

**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES**

**LARGE AIRCRAFT**

**BIWEEKLY 2019-09**

*4/15/2019 - 4/28/2019*



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

## CHANGE OF ADDRESS NOTICE

Any change of address regarding the biweekly service must include the mailing label from a recent issue or your name and address printed exactly as they appear on the mailing label (including the computer number above the address).

Please allow one month for an address change.

MAIL YOUR ADDRESS CHANGE TO:

Superintendent of Documents  
Government Printing Office  
Mail List Branch SSOM  
Washington, DC 20402

Telephone: (202) 512-1806  
Facsimile: (202) 512-2250

## 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
<b>Biweekly 2019-05</b>			
2018-21-14		Zodiac Aerotechnics	MC10 series crew oxygen mask regulators
2018-26-07		Airbus SAS	A350-941 and -1041 airplanes
2018-26-08		Airbus SAS	Note: Was missing from BW2019-01 A320-214, A320-232, A320-233, A321-211, and A321-231 airplanes
2019-03-03	A 2016-17-03	Airbus SAS	Note: Was missing from BW2019-01 A318, A319, A320, A321 airplanes
2019-03-04	R 2018-11-16	Engine Alliance	GP7270 and GP7277 model turbofan engines
2019-03-06		The Boeing Company	737-300, -400, and -500 series airplanes
2019-03-07	R 2017-16-05	The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series airplanes
2019-03-08		Airbus SAS	A350-941 airplanes
2019-03-09		Airbus SAS	A310-304, -322, -324, and -325 airplanes

## LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
Information Key: E – Emergency; COR – Correction; R – Replaces, A – Affects			
2019-03-10	R 2017-07-05	Airbus SAS	A300 airplanes
2019-03-11		Airbus SAS	A350-941 and -1041 airplanes
2019-03-15		Airbus SAS	A330-201, -202, and -203; A330-301, -302, and -303 airplanes
2019-03-17	A 2017-25-04	Airbus SAS	A318, A319, A320, A321 airplanes
2019-03-19		Saab AB, Saab Aeronautics	SAAB 2000 airplanes
2019-03-20	A 2014-16-23	Dassault Aviation	FALCON 7X airplanes
	A 2016-16-09		
2019-03-21		Embraer S.A.	ERJ 190-100 STD, -100 LR, and -100 IGW; ERJ 190-200 STD, -200 LR, and -200 IGW airplanes
2019-03-23		Airbus SAS	A330, A340 airplanes
<b>Biweekly 2019-06</b>			
2019-03-13		Gulfstream Aerospace LP	Gulfstream G150 airplanes
2019-03-14		Dassault Aviation	FAN JET FALCON and FAN JET FALCON SERIES C, D, E, F, and G airplanes
2019-03-16	A 2006-25-06	Fokker Services B.V.	F.27 Mark 100, 200, 300, 400, 500, 600, and 700 airplanes
	A 97-04-08		
2019-03-18		Airbus SAS	A318, A319, A320 airplanes
2019-03-22		Bombardier, Inc.	BD-700-1A10 and BD-700-1A11 airplanes
2019-03-24		The Boeing Company	737-400 series airplanes
2019-03-25	A 2008-02-15	Airbus SAS	A318, A319, A320, A321 airplanes
2019-03-26		The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series airplanes
2019-03-27		Dassault Aviation	Falcon 10 airplanes
2019-03-28	R 2016-07-23	Airbus SAS	A318, A319, A320, A321 airplanes
2019-03-30		Empresa Brasileira de Aeronautica S.A.	EMB-135, EMB-145 airplanes
2019-05-01	R 2017-11-06	Pratt & Whitney Division	PW2037, PW2037D, PW2037M, PW2040, PW2040D, PW2043, PW2143, PW2643, and F117-PW-100 turbofan engines
2019-05-02	R 2017-22-13	Rolls-Royce plc	RB211-Trent 970-84 and RB211-Trent 972-84 turbofan engines
2019-05-08	R 2015-12-08	Airbus SAS	A318, A319, A320, A321 airplanes
<b>Biweekly 2019-07</b>			
2019-05-07	R 2017-20-01	Honeywell International Inc.	TFE731-20R, -20AR, -20BR, and TFE731-40, -40AR, -40BR, and -40R turbofan engines
2019-05-09		Airbus SAS	A320-251N and -271N, and A321-253N airplanes
2019-05-10		Airbus SAS	A350-941 airplanes
2019-05-12		Bombardier, Inc.	CL-600-2C10, -2D15, -2D24, -2E25 airplanes
2019-05-13	R 2007-22-05	Airbus SAS	A300-600 and A310 series airplanes
2019-05-14	R 2012-02-18	Dassault Aviation	MYSTERE-FALCON 50 airplanes
2019-06-01	R 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
2019-06-02		Pratt & Whitney Division	PW4158 turbofan engines
2019-06-06		International Aero Engines AG	V2500-A1, V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, V2533-A5 turbofan engines
2019-06-07	R 2016-22-05	Pratt & Whitney Division	Certain PW4000 engines (see AD)
<b>Biweekly 2019-08</b>			
2019-06-01	R 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
2019-06-02	COR	Pratt & Whitney Division	PW4158 turbofan engines
2019-06-03	A 2017-01-08	Airbus SAS	A330 and A340 airplanes
2019-06-08		Airbus SAS	A330-223, A330-223F, A330-321, A330-322, and A330-323 airplanes
2019-06-09		Airbus SAS	A350-941 airplanes

