FR 46313, September 9, 2009) (“AD 2009-18-20”))).

(6) Where Note (17) of Sub-Part 1, “Life Limits,” of Section 3, “Systems Life-Limited Components,” of Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Revision 06, dated September 18, 2017; or Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Variation 6.1, dated January 16, 2018; defines a calendar date of “September 5, 2008,” as a date for the determination of accumulated flight cycles since the airplane's initial entry into service, the date is October 14, 2009 (the effective date of AD 2009-18-20).

(7) Where Note (17) of Sub-Part 1, “Life Limits,” of Section 3, “Systems Life-Limited Components,” of Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Revision 06, dated September 18, 2017; or Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Variation 6.1, dated January 16, 2018; defines a calendar compliance time as “March 5, 2010,” for the modification of affected servo controls, the calendar compliance time is April 14, 2011 (18 months after October 14, 2009 (the effective date of AD 2009-18-20)).

#### **(i) No Alternative Actions or Intervals**

After accomplishing the revision required by paragraph (g) of this AD, no alternative actions (e.g., inspections) or intervals may be used unless the actions or intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (k)(1) of this AD.

#### **(j) Terminating Actions for the Requirements of AD 2017-05-10**

Accomplishing the actions required by paragraph (g) of this AD terminates all requirements of AD 2017-05-10.

#### **(k) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Section, Transport Standards 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 International Section, send it to the attention of the person identified in paragraph (l)(2) of this AD. Information may be emailed to: 9-ANM-116-AMOCREQUESTS@faa.gov. 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.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency

(EASA); or Airbus SAS's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(l) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2017-0228, dated November 21, 2017, for related information. This MCAI may be found in the AD docket on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0788.

(2) For more information about this AD, contact Vladimir Ulyanov, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3229.

**(m) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Revision 06, dated September 18, 2017.

(ii) Airbus A330 Airworthiness Limitations Section (ALS) Part 4, System Equipment Maintenance Requirements (SEMR), Variation 6.1, dated January 16, 2018.

(3) For service information identified in this AD, contact Airbus SAS, Airworthiness Office–EAL, Rond-Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France; phone: +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>.

(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>.

Issued in Des Moines, Washington, on January 10, 2019.

Jeffrey E. Duven,  
Director, System Oversight Division,  
Aircraft Certification Service.



**2019-01-06 The Boeing Company:** Amendment 39-19545; Docket No. FAA-2018-0793; Product Identifier 2018-NM-057-AD.

**(a) Effective Date**

This AD is effective March 19, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

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

(2) Installation of Supplemental Type Certificate (STC) ST01219SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01219SE 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 53, Fuselage.

**(e) Unsafe Condition**

This AD was prompted by a report of cracks in the body station (STA) 303.9 frame web and doubler at fastener holes common to the stop fitting at stringer 16 left (S-16L). We are issuing this AD to address cracks in the STA 303.9 frame web and doubler at the stop fitting at S-16L, which, if not addressed, could result in the inability of a principal structural element to sustain limit loads and possible rapid decompression of the airplane.

**(f) Compliance**

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

**(g) Required Actions for Group 1**

For airplanes identified as Group 1 in Boeing Requirements Bulletin 737-53A1375 RB, dated March 12, 2018: Within 120 days after the effective date of this AD, inspect the airplane and do all applicable on-condition actions using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

## **(h) Required Actions for Groups 2 Through 5**

Except as specified in paragraph (i) of this AD: For airplanes identified as Groups 2 through 5 in Boeing Requirements Bulletin 737-53A1375 RB, dated March 12, 2018, at the applicable times specified in the “Compliance” paragraph of Boeing Requirements Bulletin 737-53A1375 RB, dated March 12, 2018, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Requirements Bulletin 737-53A1375 RB, dated March 12, 2018.

Note 1 to paragraph (h) of this AD: Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 737-53A1375, dated March 12, 2018, which is referred to in Boeing Requirements Bulletin 737-53A1375 RB, dated March 12, 2018.

