

**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES**

**SMALL AIRPLANES, ROTORCRAFT, GLIDERS,  
BALLOONS, & AIRSHIPS**

**BIWEEKLY 2019-13**

*6/10/2019 - 6/23/2019*



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

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**Biweekly 2019-01**

|            |              |                    |                                       |
|------------|--------------|--------------------|---------------------------------------|
| 2018-26-02 | R 2016-25-19 | Airbus Helicopters | AS350B3; EC130B4; EC130T2 helicopters |
|------------|--------------|--------------------|---------------------------------------|

**Biweekly 2019-02**

We published no ADs for the Small AD Biweekly during this period.

**Biweekly 2019-03**

|            |  |                      |  |
|------------|--|----------------------|--|
| 2019-01-02 |  | Aspen Avionics, Inc. | Evolution Flight Display (EFD) EFD1000 Primary Flight Display, EFD1000 Multi-Function Display (MFD), EFD1000 Emergency Backup Display, or EFD500 MFD units |
|------------|--|----------------------|--|

**Biweekly 2019-04**

|            |              |                        |  |
|------------|--------------|------------------------|--|
| 2019-02-02 |              | Pacific Aerospace Ltd. | FBA-2C1, FBA-2C2, FBA-2C3, and FBA-2C4 airplanes |
| 2019-02-05 | R 2013-11-03 | Viking Air Limited     | CL-215-1A10, CL-215-6B11 airplanes               |

**Biweekly 2019-05**

|               |                 |  |  |
|---------------|-----------------|--|--|
| 2014-05-06 R2 | R 2014-05-06 R1 | Airbus Helicopters Deutschland GmbH    | EC135 P1, P2, P2+, T1, T2, and T2+; MBB-BK 117 C-2 helicopters |
| 2018-21-14    |                 | Zodiac Aerotechnics                    | MC10 series crew oxygen mask regulators                        |
| 2018-22-11    |                 | Safran Helicopter Engines              | ASTAZOU XIV B and H model engines                              |
| 2019-03-02    |                 | Pacific Aerospace Limited              | 750XL airplanes  |
| 2019-03-05    |                 | Bell Helicopter Textron Canada Limited | 429 helicopters  |

**Biweekly 2019-06**

|            |            |                                     |  |
|------------|------------|-------------------------------------|--|
| 2019-03-12 |            | Airbus Helicopters                  | EC225 LP helicopters   |
| 2019-05-03 |            | Leonardo S.p.A.                     | AB139 and AW139; AW169 and AW189 helicopters   |
| 2019-05-04 |            | MD Helicopters, Inc.                | 369A, 369D, 369E, 369FF, 369H, 369HE, 369HM, 369HS, 500N, and 600N helicopters                                 |
| 2019-05-05 | R 97-26-03 | Airbus Helicopters Deutschland GmbH | MBB-BK 117 A-1, MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK 117 B-1, MBB-BK 117 B-2, and MBB-BK 117 C-1 helicopters |
| 2019-05-06 |            | Airbus Helicopters Deutschland GmbH | EC135P1, EC135P2, EC135P2+, EC135P3, EC135T1, EC135T2, EC135T2+, and EC135T3 helicopters                       |

**Biweekly 2019-07**

We published no ADs for the Small AD Biweekly during this period.

**Biweekly 2019-08**

|            |  |  |  |
|------------|--|--|--|
| 2019-04-01 |  | HPH s. r.o.                            | Glasfögel 304C, Glasfögel 304CZ, and Glasfögel 304CZ-17 gliders  |
| 2019-05-15 |  | Pilatus Aircraft Ltd                   | PC-7 airplanes   |
| 2019-06-04 |  | Bell Helicopter Textron Canada Limited | 429 helicopters  |
| 2019-06-05 |  | Airbus Helicopters Deutschland GmbH    | MBB-BK 117 A-1, MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK 117 B-1, MBB-BK 117 B-2, MBB-BK 117 C-1, and MBB-BK 117 C-2 helicopters |
| 2019-06-10 |  | Vulcanair S.p.A.                       | AP68TP-300 "SPARTACUS"; AP68TP-600 "VIATOR" airplanes  |
| 2019-06-11 |  | Pacific Aerospace Limited              | 750XL airplanes  |
| 2019-07-02 |  | Robinson Helicopter Company            | R66 helicopters  |