2019-06-12		Airbus SAS	A330-201, -202, and -203; A330-301, -302, and -303 airplanes
2019-07-03		Zodiac Seats France	536-Series Cabin Attendant Seats

**Biweekly 2019-09**

2019-07-01	A 2014-26-07	Dassault Aviation	FAN JET FALCON and FAN JET FALCON SERIES C, D, E, F, and G airplanes
2019-07-04	COR	The Boeing Company	757-200, -200PF, -200CB, and -300 series airplanes
2019-07-05	R 2016-19-04	Airbus SAS	A318, A319, A320 and A321 airplanes
2019-07-06		Bombardier, Inc	Model BD-100-1A10 airplanes
2019-07-09		Rolls-Royce plc	Trent 1000-A2, Trent 1000-AE2, Trent 1000-C2, Trent 1000-CE2, Trent 1000-D2, Trent 1000-E2, Trent 1000-G2, Trent 1000-H2, Trent 1000-J2, Trent 1000-K2, and Trent 1000-L2 model turbofan engines



**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)

---

**2019-07-01 Dassault Aviation:** Amendment 39-19612; Docket No. FAA-2018-0706; Product Identifier 2018-NM-086-AD.

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

This AD is effective May 24, 2019.

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

This AD affects AD 2014-26-07, Amendment 39-18058 (80 FR 2815, January 21, 2015) (“AD 2014-26-07”).

### **(c) Applicability**

This AD applies to Dassault Aviation Model FAN JET FALCON and FAN JET FALCON SERIES C, D, E, F, and G airplanes, certificated in any category, all serial numbers, except those on which the Dassault Fan Jet Falcon Supplemental Structural Inspection Program (Service Bulletin (SB) 730) has been embodied into the airplane's maintenance or inspection program.

### **(d) Subject**

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

### **(e) Reason**

This AD was prompted by a determination of the need for a revision to the airplane airworthiness limitations to introduce changes to the maintenance requirements and airworthiness limitations. We are issuing this AD to address, among other things, fatigue cracking and damage in principal structural elements; such fatigue cracking and damage could result in reduced structural integrity of the airplane.

### **(f) Compliance**

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

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

Within 12 months after the effective date of this AD, revise the existing maintenance or inspection program, as applicable, to incorporate the airworthiness limitations and maintenance requirements specified in Chapter 5-40, Airworthiness Limitations, DGT 131028, Revision 17, dated September 2017, of the Dassault Aviation Falcon 20 Maintenance Manual (MM). The initial compliance time for accomplishing the actions is at the applicable time specified in Chapter 5-40, Airworthiness Limitations, DGT 131028, Revision 17, dated September 2017, of the Dassault Aviation Falcon 20 MM; or within 12 months after the effective date of this AD; whichever occurs later. Where the threshold column in the table in paragraph B, Mandatory Maintenance Operations, of

Chapter 5-40, Airworthiness Limitations, DGT 131028, Revision 17, dated September 2017, of the Dassault Aviation Falcon 20 MM specifies a compliance time in years, those compliance times are since the date of issuance of the original French or European Aviation Safety Agency (EASA) airworthiness certificate or date of issuance of the original French or EASA export certificate of airworthiness.

**(h) 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 and intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (j)(1) of this AD.

**(i) Terminating Action for AD 2014-26-07**

Accomplishing the actions required by paragraph (g) of this AD terminates all of the requirements of AD 2014-26-07.