## **(i) Exceptions to Service Information Specifications**

(1) For purposes of determining compliance with the requirements of this AD: Where Boeing Requirements Bulletin 737-53A1375 RB, dated March 12, 2018, uses the phrase “the original issue date of Requirements Bulletin 737-53A1375 RB,” this AD requires using “the effective date of this AD.”

(2) Where Boeing Requirements Bulletin 737-53A1375 RB, dated March 12, 2018, specifies contacting Boeing for repair instructions, this AD requires repair using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

## **(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Los Angeles ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: 9-ANM-LAACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

## **(k) Related Information**

For more information about this AD, contact Galib Abumeri, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5324; fax: 562-627-5210; email: galib.abumeri@faa.gov.

## **(l) 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 Requirements Bulletin 737-53A1375 RB, dated March 12, 2018.

(ii) [Reserved].

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; phone: 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>.

Issued in Des Moines, Washington, on January 10, 2019.

Jeffrey E. Duven,  
Director, System Oversight Division,  
Aircraft Certification Service.



**2019-01-07 Airbus SAS:** Amendment 39-19546; Docket No. FAA-2018-0705; Product Identifier 2018-NM-077-AD.

**(a) Effective Date**

This AD is effective March 19, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Airbus SAS Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes, certificated in any category, as identified in Airbus Service Bulletin A320-57-1167, Revision 02, dated August 14, 2018.

**(d) Subject**

Air Transport Association (ATA) of America Code 57, Wings.

**(e) Reason**

This AD was prompted by a report that during removal of left-hand (LH) gear rib 5, four failed fasteners (bolts attaching the gear rib to the wing inner rear spar) were discovered. We are issuing this AD to address cracked or failed (broken) fasteners (bolts) of the rib 5-to-rear spar attachment, which could lead to reduced structural integrity of the wing.

**(f) Compliance**

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

**(g) Inspection of the Rib 5-to-Rear Spar Attachment Fasteners (Bolts)**

Within 30 months after the effective date of this AD, do a special detailed (ultrasonic) inspection of the LH and right-hand (RH) wing rib 5-to-rear spar attachment fasteners (bolts) for cracked or failed (broken) fasteners (bolts), in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-57-1167, Revision 02, dated August 14, 2018.

**(h) Replacement of Cracked or Failed Fasteners (Bolts)**

If any cracked or failed (broken) fastener (bolt) is found during any inspection required by paragraph (g) of this AD, before further flight, do the actions specified in paragraphs (h)(1), (h)(2), (h)(3), and (h)(4) of this AD, as applicable.

(1) Do a detailed inspection of the gear rib 5 and spar web for cracks and damage (cracks along the length of the bolt or broken bolt), in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-57-1167, Revision 02, dated August 14, 2018. If any crack or damage is found during any inspection required by this paragraph, before further flight, obtain corrective actions approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or Airbus SAS's EASA Design Organization Approval (DOA); and accomplish the corrective actions within the compliance time specified therein. If approved by the DOA, the approval must include the DOA-authorized signature.

(2) If no cracks or damage are found during any inspection required by paragraph (h)(1) of this AD: Do a rotating probe test of the gear rib and spar web bolt holes for cracks and damage (cracks in the bolt holes), in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-57-1167, Revision 02, dated August 14, 2018. If any crack or damage is found during any inspection required by this paragraph, before further flight, obtain corrective actions approved by the Manager, International Section, Transport Standards Branch, FAA; or EASA; or Airbus SAS's EASA DOA; and accomplish the corrective actions within the compliance time specified therein. If approved by the DOA, the approval must include the DOA authorized signature.

(3) If no cracks or damage are found during any inspection required by paragraph (h)(2) of this AD: Ream the gear rib and the spar web bolt holes, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-57-1167, Revision 02, dated August 14, 2018. If an oversize larger than 0.794 millimeter (0.0313 inch) is required, before further flight, obtain corrective actions approved by the Manager, International Section, Transport Standards Branch, FAA; or EASA; or Airbus SAS's EASA DOA; and accomplish the corrective actions within the compliance time specified therein. If approved by the DOA, the approval must include the DOA authorized signature.