**Biweekly 2019-09**

|            |              |                                     |  |
|------------|--------------|-------------------------------------|--|
| 2019-07-07 |              | Airbus Helicopters Deutschland GmbH | BO-105A, BO-105C, BO-105S, BO105LS A-3, MBB-BK 117A-1, MBB-BK 117A-3, MBB-BK 117A-4, MBB-BK 117B-1, MBB-BK 117B-2, MBB-BK 117C-1, MBB-BK 117C-2, and MBB-BK 117D-2 helicopters |
| 2019-07-08 |              | GA 8 Airvan (Pty) Ltd               | GA8 and Model GA8-TC320 airplanes  |
| 2019-07-10 | A 2010-26-09 | Northrop Grumman LITEF GmbH         | LCR-100 Attitude and Heading Reference System  |
| 2019-08-51 | E            | Cirrus Design Corporation (Cirrus)  | SF50 airplanes   |

**Biweekly 2019-10**

We published no ADs for the Small AD Biweekly during this period.

**Biweekly 2019-11**

|            |              |   |   |
|------------|--------------|---|---|
| 2019-08-10 |              | Bell Helicopter Textron Canada Limited (Bell) | Model 206A, 206B, 206L, 206L-1, 206L-3, 206L-4, and 407 helicopters |
| 2019-08-13 |              | Textron Aviation, Inc.                        | Models 525, 525A, and 525B airplanes                                |
| 2019-09-02 | R 2018-17-01 | Bell Helicopter Textron, Inc. (Bell)          | Bell Model 212, 412, 412CF, and 412EP helicopters                   |
| 2019-09-03 |              | Airbus Helicopters                            | Model AS332C, AS332C1, AS332L, and AS332L1 helicopters              |
| 2019-10-51 | E            | Airbus Helicopters Deutschland GmbH (Airbus)  | Model MBB-BK 117 C-2 helicopters                                    |

**Biweekly 2019-12**

|            |  |  |   |
|------------|--|--|---|
| 2019-09-04 |  | Leonardo S.p.A.                        | Model AW109SP helicopters   |
| 2019-10-04 |  | BRP-Rotax GmbH & Co KG                 | BRP-Rotax GmbH & Co KG (Rotax) 912 F2, 912 F3, and 912 F4, 912 S2, 912 S3, and 912 S4, Rotax 914 F2, 914 F3, and 914 F4, and Rotax 912 F2, 912 F3, 912 F4, 912 S2, 912 S3, 912 S4, 914 F2, 914 F3, and 914 F4 engines |
| 2019-10-07 |  | Pilatus Aircraft Ltd                   | Models PC-6, PC-6/350, PC-6/350-H1, PC-6/350-H2, PC-6/A, PC-6/A-H1, PC-6/A-H2, PC-6/B-H2, PC-6/B1-H2, PC-6/B2-H2, PC-6/B2-H4, PC-6/C-H2, PC-6/C1-H2, PC-6-H1, PC-6-H2 airplanes                                       |
| 2019-11-04 |  | Airbus Helicopters Deutschland GmbH    | Model MBB-BK 117 D-2 helicopters  |
| 2019-11-05 |  | Bell Helicopter Textron Canada Limited | 429 helicopters   |