**(j) 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 (k)(2) of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS. 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 Dassault Aviation's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(k) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2018-0083, dated April 16, 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-2018-0706.

(2) For more information about this AD, contact Tom Rodriguez, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3226.

**(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 this AD specifies otherwise.

(i) Chapter 5-40, Airworthiness Limitations, DGT 131028, Revision 17, dated September 2017, of the Dassault Aviation Falcon 20 Maintenance Manual.

(ii) [Reserved]

(3) For service information identified in this AD, contact Dassault Falcon Jet Corporation, Teterboro Airport, P.O. Box 2000, South Hackensack, NJ 07606; telephone 201-440-6700; internet <http://www.dassaultfalcon.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 April 10, 2019.

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



---

**2019-07-04 The Boeing Company:** Amendment 39-19615; Docket No. FAA-2018-0899; Product Identifier 2018-NM-099-AD.

**(a) Effective Date**

This AD is effective May 22, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

(1) This AD applies to all The Boeing Company Model 757-200, -200PF, -200CB, and -300 series airplanes, certificated in any category.

(2) Installation of Supplemental Type Certificate (STC) ST01518SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01518SE 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 an evaluation by the design approval holder (DAH) indicating that the inner skin of the lap splices, at the lower fastener row, is subject to scratch cracks that may interact with widespread fatigue damage (WFD). We are issuing this AD to address scratches that can grow into scratch cracks, which could interact with multi-site damage (MSD) fastener hole fatigue cracking. This condition, if not addressed, could result in accelerated crack growth rate, which could result in reduced structural integrity of the airplane.

**(f) Compliance**

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

**(g) Required Actions**

Except as specified by paragraph (h) of this AD: At the applicable times specified in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 757-53A0111 RB, dated May 21, 2018, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 757-53A0111 RB, dated May 21, 2018.

Note 1 to paragraph (g) of this AD: Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 757-53A0111, dated May 21, 2018, which is referred to in Boeing Alert Requirements Bulletin 757-53A0111 RB, dated May 21, 2018.

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

(1) For purposes of determining compliance with the requirements of this AD: Where Boeing Alert Requirements Bulletin 757-53A0111 RB, dated May 21, 2018, uses the phrase “the original issue date of Requirements Bulletin 757-53A0111 RB,” this AD requires using “the effective date of this AD.”

(2) Where Boeing Alert Requirements Bulletin 757-53A0111 RB, dated May 21, 2018, specifies contacting Boeing for alternative inspections or repair instructions, this AD requires alternative inspection or repair before further flight using a method approved in accordance with the procedures specified in paragraph (i) of this AD.

(3) Inspections performed in accordance with Boeing Alert Requirements Bulletin 757-53A0111 RB, dated May 21, 2018, are not necessary in areas where existing FAA approved repairs cover the affected inspection areas; provided the outermost repair doubler extends a minimum of three rows of fasteners above and below the original group of lap splice fasteners subject to the inspection. Damage tolerance inspections specified for existing repairs must continue. Inspections outside of the repaired boundaries are still required as specified in Boeing Alert Requirements Bulletin 757-53A0111 RB, dated May 21, 2018.

#### **(i) 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 (j)(1) 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.

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

(1) For more information about this AD, contact David Truong, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5224; fax: 562-627-5210; email: david.truong@faa.gov.

(2) 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 the AD specifies otherwise.

(i) Boeing Alert Requirements Bulletin 757-53A0111 RB, dated May 21, 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 April 8, 2019.

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



**2019-07-05 Airbus SAS:** Amendment 39-19616; Docket No. FAA-2018-0903; Product Identifier 2018-NM-113-AD.

**(a) Effective Date**

This AD is effective May 24, 2019.

**(b) Affected ADs**

This AD replaces AD 2016-19-14, Amendment 39-18663 (81 FR 71602, October 18, 2016) (“AD 2016-19-14”).

**(c) Applicability**

This AD applies to the Airbus SAS airplanes identified in paragraphs (c)(1) through (c)(4) of this AD, certificated in any category, all manufacturer serial numbers.

- (1) Model A318-111, -112, -121, and -122 airplanes.
- (2) Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes.
- (3) Model A320-211, -212, -214, -216, -231, -232, and -233 airplanes.
- (4) Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes.

**(d) Subject**

Air Transport Association (ATA) of America Code 92, Electric and Electronic Common Installation.

**(e) Reason**

This AD was prompted by a report of cracks found during maintenance inspections on certain 10VU rack fitting lugs. We are issuing this AD to address reading difficulties of flight-critical information displayed to the flightcrew during a critical phase of flight, such as an approach or takeoff, which could result in loss of airplane control at an altitude insufficient for recovery.

