

**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES**

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

**BIWEEKLY 2019-17**

*8/5/2019 - 8/18/2019*



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

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

AD No.	Information	Manufacturer	Applicability
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Information Key: E - Emergency; COR - Correction; S – Supersedes; R - Replaces

**Biweekly 2019-01**

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

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

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2019-08-51	E	Cirrus Design Corporation (Cirrus)	SF50 airplanes
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**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

**Biweekly 2019-14**

2019-12-06		Leonardo S.p.A.	Model AW139 helicopters
2019-12-12		Piper Aircraft, Inc.	Model PA-46-600TP (M600) airplanes
2019-12-14		Airbus Helicopters Deutschland GmbH	Model MBB-BK 117 C-2 helicopters
2019-12-15		Leonardo S.p.A	Model AB139 and AW139 helicopters
2019-12-18		Robinson Helicopter Company	Model R44 II helicopters

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**Biweekly 2019-15**

2019-12-09		Rockwell Collins, Inc.	Flight Display System
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**Biweekly 2019-16**

2019-13-03		Trig Avionics Limited	TT31 Mode S transponders, AXP340 Mode S transponders and KT74 Mode S transponders
2019-13-05		Sikorsky Aircraft Corporation	Model S-92A helicopters
2019-14-01		Rolls-Royce Deutschland Ltd & Co KG	TAY 650-15 and TAY 651-54 turbofan engines
2019-14-05		B/E Aerospace Fischer GmbH	Common Seats 170/260 H160
2019-15-05		Rolls-Royce Deutschland Ltd & Co KG	Trent 1000-AE3, Trent 1000-CE3, Trent 1000-D3, Trent 1000-G3, Trent 1000-H3, Trent 1000-J3, Trent 1000-K3, Trent 1000-L3, Trent 1000-M3, Trent 1000-N3, Trent 1000-P3, Trent 1000-Q3 and Trent 1000-R3 engines

**Biweekly 2019-17**

2019-14-11		Diamond Aircraft Industries GmbH	Model DA 42 NG and Model DA 42 M-NG airplanes
2019-15-06	R 2018-22-07	Engine Alliance	GP7270, GP7272, and GP7277 model turbofan engines
2019-16-01		International Aero Engines AG	AG (IAE) V2525-D5 and V2528-D5 model turbofan engines
2019-16-02		GE Honda Aero Engines	HF120 model turbofan engines
2019-16-04	R 2019-03-04	Engine Alliance	GP7270 and GP7277 model turbofan engines



**2019-14-11 Diamond Aircraft Industries GmbH:** Amendment 39-19689; Docket No. FAA-2019-0203; Product Identifier 2018-CE-052-AD.

**(a) Effective Date**

This AD is effective September 9, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Diamond Aircraft Industries GmbH (Diamond) Model DA 42 NG and Model DA 42 M-NG airplanes, serial numbers 42.N202, 42.N203, 42.N205 through 42.N207, 42.N210 through 42.N214, 42.N229 through 42.N338, 42.N340, 42.MN055, 42.MN057, and 42.MN058, certificated in any category.

**(d) Subject**

Air Transport Association of America (ATA) Code 27: Flight Controls.

**(e) Reason**

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The unsafe condition reported by the MCAI is insufficient clearance of the gust lock mounts on the pilot side rudder pedals. The FAA is issuing this AD to prevent restricted rudder travel, which could result in reduced control of the airplane.

**(f) Actions and Compliance**

Unless already done, do the following actions in paragraphs (f)(1) and (2) of this AD.

(1) Within the next 100 hours time-in-service after September 9, 2019 (the effective date of this AD):

(i) Remove the pilot (left-hand) side rudder pedal gust lock mounts in accordance with steps 1 through 5 of the Instructions in Diamond Aircraft Industries GmbH Work Instruction WI-MSB 42NG-077, dated August 20, 2018.

(ii) Revise the airplane flight manual (AFM) by adding the figures on page 8-11a of Diamond Aircraft Temporary Revision TR-MÄM 42-1097 Gustlock on Co-Pilot Side only, Doc. #7.01.15-E, dated July 18, 2018, into Chapter 8 of the AFM.

(2) As of September 9, 2019 (the effective date of this AD), do not install on any airplane a pilot (left-hand) side rudder pedal gust lock mount.

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

The Manager, Small Airplane Standards Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Mike Kiesov, Aerospace Engineer, FAA, Small Airplane Standards Branch, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4144; fax: (816) 329-4090; email: mike.kiesov@faa.gov. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

**(h) Related Information**

Refer to MCAI European Aviation Safety Agency (EASA) AD No. 2018-0214, dated October 4, 2018; and Diamond Mandatory Service Bulletin MSB 42NG-077, dated August 20, 2018, for related information. You may examine the MCAI on the internet at <https://www.regulations.gov/document?D=FAA-2019-0203-0002>. Service information related to this final rule is available at the address in paragraph (i)(3) of this AD.