**Biweekly 2019-13**

|            |  |                            |  |
|------------|--|----------------------------|--|
| 2019-08-51 |  | Cirrus Design Corporation  | Model SF50 airplanes   |
| 2019-10-06 |  | Aviat Aircraft Inc         | Models A-1C-180 and A-1C-200 airplanes   |
| 2019-11-07 |  | Rolls-Royce plc            | (RR) RB211-524G2-19, RB211-524G2-T-19, RB211-524G3-19, RB211-524G3-T-19, RB211-524H2-19, RB211-524H2-T-19, RB211-524H-36 and RB211-524H-T-36 engines   |
| 2019-11-08 |  | International Aero Engines | PW1133G-JM, PW1133GA-JM, PW1130G-JM, PW1129G-JM, PW1127G-JM, PW1127GA-JM, PW1127G1-JM, PW1124G-JM, PW1124G1-JM, and PW1122G-JM model turbofan engines  |
| 2019-12-01 |  | CFM International S.A      | LEAP-1B21, -1B23, -1B25, -1B27, -1B28, -1B28B1, -1B28B2, -1B28B3, -1B28B2C, -1B28BBJ1, and -1B28BBJ2 model turbofan  |
| 2019-12-05 |  | CFM International S.A      | CFM56-5B1, -5B2, -5B4, -5B5, -5B6, -5B7, -5B1/P, -5B2/P, -5B3/P, -5B4/P, -5B5/P, -5B6/P, -5B7/P, -5B8/P, -5B9/P, -5B3/P1, -5B4/P1, -5B1/2P, -5B2/2P, -5B3/2P, -5B4/2P, -5B6/2P, -5B9/2P, -5B3/2P1, -5B4/2P1, -7B20, -7B22, -7B24, -7B26, -7B27, -7B22/B1, -7B24/B1, -7B26/B1, -7B26/B2, -7B27/B1, -7B27/B3, -7B20/2, -7B22/2, -7B24/2, -7B26/2, -7B27/2, -7B27A model turbofan engines |



**2019-08-51 Cirrus Design Corporation:** Amendment 39-19639; Docket No. FAA-2019-0392; Product Identifier 2019-CE-020-AD.

**(a) Effective Date**

This AD is effective June 17, 2019 to all persons except those persons to whom it was made immediately effective by Emergency AD 2019-08-51, issued on April 18, 2019, which contained the requirements of this amendment.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Cirrus Design Corporation Model SF50 airplanes, all serial numbers, certificated in standard category.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 27; Flight Controls.

**(e) Unsafe Condition**

This AD was prompted by Cirrus reporting three incidents of the stall warning and protection system (SWPS) or Electronic Stability & Protection (ESP) System engaging when not appropriate. The SWPS and ESP may engage even when sufficient airspeed and proper angle of attack (AOA) exists for normal flight. SWPS includes the stall warning alarm, stick shaker and stick pusher. ESP includes under speed protection (USP). The SWPS and ESP engaging could potentially result in a STALL WARNING crew alert (CAS) message activation, accompanied by an audio alarm and stick shaker activation, followed possibly by either low speed ESP/USP engaging and/or the stick pusher engaging. The pilot will also observe the dynamic and color-coded (Red) airspeed awareness ranges displaying the stall band, regardless of actual indicated airspeed. These conditions, if not addressed, could result in the flight crew having difficulty controlling the airplane, lead to excessive nose-down attitude, significant altitude loss, and possible impact with terrain.

**(f) Compliance**

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

**(g) Corrective Action**

(1) Before further flight after the effective date of this AD, replace the AOA sensor with an improved AOA sensor, Aerosonic part number 4677-03 Mod 1 or Cirrus part number 32159-004 in accordance with section 11. ACCOMPLISHMENT INSTRUCTIONS, paragraphs A, B, and C of Cirrus Design Corporation SF50 Service Bulletin Number: SB5X-34-03, dated April 16, 2019.

(2) Before further flight after replacement of the AOA sensor per paragraph (g)(1) of this AD, perform final installation checkout procedures and flight tests in accordance with a method approved by the Manager, FAA, Chicago ACO Branch. For the checkout procedures and flight test to be approved by the Manager, FAA, Chicago ACO Branch as required by this paragraph, the Manager's approval letter must specifically refer to this AD.

(3) As of the effective date of this AD, do not install any AOA sensor on any affected airplane unless it is an improved AOA sensor as identified in paragraph (g)(1) of this AD.

**(h) Special Flight Permit**

A special flight permit is allowed with the following limitation: Operators may fly the airplane to a location where the modification/corrective action can be incorporated. However, the pilot must follow the procedures listed in section 4., Pilot Actions Required, in Cirrus SF50 Alert Service Advisory SA19-08, dated April 8, 2019.

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

(1) The Manager, Chicago 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.

(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**

(1) For further information about this AD, contact: Wess Rouse, Small Airplane Program Manager, 2300 East Devon Avenue, Room 107, Des Plaines, Illinois 60018; telephone: (847) 294-8113; fax: (847) 294-7834; email: wess.rouse@faa.gov.