(4) Replace any cracked or failed fasteners (bolts) in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-57-1167, Revision 02, dated August 14, 2018.

#### **(i) Reporting**

Within 90 days after the special detailed inspection required by paragraph (g) of this AD, or within 30 days after the effective date of this AD, whichever occurs later, report the inspection results (both positive and negative) to Airbus SAS in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-57-1167, Revision 02, dated August 14, 2018. If operators have reported findings as part of obtaining any corrective actions approved by the EASA DOA, operators are not required to report those findings as specified in this paragraph.

#### **(j) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraphs (g), (h), and (i) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A320-57-1167, Revision 01, dated January 16, 2018.

#### **(k) Paperwork Reduction Act Burden Statement**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 1 hour per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at:

800 Independence Ave. SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

### **(l) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Section, Transport Standards 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 International Section, send it to the attention of the person identified in paragraph (m)(2) of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. 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.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or the EASA; or Airbus SAS's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) Required for Compliance (RC): Except as required by paragraph (i) of this AD, if any service information contains procedures or procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified 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 procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

### **(m) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2018-0102, dated April 27, 2018, for related information. This MCAI may be found in the AD docket on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0705.

(2) For more information about this AD, contact Sanjay Ralhan, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3223.

(3) 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 this AD specifies otherwise.

(i) Airbus Service Bulletin A320-57-1167, Revision 02, dated August 14, 2018.

(ii) [Reserved]

(3) For service information identified in this AD, contact Airbus SAS, Airworthiness Office–EIAS, Rond-Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France; phone: +33 5 61 93 36 96; fax: +33 5 61 93 44 51; email: [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); internet: <http://www.airbus.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>;

Issued in Des Moines, Washington, on January 10, 2019.

Jeffrey E. Duven,  
Director, System Oversight Division,  
Aircraft Certification Service.



**2019-01-08 The Boeing Company:** Amendment 39-19547; Docket No. FAA-2018-0581; Product Identifier 2018-NM-029-AD.

**(a) Effective Date**

This AD is effective March 22, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 777-200, -200LR, -300, and -300ER series airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 777-25-0649, Revision 1, dated October 6, 2017.

**(d) Subject**

Air Transport Association (ATA) of America Code 25, Equipment/furnishings.

**(e) Unsafe Condition**

This AD was prompted by a report that showed a non-compliance exists on some in-service galley attendant seat fitting installations. We are issuing this AD to address non-compliant flight attendant seats, which could fail in a high-G crash and result in potential injury to flight attendants and consequent inability of the flight attendants to assist with passenger evacuation in a timely manner.

**(f) Compliance**

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

**(g) Required Actions**

Within 6 years after the effective date of this AD, do all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-25-0649, Revision 1, dated October 6, 2017.

**(h) 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 (i) 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) For service information that contains steps that are labeled as RC, the provisions of paragraphs (h)(4)(i) and (h)(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.

#### **(i) Related Information**

For more information about this AD, contact Allison Buss, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3564; email: Allison.Buss@faa.gov.

#### **(j) 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 777-25-0649, Revision 1, dated October 6, 2017.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; internet <https://www.myboeingfleet.com>.

(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>.

Issued in Des Moines, Washington, on January 28, 2019.

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



**2019-02-01 General Electric Company:** Amendment 39-19548; Docket No. FAA-2019-0042; Product Identifier 2018-NE-25-AD.

**(a) Effective Date**

This AD is effective February 25, 2019.

**(b) Affected ADs**

This AD replaces AD 2018-16-07, Amendment 39-19347 (83 FR 36724, July 31, 2018) (“AD 2018-16-07”).