**(i) 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) Diamond Aircraft Industries GmbH Work Instruction WI-MSB 42NG-077, dated August 20, 2018.

(ii) Diamond Aircraft Temporary Revision TR-MÄM 42-1097 Gustlock on Co-Pilot Side only, Doc. #7.01.15-E, dated July 18, 2018.

(3) For Diamond Aircraft Industries GmbH service information identified in this AD, contact Diamond Aircraft Industries GmbH, N.A. Otto-Straße 5, A-2700 Wiener Neustadt, Austria, telephone: +43 2622 26700; fax: +43 2622 26780; email: office@diamond-air.at; internet: <http://www.diamondaircraft.com>.

(4) You may view this service information at the 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 July 19, 2019.

Melvin J. Johnson,

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

[FR Doc. 2019-16573 Filed 8-2-19; 8:45 am]

**BILLING CODE 4910-13-P**



**2019-15-06 Engine Alliance:** Amendment 39-19699; Docket No. FAA-2019-0459; Product Identifier 2018-NE-36-AD.

**(a) Effective Date**

This AD is effective August 30, 2019.

**(b) Affected ADs**

This AD replaces AD 2018-22-07, Amendment 39-19480 (83 FR 66609, December 27, 2018).

**(c) Applicability**

This AD applies to all Engine Alliance (EA) GP7270, GP7272, and GP7277 model turbofan engines.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by a shop finding of axial cracks in the interstage 5-6 seal teeth of the high-pressure compressor (HPC) stages 2-5 spool spacer arm due to an incorrectly installed stage 6 seal ring. The FAA is issuing this AD to prevent failure of the HPC interstage 5-6 seal teeth and uncontained HPC stages 2-5 spool release. The unsafe condition, if not addressed, could result in an uncontained release of the HPC stages 2-5 spool, 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 HPC stages 2-5 spools, perform an initial borescope inspection (BSI) of the HPC stage 6 seal ring position:

(i) Borescope inspect the HPC stage 6 seal ring location in accordance with the Accomplishment Instructions, paragraph 1.F, of EA Alert Service Bulletin (ASB) EAGP7-A72-395, Revision No. 3, dated June 3, 2019, and within the compliance times specified in Table 1 to paragraph (g)(1) of this AD or within 230 engine cycles after the effective date of this AD, whichever occurs first. If the HPC stage 6 seal ring is installed incorrectly, remove the HPC stages 2-5 spool from service within 50 engine cycles and replace with a part eligible for installation, and correct the location of the stage 6 seal ring.

(ii) Borescope inspect the HPC interstage 5-6 seal tooth forward and aft face for cracks and missing coating in accordance with the Accomplishment Instructions, paragraphs 2.C and 2.E, of EA ASB EAGP7-A72-395, Revision No. 3, dated June 3, 2019, and within the compliance times specified in Table 1 to paragraph (g)(1) of this AD or within 230 engine cycles after the effective date of this AD, whichever occurs first.

(A) If the coating is missing on the HPC interstage 5-6 seal tooth forward or aft face, thereafter, repeat the BSI required by paragraph (g)(1)(ii) of this AD for cracks within every 150 engine cycles since you performed the last BSI.

(B) If cracks are found in the HPC interstage 5-6 seal tooth forward or aft face, remove the HPC stages 2-5 spool from service and replace with a part eligible for installation before further flight.

**Table 1 to Paragraph (g)(1)–Compliance Times**

<b>Cycles since new (CSN) on HPC stages 2-5 spool as of January 11, 2019 (the effective date of AD 2018-22-07)</b>	<b>Complete the inspection</b>
2,499 or less	Within 900 engine cycles after January 11, 2019, but not to exceed 2,850 CSN.
2,500 to 3,499	Within 350 engine cycles after January 11, 2019, but not to exceed 3,600 CSN.
3,500 or more	Within 100 engine cycles after January 11, 2019.

(2) For HPC stages 2-5 spools listed in Table 1 of Appendix A of EA SB EAGP7-72-413, dated February 4, 2019, perform the following repetitive on-wing inspections:

(i) Borescope inspect the HPC interstage 5-6 seal tooth forward and aft face for cracks and missing coating in accordance with the Accomplishment Instructions, paragraphs 1.E. and 1.G., of EA SB EAGP7-72-413, dated February 4, 2019, within 300 engine cycles after completion of the initial inspection required by paragraph (g)(1)(ii) of this AD. If the engine has already accumulated more than 200 engine cycles since the inspection required by paragraph (g)(1)(ii) of this AD, perform this BSI of the HPC interstage 5-6 seal tooth forward and aft face within the next 100 engine cycles after the effective date of this AD, but before exceeding 500 engine cycles since the last inspection required by paragraph (g)(1)(ii) of this AD.