(2) For additional information related to this AD, you may refer to Cirrus SF50 Alert Service Advisory SA19-08, dated April 8, 2019.

**(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) Cirrus Design Corporation SF50 Service Bulletin Number: SB5X-34-03, dated April 16, 2019.

(ii) Cirrus SF50 Alert Service Advisory SA19-08, dated April 8, 2019.

(3) For service information identified in this AD, contact Cirrus Worldwide Headquarters, 4515 Taylor Circle, Duluth, Minnesota, 55811; telephone: (800) 921-2737 or after hours (800) 921-2737;

fax: (218) 788-3500; email: [fieldservice@cirrusaircraft.com](mailto:fieldservice@cirrusaircraft.com); internet:  
<https://cirrusaircraft.com/service-support/>.

(4) You may view this service information at FAA, Small Airplane Standards Branch, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148. For information on the availability of this material at the FAA, call (816) 329-4148.

(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 Kansas City, Missouri, on June 10, 2019.

Melvin J. Johnson,

Aircraft Certification Service, Deputy Director, Policy and Innovation Division, AIR-601.

[FR Doc. 2019-12622 Filed 6-14-19; 8:45 am]

**BILLING CODE 4910-13-P**



**2019-10-06 Aviat Aircraft Inc.:** Amendment 39-19645; Docket No. FAA-2017-0418; Product Identifier 2016-CE-041-AD.

**(a) Effective Date**

This AD is effective July 22, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Aviat Aircraft Inc. (Aviat) Models A-1C-180 and A-1C-200 airplanes, serial numbers 3181 through 3282, certificated in any category, that are equipped with a Rapco part number (P/N) RA1798-00-1 fuel vent check valve on one or both wings.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 2820, Fuel Distribution.

**(e) Unsafe Condition**

This AD was prompted by a report that Rapco P/N RA1798-00-1 fuel vent check valves are sticking in the closed position. We are issuing this AD to detect and correct failure of the fuel tank vent check valve, which could result in fuel starvation to the engine and cause the engine to shut down.

**(f) Compliance**

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

**(g) Verify Proper Operation of the Fuel Vent Check Valve on Each Wing**

Before further flight after July 22, 2019 (the effective date of this AD), revise the airplane flight manual (AFM) as follows:

(1) Insert into the Limitations Section of the AFM steps 1 through 3 of the Accomplishment Instructions in Aviat Aircraft Inc. Mandatory Service Bulletin (MSB) No. 33, Initial Release, dated November 11, 2016 (Aviat SB, No. 33, IR).

(2) Immediately following steps 1 through 3, add the following language to the Limitations Section of the AFM: Step 4. If there is a stuck fuel vent check valve, it must be replaced in accordance with AD 2019-10-06 before further flight.

(3) This AFM revision requires preflight checks of the fuel vent check valve on each wing. This insertion and the steps therein may be performed by the owner/operator (pilot) holding at least a

private pilot certificate. The AFM revision must be entered into the aircraft records showing compliance with this AD in accordance with 14 CFR 91.417(a)(2)(v). The record must be maintained as required by 14 CFR 91.417, 121.380, or 135.439.

**(h) Remove Inoperative Fuel Vent Check Valve**

If a fuel vent check valve is not operating properly, before further flight, remove the inoperative valve by following steps 5 and 6 of the Accomplishment Instructions in Aviat SB, No. 33, IR.

**(i) Replace Inoperative Fuel Vent Check Valve**

Before further flight after removing any inoperative fuel vent check valve as required by paragraph (h) of this AD, replace it with an airworthy fuel vent check valve by following step 8 of the Accomplishment Instructions in Aviat SB, No. 33, IR. If both fuel vent check valves, Rapco P/N RA1798-00-1, are replaced with Aviat P/N 38266-501 fuel vent check valves, you may remove the AFM revisions required by paragraph (g)(1) and (2) of this AD.

**(j) Special Flight Permit**

Special flight permits are not necessary for the preflight checks. A special flight permit is allowed for this AD per 14 CFR 39.23 with limitations. Special flight permits are permitted for the airplane to be flown visual flight rules only to a location where the inoperative fuel vent check valve can be removed and replaced. No special flight permits are allowed if both valves are found to be inoperative.