**(c) Applicability**

This AD applies to General Electric Company (GE) GENx-1B54, -1B58, -1B64, -1B67, -1B70, -1B54/P1, -1B58/P1, -1B64/P1, -1B67/P1, -1B70/P1, -1B54/P2, -1B58/P2, -1B64/P2, -1B67/P2, -1B70/P2, -1B70C/P1, -1B70/72/P1, -1B70/75/P1, -1B74/75/P1, -1B75/P1, -1B70C/P2, -1B70/72/P2, -1B70/75/P2, -1B74/75/P2, -1B75/P2, -1B76/P2, -1B76A/P2, -1B78/P2, -2B67, -2B67B, and -2B67/P turbofan engines with a high-pressure turbine (HPT) stator case (HPT case), part number (P/N) 2302M90G04 installed, and with any serial number (S/N) listed in Table 1, 2, or 3, in the Planning Information section of GE Service Bulletin (SB) GENx-2B S/B 72-0360, Revision 04, dated December 4, 2018, or GE SB GENx-1B S/B 72-0424, Revision 04, dated December 3, 2018, installed.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7250, Turbine section.

**(e) Unsafe Condition**

This AD was prompted by the discovery of a quality escape at a manufacturing facility involving unapproved rework on HPT cases. We are issuing this AD to prevent failure of the HPT case and subsequent engine fire and damage to the airplane.

**(f) Compliance**

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

**(g) Required Actions**

(1) For HPT cases listed in Planning Information, Table 1 or 2, of GE SB GENx-2B S/B 72-0360, Revision 04, dated December 4, 2018, or GE SB GENx-1B S/B 72-0424, Revision 04, dated December 3, 2018, determine the lesser of the following: Cycles since new (CSN) or cycles since Class A fluorescent penetrant inspection (CSFPI) of the entire HPT case.

(2) Using the determination made in paragraph (g)(1) of this AD, remove from service the HPT case before exceeding the applicable cycles in service accrued after August 15, 2018, the effective date of AD 2018-16-07, as specified in Table 1 to paragraph (g)(2) of this AD. Replace the removed HPT case with a part eligible for installation.

**Table 1 to paragraph (g)(2) of this AD – Compliance times**

<b>CSN or CSFPI of HPT case</b>	<b>Remove from service (cycles in service after August 15, 2018, the effective date of AD 2018-16-07)</b>
Fewer than 1000	150 cycles
1000 to 2000	125 cycles
2001 to 3000	100 cycles
3001 to 4000	75 cycles
4001 to 5000	50 cycles
Greater than 5000	25 cycles

(3) For HPT cases listed in Planning Information, Table 3, of GE SB GENx-2B S/B 72-0360, Revision 04, dated December 4, 2018, determine the lesser of the following: CSN or CSFPI of the entire HPT case.

(4) Using the determination made in paragraph (g)(3) of this AD, remove from service the HPT case before exceeding the cycles in service specified in Table 2 to paragraph (g)(4) of this AD. Replace the removed HPT case with a part eligible for installation.

**Table 2 to paragraph (g)(4) of this AD – Compliance times**

<b>CSN or CSFPI of HPT case</b>	<b>Remove from service (cycles in service after the effective date of this AD)</b>
Fewer than 1000	1400 cycles
1000 to 1500	950 cycles
1501 to 2000	700 cycles
2001 to 3000	375 cycles
3001 to 4000	225 cycles
Greater than 4000	150 cycles

(5) For HPT cases listed in Planning Information, Table 3, of GE SB GENx-1B S/B 72-0424, Revision 04, dated December 3, 2018, determine the lesser of the following: CSN or CSFPI of the entire HPT case.

(6) Using the determination made in paragraph (g)(5) of this AD, remove from service the HPT case before exceeding the cycles in service specified in Table 3 to paragraph (g)(6) of this AD. Replace the removed HPT case with a part eligible for installation.

**Table 3 to paragraph (g)(6) of this AD – Compliance times**

<b>CSN or CSFPI of HPT case</b>	<b>Remove from service (cycles in service after the effective date of this AD)</b>
Fewer than 1000	700 cycles
1000 to 1500	600 cycles
1501 to 2000	400 cycles
2001 to 3000	200 cycles
3001 to 4000	120 cycles
Greater than 4000	75 cycles

**(h) Installation Prohibition**

After the effective date of this AD, do not install any affected HPT case onto any engine if the HPT case has been disassembled to piece-part level. Affected HPT cases are identified in paragraphs (g)(1), (g)(3), and (g)(5) of this AD. Piece-part level is defined as when the part is completely disassembled.