**(f) Compliance**

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

**(g) Definitions**

For the purpose of this AD, Group 1 airplanes are in a pre-Airbus Modification 35869 configuration, and Group 2 airplanes are in a post-Airbus Modification 35869 configuration.

**(h) Repetitive Inspections**

(1) For Group 1 airplanes: At the later of the times specified in table 1 to paragraph (h)(1) of this AD, and thereafter at intervals not to exceed 20,000 flight cycles or 40,000 flight hours, whichever occurs first, do a detailed inspection for cracking of the 10VU rack fitting lugs, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-92-1087, Revision 03, dated July 31, 2017.

**Table 1 to paragraph (h)(1) of this AD** – *Initial inspection compliance time for Group 1 airplanes*

<b>Compliance Time (whichever occurs later, A or B)</b>	
<b>A</b>	Prior to exceeding 30,000 total flight cycles or 60,000 total flight hours
<b>B</b>	Within 24 months after November 22, 2016 (the effective date of AD 2016-19-14)

(2) For Group 2 airplanes: At the later of the times specified in paragraphs (h)(2)(i) and (h)(2)(ii) of this AD, and thereafter at intervals not to exceed 20,000 flight cycles or 40,000 flight hours, whichever occurs first, do a detailed inspection for cracking of the 10VU rack fitting lugs, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-92-1119, dated July 28, 2017.

(i) Prior to exceeding 30,000 total flight cycles or 60,000 total flight hours, whichever occurs first.

(ii) Within 30 days after the effective date of this AD.

**(i) Repair**

If any crack is found during any inspection required by paragraph (h)(1) or (h)(2) of this AD: Before further flight, do a repair in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-92-1087, Revision 03, dated July 31, 2017 (for Group 1 airplanes); or Service Bulletin A320-92-1119, dated July 28, 2017 (for Group 2 airplanes); as applicable. Repair of a 10VU rack fitting lug does not terminate the repetitive inspections required by paragraphs (h)(1) and (h)(2) of this AD.

**(j) Reporting**

At the applicable time specified in paragraph (j)(1) or (j)(2) of this AD: Submit a report of findings (positive and negative) of each inspection required by paragraph (h) of this AD to Airbus Service Bulletin Reporting Online Application on Airbus World (<https://w3.airbus.com/>), or submit the results to Airbus in accordance with the instructions of Airbus Service Bulletin A320-92-1087, Revision 03, dated July 31, 2017 (for Group 1 airplanes); or Service Bulletin A320-92-1119, dated July 28, 2017 (for Group 2 airplanes); as applicable. Where Figure A-FAAAA, Sheet 02, of Appendix 01, "Inspection Report," of Airbus Service Bulletin A320-92-1087, Revision 03, dated July 31, 2017; and Figure A-FAAAA, Sheet 02, of Appendix 01, "Inspection Report," of Service Bulletin A320-92-1119, dated July 28, 2017; specifies sending removed lugs to Airbus for investigation, this AD does not include that requirement.

(1) If the inspection was done on or after the effective date of this AD: Submit the report within 90 days after the inspection.

(2) If the inspection was done before the effective date of this AD: Submit the report within 90 days after the effective date of this AD.

**(k) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraphs (h)(1) and (i) of this AD if those actions were performed before the effective date of this AD using Airbus Service Bulletin A320-92-1087, Revision 02, dated November 25, 2014.

**(l) 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.

**(m) Other FAA AD Provisions**

(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 (n)(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: As of the effective date of this AD, 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.

(3) Required for Compliance (RC): If any service information contains procedures or tests that are identified as RC, those 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.

**(n) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2018-0131, dated June 19, 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-2018-0903.

(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; telephone 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 (o)(3) and (o)(4) of this AD.

**(o) Material Incorporated by Reference**

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

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

(i) Airbus Service Bulletin A320-92-1087, Revision 03, dated July 31, 2017.

(ii) Airbus Service Bulletin A320-92-1119, dated July 28, 2017.

(3) For service information identified in this AD, contact Airbus SAS, Airworthiness Office–EIAS, Rond-Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France; telephone +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 April 9, 2019.

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



**2019-07-06 Bombardier, Inc.:** Amendment 39-19617; Docket No. FAA-2018-0965; Product Identifier 2018-NM-124-AD.

**(a) Effective Date**

This AD is effective May 28, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Bombardier, Inc., Model BD-100-1A10 airplanes, certificated in any category, serial numbers 20003 through 20500 and 20501 through 20665 inclusive.