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

(1) The Manager, Denver 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 ACO, send it to the attention of the person and office identified in paragraph (l)(1) of this AD.

(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.

**(l) Related Information**

For more information about this AD, contact Richard R. Thomas, Aviation Safety Engineer (ASE), FAA, Denver ACO Branch, 26805 East 68th Avenue, Room 214, Denver, Colorado 80249; phone: (303) 342-1085; fax: (303) 342-1088; email: richard.r.thomas@faa.gov. If an AMOC is requested by email, it must be sent to both the ASE's email and the Denver ACO Branch general email: 9-Denver-Aircraft-Cert@faa.gov.

**(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) Aviat Aircraft Inc. Mandatory Service Bulletin No. 33, Initial Release, dated November 11, 2016.

(ii) [Reserved]

(3) For service information identified in this AD, contact Aviat Aircraft Inc., P.O. Box 1240, Afton, WY 83110; phone (307) 885-3151; fax: (307) 885-9674; email: [aviat@aviataircraft.com](mailto:aviat@aviataircraft.com); internet: <http://aviataircraft.com>.

(4) You may view this service information at FAA, Policy and Innovation Division, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

(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 Kansas City, Missouri, on June 10, 2019.

Melvin J. Johnson,

Aircraft Certification Service, Deputy Director, Policy and Innovation Division, AIR-601.

[FR Doc. 2019-12621 Filed 6-14-19; 8:45 am]



**2019-11-07 Rolls-Royce plc:** Amendment 39-19653; Docket No. FAA-2019-0338; Product Identifier 2019-NE-10-AD.

**(a) Effective Date**

This AD is effective June 28, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Rolls-Royce plc (RR) RB211-524G2-19, RB211-524G2-T-19, RB211-524G3-19, RB211-524G3-T-19, RB211-524H2-19, RB211-524H2-T-19, RB211-524H-36 and RB211-524H-T-36 engines.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by unauthorized repairs to the affected low-pressure compressor (LPC) shafts that reduced their expected life. The FAA is issuing this AD to prevent failure of the LPC shaft. The unsafe condition, if not addressed, could result in uncontained release of the LPC shaft, 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**

Within 30 days from the effective date of this AD or before exceeding 10,500 flight cycles (FCs) since new, whichever occurs later, remove LPC shaft, part number (P/N) UL24833, with serial numbers (S/Ns) PATH3113; PATH3121; PAVN1765, PAVN1853, PAVN2152, PAVN2157, PAVN2259, PAVN2636, PAVN2991, or PAVN2992.

**(h) Installation Prohibition**

After the effective date of this AD, do not install an LPC shaft, P/N UL24833 and with S/Ns PATH3113; PATH3121; PAVN1765, PAVN1853, PAVN2152, PAVN2157, PAVN2259, PAVN2636, PAVN2991, or PAVN2992, with 10,500 FCs since new, or greater, on any engine.

**(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)(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.

**(j) Related Information**

(1) For more information about this AD, contact Eugene Triozzi, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7148; fax: 781-238-7199; email: Eugene.triozzi@faa.gov.

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2018-0157, dated July 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-2019-0338.

**(k) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on June 6, 2019.  
Robert J. Ganley,  
Manager, Engine and Propeller Standards Branch,  
Aircraft Certification Service.



**2019-11-08 International Aero Engines:** Amendment 39-19654; Docket No. FAA-2019-0393; Product Identifier 2019-NE-14-AD.

**(a) Effective Date**

This AD is effective June 28, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all International Aero Engines, LLC (IAE) PW1133G-JM, PW1133GA-JM, PW1130G-JM, PW1129G-JM, PW1127G-JM, PW1127GA-JM, PW1127G1-JM, PW1124G-JM, PW1124G1-JM, and PW1122G-JM model turbofan engines.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7260, Turbine Engine Accessory Drive.