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

(1) The Manager, ECO 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 (j) of this AD. You may email your request to ANE-AD-AMOC@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.

**(j) Related Information**

For more information about this AD, contact Herman Mak, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7147; fax: 781-238-7199; email: herman.mak@faa.gov.

**(k) 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) General Electric Company (GE) Service Bulletin (SB) GEnx-2B S/B 72-0360, Revision 04, dated December 4, 2018.

(ii) GE SB GEnx-1B S/B 72-0424, Revision 04, dated December 3, 2018.

(3) For GE service information identified in this AD, contact General Electric Company, GE Aviation, Room 285, 1 Neumann Way, Cincinnati, OH 45215; phone: 513-552-3272; email: aviation.fleetsupport@ge.com.

(4) You may view this service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7759.

(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 Burlington, Massachusetts, on February 1, 2019.  
Robert J. Ganley,  
Manager, Engine and Propeller Standards Branch,  
Aircraft Certification Service.



**2019-02-03 The Boeing Company:** Amendment 39-19550; Docket No. FAA-2019-0015; Product Identifier 2018-NM-179-AD.

**(a) Effective Date**

This AD is effective February 22, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes, certificated in any category.

**(d) Subject**

Air Transport Association (ATA) of America Code 26, Fire protection.

**(e) Unsafe Condition**

This AD was prompted by reports of warpage of internal fire handle components, which can cause binding and prevent proper operation. We are issuing this AD to address a latent failure of the engine fire handle, which could result in the inability to extinguish an engine fire that, if uncontrollable, could lead to wing failure.

**(f) Compliance**

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

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

Within 14 days after the effective date of this AD, revise the existing maintenance or inspection program, as applicable, to add airworthiness limitation 28-AWL-FIRE, by incorporating the information specified in figure 1 to paragraph (g) of this AD into the Airworthiness Limitations Section of the Instructions for Continued Airworthiness. The initial compliance time for accomplishing the actions specified in figure 1 to paragraph (g) of this AD is within 45 days after the effective date of this AD.

**Figure 1 to paragraph (g) of this AD: *Engine fire handle operational check***

AWL No.	Task	Interval	Applicability	Description
28-AWL-FIRE	ALI	30 days	787-8, -9, and -10 airplanes	<p>Engine Fire Handle Operational Check.</p> <p>Concern: The fire handle design can result in airplanes operating with an engine fire handle that cannot be operated. A latently failed engine fire handle could prevent the fire</p>
				<p>extinguishing agent from being able to be released. In the event of certain engine fires, the potential exists for an engine fire to be uncontrollable.</p> <p>Perform the following engine fire handle checks (unless checked by the flightcrew in a manner approved by the principal operations inspector):</p> <ol style="list-style-type: none"> <li>1. Press the left engine fire handle solenoid override button, and verify that the handle can be pulled up using normal force. CAUTION: Do not rotate the engine fire handle; inadvertent discharge of the fire extinguishing agent would result. Although not required, pulling the FIRE EXT BOTTLE – ENG L1 and L2 circuit breakers will prevent fire bottle discharge.</li> <li>2. Stow the handle.</li> <li>3. Press the right engine fire handle solenoid override button, and verify that the handle can be pulled up using normal force. CAUTION: Do not rotate the engine fire handle; inadvertent discharge of the fire extinguishing agent would result. Although not required, pulling the FIRE EXT BOTTLE – ENG R1 and R2 circuit breakers will prevent fire bottle discharge.</li> <li>4. Stow the handle.</li> </ol> <p>Replace any engine fire handle that fails any operational check before further flight.</p>

**(h) No Alternative Actions or Intervals**

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

**(i) Special Flight Permit**

Special flight permits, as described in 14 CFR 21.197 and 21.199, are not allowed.