**(d) Subject**

Air Transport Association (ATA) of America Code 32, Landing gear.

**(e) Reason**

This AD was prompted by a report that certain split ball bearings used in main landing gear (MLG) side brace actuator assemblies are manufactured from material that does not meet the required material properties. We are issuing this AD to address these non-conforming split ball bearings, which, if not corrected, can result in potentially asymmetric MLG extension or retraction and consequent collapse of the MLG during landing.

**(f) Compliance**

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

**(g) Inspection To Verify Serial Number**

At the applicable time specified in figure 1 to paragraphs (g) and (h) of this AD: Perform an inspection to verify the serial number of the left and right MLG side brace actuator assemblies having part number (P/N) 40310-103, in accordance with paragraphs 2.A. and 2.B. of the Accomplishment Instructions of Bombardier Service Bulletin 100-32-30, dated December 18, 2017; or perform an inspection to verify the serial number of the left and right MLG side brace actuator assemblies having P/N 2-8554-2, in accordance with paragraphs 2.A. and 2.B. of the Accomplishment Instructions of Bombardier Service Bulletin 350-32-006, dated December 18, 2017; as applicable. A review of airplane maintenance records is acceptable in lieu of this inspection if the serial number can be conclusively determined from that review.

**Figure 1 to paragraphs (g) and (h) of this AD – Compliance Times**

Airplane cycles	Compliance Time
As of the effective date of this AD: 3,350 total flight cycles or fewer	Before accumulating 3,750 total flight cycles, or within 48 months after the effective date of this AD, whichever occurs first
As of the effective date of this AD: more than 3,350 total flight cycles	Within 400 flight cycles or 12 months after the effective date of this AD, whichever occurs first

**(h) Replacement**

If, during the inspection specified in paragraph (g) of this AD, the serial number of the part installed is listed in table 1 of paragraph 2.B. of the Accomplishment Instructions of Bombardier Service Bulletin 100-32-30, dated December 18, 2017; or table 1 of paragraph 2.B. of the Accomplishment Instructions of Bombardier Service Bulletin 350-32-006, dated December 18, 2017; as applicable: at the applicable time specified in figure 1 to paragraphs (g) and (h) of this AD, replace the split ball bearing having P/N 104467672, in accordance with paragraph 2.C. of the Accomplishment Instructions of Bombardier Service Bulletin 100-32-30, dated December 18, 2017; or paragraph 2.C. of the Accomplishment Instructions of Bombardier Service Bulletin 350-32-006, dated December 18, 2017; as applicable. If the serial number of the installed part is not listed in table 1 of paragraph 2.B. of the Accomplishment Instructions of Bombardier Service Bulletin 100-32-30, dated December 18, 2017; or table 1 of paragraph 2.B. of the Accomplishment Instructions of Bombardier Service Bulletin 350-32-006, dated December 18, 2017; as applicable; no further action is required by this paragraph.

**(i) Parts Installation Limitation**

As of the effective date of this AD, no person may install on any Bombardier, Inc., Model BD-100-1A10 airplane any MLG side brace actuator assembly having a serial number listed in table 1 of paragraph 2.B. of the Accomplishment Instructions of Bombardier Service Bulletin 100-32-30, dated December 18, 2017; or table 1 of paragraph 2.B. of the Accomplishment Instructions of Bombardier Service Bulletin 350-32-006, dated December 18, 2017; as applicable; unless the split ball bearing having P/N 104467672 has been previously replaced as specified in paragraph (h) of this AD.

**(j) 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.

**(k) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF-2018-20, dated July 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-2018-0965.

(2) For more information about this AD, contact Darren Gassetto, Aerospace Engineer, Mechanical Systems and Admin Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7323; fax 516-794-5531; email 9-avs-nyaco-cos@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 this AD specifies otherwise.

(i) Bombardier Service Bulletin 100-32-30, dated December 18, 2017.

(ii) Bombardier Service Bulletin 350-32-006, dated December 18, 2017.

(3) For service information identified in this AD, contact Bombardier, Inc., 200 Côte-Vertu Road West, Dorval, Québec H4S 2A3, Canada; North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; email [ac.yul@aero.bombardier.com](mailto:ac.yul@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 April 8, 2019.