**(e) Unsafe Condition**

This AD was prompted by multiple reports of in-flight engine shutdowns as the result of high-cycle fatigue causing fracture of certain parts of the main gearbox (MGB) assembly. The FAA is issuing this AD to prevent failure of the MGB assembly. The unsafe condition, if not addressed, could result in failure of one or more engines, loss of thrust control, and loss of the airplane.

**(f) Compliance**

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

**(g) Required Actions**

(1) Remove the MGB assembly, part number (P/N) 5322505, and install a part eligible for installation as follows:

(i) For engines that operate on 180-minute extended operations (ETOPS) flights, within 90 days from the effective date of this AD;

(ii) For engines that operate on 120-minute ETOPS flights, within 120 days from the effective date of this AD.

(2) For engines with MGB assembly P/N 5322505, within 120 days from the effective date of this AD, remove electronic engine control (EEC) software earlier than FCS 5.0 from the engine and load EEC software that is eligible for installation.

**(h) Installation Prohibition**

(1) After the effective date of this AD, do not install integrated drive generator (IDG) oil pump drive gearshaft assembly, P/N 5322630-01, into an MGB assembly.

(2) After the effective date of this AD, do not load EEC software earlier than FCS 5.0 on any engine identified in paragraph (c) of this AD with an MGB assembly, P/N 5322505.

**(i) Definitions**

(1) For the purpose of this AD, a “part eligible for installation” is an MGB assembly with an IDG oil pump drive gearshaft assembly other than P/N 5322630-01.

(2) For the purpose of this AD, “EEC software that is eligible for installation” is EEC software FCS 5.0 and later.

**(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 certification office, send it to the attention of the person identified in paragraph (k) 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**

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.

**(l) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on June 6, 2019.

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



**2019-12-01 CFM International S.A.:** Amendment 39-19656; Docket No. FAA-2019-0414; Product Identifier 2019-NE-15-AD.

**(a) Effective Date**

This AD is effective July 3, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all CFM International S.A. (CFM) LEAP-1B21, -1B23, -1B25, -1B27, -1B28, -1B28B1, -1B28B2, -1B28B3, -1B28B2C, -1B28BBJ1, and -1B28BBJ2 model turbofan engines with radial drive shaft (RDS) bearing, part number (P/N) 92D08200 or P/N 92D08201, installed.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7260, Turbine Engine Accessory Drive.

**(e) Unsafe Condition**

This AD was prompted by multiple reports of in-flight shutdowns (IFSDs) due to RDS bearing cage failure. The FAA is issuing this AD to prevent failure of the RDS bearing. The unsafe condition, if not addressed, could result in failure of one or more engines, loss of thrust control, and loss of the airplane.

**(f) Compliance**

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

**(g) Required Actions**

(1) Inspect the transfer gearbox (TGB) 1 and TGB2 scavenge screens in accordance with the Accomplishment Instructions, paragraph 5.A.(1), of CFM Service Bulletin (SB) LEAP-1B-72-00-0222-01A-930A-D, Issue 007, dated May 17, 2019, as follows:

(i) For affected engines with engine serial number (ESN) 602499 and lower:

(A) After the RDS bearing accumulates 50 flight hours (FHs) since new but before accumulating 250 FHs since new, or within 50 FHs after the effective date of this AD, whichever occurs later, perform an initial inspection of the TGB1 and TGB2 scavenge screens.

(B) Thereafter, perform repetitive inspections of the TGB1 and TGB2 scavenge screens at intervals not exceeding 250 FHs since the last inspection.

(ii) For affected engines with ESN 602500 and higher:

(A) After the RDS accumulates 50 FHs since new but before accumulating 100 FHs since new, or within 50 FHs after the effective date of this AD, whichever occurs later, perform an initial inspection of the TGB1 and TGB2 scavenge screens.

(B) Thereafter, perform repetitive inspections of the TGB1 and TGB2 scavenge screens at intervals not exceeding 100 FHs since the last inspection.

(iii) Based on the results of these inspections, remove the engine from service or return the engine to service using the criteria in the Accomplishment Instructions, Paragraphs 5.A.(2) through 5.A.(5), of CFM SB LEAP-1B-72-00-0222-01A-930A-D, Issue 007, dated May 17, 2019.