**(j) 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 (k) 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.

**(k) Related Information**

For more information about this AD, contact Rebel Nichols, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3556; email: Rebel.Nichols@faa.gov.

**(l) Material Incorporated by Reference**

None.

Issued in Des Moines, Washington, on January 30, 2019.  
Michael Kaszycki,  
Acting Director, System Oversight Division,  
Aircraft Certification Service.



**2019-02-04 Engine Alliance:** Amendment 39-19551; Docket No. FAA-2019-0050; Product Identifier 2018-NE-35-AD.

**(a) Effective Date**

This AD is effective February 25, 2019.

**(b) Affected ADs**

This AD replaces AD 2018-22-05, Amendment 39-19478 (83 FR 55816, November 8, 2018) (“AD 2018-22-05”).

**(c) Applicability**

This AD applies to Engine Alliance (EA) GP7270, GP7272, and GP7277 turbofan engines, with a high-pressure turbine (HPT) stator case (HPT case), part number (P/N) 2060M40G02 or 2137M29G01 installed, and with HPT case serial numbers (S/Ns) listed in Planning Information, Table 1, of Engine Alliance Alert Service Bulletin EAGP7-A72-401, Revision 1, dated December 13, 2018, and in Planning Information, Table 1, of Engine Alliance Service Bulletin EAGP7-72-399, dated June 4, 2018.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7250, Turbine section.

**(e) Unsafe Condition**

This AD was prompted by the discovery of a quality escape at a manufacturing facility involving unapproved welds on HPT cases. We are issuing this AD to address failure of the HPT case, which could result in engine fire and damage to the airplane.

**(f) Compliance**

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

**(g) Required Actions**

(1) For HPT cases listed in Planning Information, Table 1, of Engine Alliance Alert Service Bulletin EAGP7-A72-401, Revision No. 1, dated December 13, 2018, remove the affected HPT case from service within the cycles identified in Table 1 of Engine Alliance Alert Service Bulletin EAGP7-A72-401, Revision No. 1, dated December 13, 2018, after the effective date of this AD.

(2) For HPT cases listed in Planning Information, Table 1, of Engine Alliance Service Bulletin EAGP7-72-399, dated June 4, 2018, remove the affected HPT cases from service, using the number

of part cycles since new (PCSN) or part cycles since overhaul (PCSO), whichever is less, as specified in Table 1 to paragraph (g)(2) of this AD.

**Table 1 to paragraph (g)(2) of this AD – Compliance times**

<b>PCSN or PCSO</b>	<b>Remove from service within these cycles after November 23, 2018 (the effective date of AD 2018-22-05)</b>
Fewer than 1000	150 cycles.
1001 to 2000	125 cycles.
2001 to 3000	100 cycles.
3001 to 4000	75 cycles.
4001 to 5000	50 cycles.
5001 or more	25 cycles.

(3) Replace the removed HPT case with a part eligible for installation before further flight.

**(h) Definition**

For the purpose of this AD, a “part eligible for installation” is any HPT case not identified in paragraph (c) of this AD or an HPT case listed in this AD that has been inspected and repaired by a method approved by the Manager, ECO Branch, FAA.

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

(1) The Manager, ECO 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 (j) of this AD. You may email your request to ANE-AD-AMOC@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.

**(j) Related Information**

For more information about this AD, contact Matthew Smith, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7735; fax: 781-238-7199; email: Matthew.C.Smith@faa.gov.

**(k) 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.

(3) The following service information was approved for IBR on February 25, 2019.

(i) Engine Alliance Alert Service Bulletin EAGP7-A72-401, Revision No. 1, dated December 13, 2018.

(ii) [Reserved]

(4) The following service information was approved for IBR on November 23, 2018 (83 FR 55816, November 8, 2018).

(i) Engine Alliance Service Bulletin EAGP7-72-399, dated June 4, 2018.

(ii) [Reserved]

(5) For service information identified in this AD, contact Engine Alliance, 411 Silver Lane, East Hartford, CT 06118; phone: 800-565-0140; email: help24@pw.utc.com; website: [www.engineallianceportal.com](http://www.engineallianceportal.com).