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



**2019-07-09 Rolls-Royce plc:** Amendment 39-19620; Docket No. FAA-2018-0611; Product Identifier 2018-NE-21-AD.

**(a) Effective Date**

This AD is effective May 28, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Rolls-Royce plc (RR) Trent 1000-A2, Trent 1000-AE2, Trent 1000-C2, Trent 1000-CE2, Trent 1000-D2, Trent 1000-E2, Trent 1000-G2, Trent 1000-H2, Trent 1000-J2, Trent 1000-K2, and Trent 1000-L2 model turbofan engines with intermediate-pressure compressor (IPC) rotor seal, part number (P/N) KH77674, installed.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by reports of IPC rotor seal failures. We are issuing this AD to prevent an IPC rotor seal failure. The unsafe condition, if not addressed, could result in loss of engine thrust control and reduced control of the airplane.

**(f) Compliance**

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

**(g) Required Actions**

(1) Perform an on-wing borescope inspection (BSI) of the IPC rotor seal using the Accomplishment Instructions, Paragraph 3, of RR Alert Non-Modification Service Bulletin (NMSB) Trent 1000 72-AJ929, Initial Issue, dated November 23, 2017, as follows:

(i) For engines with an IPC rotor seal with 300 cycles since new (CSN) or more as of the effective date of this AD, perform a BSI before the IPC rotor seal accumulates 400 flight cycles (FCs) after the effective date of this AD.

(ii) For engines with an IPC rotor seal with less than 300 CSN as of the effective date of this AD, perform a BSI before the IPC rotor seal accumulates 300 CSN or within 100 FCs after the effective date of this AD, whichever is later.

(iii) For engines that were modified to incorporate RR Service Bulletin (SB) Trent 1000 72-J704, Initial Issue, dated June 23, 2017, before the effective date of this AD, perform a BSI before the IPC

rotor seal accumulates 400 FCs since the shop visit modification or before the next flight, whichever occurs later.

(2) Repeat the on-wing BSI at intervals in accordance with Figure 2 of RR Alert NMSB Trent 1000 72-AJ929, Initial Issue, dated November 23, 2017.

(3) An in-shop inspection in accordance with the Accomplishment Instructions, Paragraph 3, of RR NMSB Trent 1000 72-J353, Revision 2, dated February 14, 2018, may be substituted for an on-wing BSI as required by paragraphs (g)(1) and (2) of this AD, within the compliance times specified by paragraphs (g)(1) and (2) of this AD.

(4) If a crack is found on the front face of the seal that is at or beyond the rejection limits specified in Figures 1, 2, and 3 of RR Alert NMSB Trent 1000 72-AJ929, Initial Issue, dated November 23, 2017, replace the IPC rotor seal with a part eligible for installation before further flight.

#### **(h) Operating Prohibition**

After the effective date of this AD, do not operate an aircraft that has two engines installed that are both required by this AD to complete either the 50 FCs interval inspections or the single 100 FCs fly-on period as specified in Figures 1, 2, and 3 of RR Alert NMSB Trent 1000 72-AJ929, Initial Issue, dated November 23, 2017.

#### **(i) Non-Required Action**

None of the reporting requirements referenced in RR Alert NMSB Trent 1000 72-AJ929, Initial Issue, dated November 23, 2017; RR SB Trent 1000 72-J704, Initial Issue, dated June 23, 2017; or RR NMSB Trent 1000 72-J353, Revision 2, dated February 14, 2018, are required by this AD.

#### **(j) 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 ECO Branch, send it to the attention of the person identified in paragraph (k)(1) 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.

#### **(k) Related Information**

(1) For more information about this AD, contact Besian Luga, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7750; fax: 781-238-7199; email: Besian.luga@faa.gov.

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2018-0095, dated April 24, 2018, for more information. You may examine the EASA AD in the AD docket on the internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2018-0611.

#### **(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) Rolls-Royce plc (RR) Non-Modification Service Bulletin (NMSB) Trent 1000 72-J353, Revision 2, dated February 14, 2018.

(ii) RR Service Bulletin Trent 1000 72-J704, Initial Issue, dated June 23, 2017.

(iii) RR Alert NMSB Trent 1000 72-AJ929, Initial Issue, dated November 23, 2017.

(3) For RR service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE24 8BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; email: [corporate.care@rolls-royce.com](mailto:corporate.care@rolls-royce.com); internet: <https://customers.rolls-royce.com/public/rollsroycecare>.

(4) You may view this service information at FAA, Engine & Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. 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 April 15, 2019.

Karen M. Grant,  
Acting Manager, Engine and Propeller Standards Branch,  
Aircraft Certification Service.