(2) [Reserved]

#### **(h) Optional Borescope Inspection (BSI)**

(1) Once the RDS bearing has accumulated 1,000 FHs since new, you may perform a BSI of the RDS bearing in accordance with the Accomplishment Instructions, paragraphs 5.B.(1) through 5.B.(8), of CFM SB LEAP-1B-72-00-0222-01A-930A-D dated May 17, 2019. If the results of this BSI are “satisfactory” according to the criteria in the Accomplishment Instructions, paragraphs 5.B.(6)(g), of CFM SB LEAP-1B-72-00-0222-01A-930A-D, Issue 007, dated May 17, 2019, then you are not required to perform the repetitive inspections in paragraphs (g)(1)(i)(B) or (g)(1)(ii)(B) of this AD until the RDS bearing accumulates 4,250 FHs since new.

(2) [Reserved]

#### **(i) Optional Terminating Action**

(1) As an optional terminating action to the repetitive inspections required by paragraphs (g)(1)(i)(B) and (g)(1)(ii)(B) of this AD, you may perform a BSI of the RDS bearing in accordance with the Accomplishment Instructions, Paragraphs 5.B.(1) through 5.B.(8), of CFM SB LEAP-1B-72-00-0222-01A-930A-D, Issue 007, dated May 17, 2019 after the RDS bearing accumulates 3,750 FHs since new.

(i) If the results of the BSI are “satisfactory” using the criteria in Accomplishment Instructions, paragraph 5.B.(6)(g), of CFM SB LEAP-1B-72-00-0222-01A-930A-D, Issue 007, dated May 17, 2019, then you have met the repetitive inspection requirements of this AD and no further action is required.

(ii) If the results of the BSI are “unsatisfactory” using the criteria in Accomplishment Instructions, paragraph 5.B.(6)(g), of CFM SB LEAP-1B-72-00-0222-01A-930A-D, Issue 007, dated May 17, 2019, then you must continue the repetitive inspections required by paragraphs (g)(1)(i)(B) or (g)(1)(ii)(B) of this AD.

(2) [Reserved]

#### **(j) Definition**

For the purpose of this AD, “flight hours (FHs) since new” are the FHs accumulated on the RDS bearings on new engines delivered from production and on engines that have had the RDS bearing replaced during an engine shop visit.

#### **(k) No Reporting Requirement**

The reporting requirement in paragraph 5.A.(6) in CFM SB LEAP-1B-72-00-0222-01A-930A-D, Issue 007, dated May 17, 2019, is not required by this AD.

**(l) Credit for Previous Actions**

You may take credit for the inspections that are required by paragraph (g)(1) of this AD, if you performed those actions before the effective date of this AD using CFM SB LEAP-1B-72-00-0222-01A-930A-D, Issue 006, dated March 22, 2019, or an earlier revision. You may also take credit for the optional BSI in paragraphs (h)(1) or the optional terminating inspection in paragraph (i)(1) of this AD, if you performed that action before the effective date of this AD using CFM SB LEAP-1B-72-00-0256-01A-930A-D, Issue 002, dated May 6, 2019, or an earlier revision.

**(m) 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 (n) 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.

**(n) Related Information**

For more information about this AD, contact Christopher McGuire, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7120; fax: 781-238-7199; email: chris.mcguire@faa.gov.

**(o) Material Incorporated by Reference**

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

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

(i) CFM Service Bulletin LEAP-1B-72-00-0222-01A-930A-D, Issue 007, dated May 17, 2019.

(ii) [Reserved]

(3) For CFM service information identified in this AD, contact CFM International Inc., Aviation Operations Center, 1 Neumann Way, M/D Room 285, Cincinnati, OH, 45125; phone: 877-432-3272; fax: 877-432-3329; email: aviation.fleetsupport@ge.com.

(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 June 14, 2019.

Karen M. Grant,

Acting Manager, Engine & Propeller Standards Branch, Aircraft Certification Service.

[FR Doc. 2019-13022 Filed 6-17-19; 8:45 am]



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**2019-12-05 CFM International S.A.:** Amendment 39-19660; Docket No. FAA-2019-0212; Product Identifier 2019-NE-05-AD.