(6) You may view this service information at FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759.

(7) 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 Burlington, Massachusetts, on February 5, 2019.

Robert J. Ganley,  
Manager, Engine and Propeller Standards Branch,  
Aircraft Certification Service.



**2019-03-01 Pratt & Whitney Division:** Amendment 39-19553; Docket No. FAA-2018-0826; Product Identifier 2018-NE-27-AD.

**(a) Effective Date**

This AD is effective March 22, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Pratt & Whitney Division (PW) PW4074, PW4074D, PW4077, PW4077D, PW4084D, PW4090, and PW4090-3 turbofan engines, with 1st-stage low-pressure compressor (LPC) blade, part numbers 52A241, 55A801, 55A801-001, 55A901, 55A901-001, 56A201, 56A201-001, or 56A221, installed.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7230, Turbine Engine Compressor Section.

**(e) Unsafe Condition**

This AD was prompted by an uncontained 1st-stage LPC blade failure. We are issuing this AD to prevent failure of the 1st-stage LPC blade. The unsafe condition, if not addressed, could result in uncontained blade release, damage to the engine, and damage to the airplane.

**(f) Compliance**

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

**(g) Required Actions**

(1) After the effective date of this AD, perform an initial thermal acoustic imaging (TAI) inspection of the 1st-stage LPC blades as follows:

(i) For 1st-stage LPC blades that have accumulated fewer than 6,500 cycles since new (CSN), perform a TAI inspection the next time the engine is separated at the M-flange, or prior to the 1st-stage LPC blade accumulating 7,000 CSN, whichever occurs first.

(ii) For 1st-stage LPC blades that have accumulated 6,500 or more CSN, or if the cycles since the blade was new cannot be determined, or if the cycles since the blade was last TAI inspected cannot be determined, perform a TAI inspection within 500 flight cycles or 180 days after the effective date of this AD, whichever occurs first.

(2) Thereafter, perform a TAI inspection of 1st-stage LPC blades every time the engine is separated at the M-flange and the blades have accumulated 1,000 or more flight cycles since the last TAI inspection, not to exceed 6,500 flight cycles since the last TAI inspection.

(3) If any 1st-stage LPC blade fails the inspection required by paragraph (g)(1) or (2) of this AD, remove the blade from service and replace with a part eligible for installation before further flight.

(4) The TAI inspection and disposition required for compliance with this AD must be accomplished by a method approved by the FAA. You can find a vendor that has an FAA-approved TAI inspection listed in the Vendor Services Section of Pratt & Whitney Alert Service Bulletin (ASB) PW4G-112-A72-268, Revision No. 7, dated September 6, 2018.

#### **(h) Credit for Previous Actions**

You may take credit for the initial TAI inspection required by paragraph (g)(1) of this AD if you performed the TAI inspection before the effective date of this AD using Pratt & Whitney ASB PW4G-112-A72-268, Revision No. 6, dated August 5, 2014, or earlier revisions.

#### **(i) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, ECO 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 (j) of this AD. You may email your request to: ANE-AD-AMOC@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.

#### **(j) Related Information**

For more information about this AD, contact Jo-Ann Theriault, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7105; fax: 781-238-7199; email: jo-ann.theriault@faa.gov.

#### **(k) 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.

(3) The following service information was approved for IBR on March 22, 2019.

(i) Pratt & Whitney Alert Service Bulletin PW4G-112-A72-268, Revision No. 7, dated September 6, 2018.

(ii) [Reserved].

(4) For Pratt & Whitney service information identified in this AD, contact Pratt & Whitney Division, 400 Main Street, East Hartford, CT, 06118; phone: 800-565-0140; fax: 860-565-5442; email: help24@pw.utc.com.

(5) You may view this service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759.

(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>.

Issued in Burlington, Massachusetts, on February 7, 2019.  
Robert J. Ganley,  
Manager, Engine and Propeller Standards Branch,  
Aircraft Certification Service.