**(a) Effective Date**

This AD is effective July 5, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to:

(1) CFM International S.A. (CFM) CFM56-5B1, -5B2, -5B4, -5B5, -5B6, -5B7, -5B1/P, -5B2/P, -5B3/P, -5B4/P, -5B5/P, -5B6/P, -5B7/P, -5B8/P, -5B9/P, -5B3/P1, -5B4/P1, -5B1/2P, -5B2/2P, -5B3/2P, -5B4/2P, -5B6/2P, -5B9/2P, -5B3/2P1, -5B4/2P1, -7B20, -7B22, -7B24, -7B26, -7B27, -7B22/B1, -7B24/B1, -7B26/B1, -7B26/B2, -7B27/B1, -7B27/B3, -7B20/2, -7B22/2, -7B24/2, -7B26/2, -7B27/2, -7B27A model turbofan engines with a:

(i) rotating air high-pressure turbine (HPT) front seal:

(A) with part number (P/N) 1795M36P01 or P/N 1795M36P02 and serial numbers (S/Ns) GWNDN949 through GWNSE969 or S/Ns GWN000CE through GWN0990L, not including S/Ns GWN08ND7, GWN0923A, GWN0971E, GWN098A1, GWN098W6, GWN098W8, GWN098WA, and GWN0990G, installed;

(B) that has been removed from the original HPT disk and re-assembled to a different HPT disk; and

(C) that has 6,001 or more cycles since being reconfigured.

(ii) [Reserved]

(2) CFM CFM56-5C2, -5C2/4, -5C2/F, -5C2/F4, -5C2/G, -5C2/G4, -5C2/P, -5C3/F, -5C3/F4, -5C3/G, -5C3/G4, -5C3/P, -5C4, -5C4/1, -5C4/P, -5C4/1P model turbofan engines with a:

(i) rotating air HPT front seal:

(A) with P/N 1795M36P01 or P/N 1795M36P02 and S/Ns GWNDN949 through GWNSE969 or S/Ns GWN000CE through GWN0990L, not including S/Ns GWN08ND7, GWN0923A, GWN0971E, GWN098A1, GWN098W6, GWN098W8, GWN098WA, and GWN0990G, installed;

(B) that has been removed from the original HPT disk and re-assembled to a different HPT disk; and

(C) that has 3,751 or more cycles since being reconfigured.

(ii) [Reserved]

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by cracks found in the rotating air HPT front seal. The FAA is issuing this AD to prevent failure of the rotating air HPT front seal. The unsafe condition, if not addressed, could result in the uncontained release of the rotating air HPT front seal, 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) For all affected CFM CFM56-5B and CFM56-7B model turbofan engines:

(i) If, on the effective date of this AD, the rotating air HPT front seal has 7,000 cycles or greater since being reconfigured, remove the part from service within 50 cycles after the effective date of this AD and replace with a part eligible for installation.

(ii) If, on the effective date of this AD, the rotating air HPT front seal has between 6,001 and 6,999 cycles, inclusive, since being reconfigured, remove the part from service within 500 cycles after the effective date of this AD, but not to exceed 7,050 cycles since being reconfigured, and replace with a part eligible for installation.

(2) For all affected CFM CFM56-5C model turbofan engines:

(i) If, on the effective date of this AD, the rotating air HPT front seal has 4,250 cycles or greater since being reconfigured, remove the part from service within 25 cycles after the effective date of this AD, or within 1,500 cycles since the last fluorescent penetrant inspection (FPI) of the rotating air HPT front seal, whichever occurs later, and replace with a part eligible for installation.

(ii) If, on the effective date of this AD, the rotating air HPT front seal has between 3,751 and 4,249 cycles, inclusive, since being reconfigured, remove the part from service within 250 cycles after the effective date of this AD, before accumulating 4,275 cycles since being reconfigured, or within 1,500 cycles since the last FPI of the rotating air HPT front seal, whichever occurs later, and replace with a part eligible for installation.

**(h) Definition**

For the purpose of this AD, reconfigured is when a rotating air HPT front seal has been removed from the original HPT disk and re-assembled to a different HPT disk.

**(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 Christopher McGuire, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7120; fax: 781-238-7199; email: [chris.mcguire@faa.gov](mailto:chris.mcguire@faa.gov).

**(k) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on June 14, 2019.

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