(A) If the coating is found missing on the HPC interstage 5-6 seal tooth forward or aft face during the BSI, thereafter, repeat the BSI required by paragraph (g)(2)(i) of this AD for cracks within every 150 engine cycles since last BSI required by paragraph (g)(2)(i).

(B) If cracks are found in the HPC interstage 5-6 seal tooth forward or aft face during the BSI, remove the HPC stages 2-5 spool from service and replace with a part eligible for installation before further flight.

(ii) Thereafter, repeat the BSI required by paragraph (g)(2)(i) of this AD at intervals not exceeding 300 engine cycles since the last BSI.

**(h) Mandatory Terminating Action for HPC Stages 2-5 Spools Identified in Paragraph (g)(2) of This AD**

As a terminating action to the on-wing repetitive BSI required by paragraph (g)(2) of this AD, at the next engine shop visit after the effective date of this AD, perform the following inspections and, if necessary, replacement of any HPC stages 2-5 spools listed in Table 1 of Appendix A of EA SB EAGP7-72-413, dated February 4, 2019.

(1) Visually inspect for the location of the HPC stage 6 seal ring in accordance with the Accomplishment Instructions, paragraph 1, of EA SB EAGP7-72-398, dated February 4, 2019. If the

seal ring is found to be installed incorrectly, remove the HPC stages 2-5 spool and the HPC stage 6 seal ring from service and replace with parts eligible for installation.

(2) Perform an eddy current inspection (ECI) of the HPC interstage 5-6 seal teeth on the HPC stages 2-5 spool in accordance with Accomplishment Instructions, paragraph 2, of EA SB EAGP7-72-398, dated February 4, 2019. If there are ECI indications, as defined in paragraph 2 of EA SB EAGP7-72-398, remove the HPC stages 2-5 spool from service and replace with a part eligible for installation.

(3) Dimensionally inspect the diameter of the middle tooth of the HPC interstage 5-6 seal teeth on eight equally spaced points of the HPC stages 2-5 spool in accordance with the Accomplishment Instructions, paragraph 3, of EA SB EAGP7-72-398, dated February 4, 2019. If the average diameter is larger than the “expected diameter,” as defined in the Accomplishment Instructions, Figure 4 and Figure 5, of EA SB EAGP7-72-398, dated February 4, 2019, remove the HPC stages 2-5 spool from service and replace with a part eligible for installation.

### **(i) Definition**

For the purpose of this AD, an “engine shop visit” is the induction of an engine into the shop for maintenance involving the separation of pairs of major mating engine case flanges, except for the following situations, which do not constitute an engine shop visit:

(1) Separation of engine flanges solely for the purposes of transportation of the engine without subsequent maintenance.

(2) Separation of engine flanges solely for the purpose of replacing the fan or propulsor without subsequent engine maintenance.

### **(j) No Reporting Requirement**

The reporting requirements in the Accomplishment Instructions, paragraphs 1 and 2 of EA SB EAGP7-72-398, dated February 4, 2019, are not required by this AD.

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

You may take credit for any of the initial inspections required by paragraph (g)(1) of this AD if you performed the initial inspection before the effective date of this AD using EA ASB EAGP7-A72-395, Revision No. 2, dated August 2, 2018. The repetitive inspections required by paragraph (g)(1) of this AD are still required if the HPC stage 6 seal ring position is installed incorrectly or the HPC interstage 5-6 seal tooth forward or aft face is cracked or missing coating as determined by the initial BSI required by paragraph (g)(1).

### **(l) 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 (m) 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.

(3) AMOCs approved for AD 2018-22-07, Amendment 39-19480 (83 FR 66609, December 27, 2018) are approved as AMOCs for paragraph (g)(1) of this AD.

**(m) 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.

**(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 the AD specifies otherwise.

(i) Engine Alliance (EA) Alert Service Bulletin EAGP7-A72-395, Revision No. 3, dated June 3, 2019.

(ii) EA Service Bulletin (SB) EAGP7-72-413, dated February 4, 2019.

(iii) EA SB EAGP7-72-398, dated February 4, 2019.

(3) For EA 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).

(4) 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.

(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 August 2, 2019.

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



**2019-16-01 International Aero Engines AG:** Amendment 39-19704; Docket No. FAA-2019-0274; Product Identifier 2019-NE-07-AD.

**(a) Effective Date**

This AD is effective September 19, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all International Aero Engines AG (IAE) V2525-D5 and V2528-D5 model turbofan engines.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by reports of a cracked turbine exhaust case (TEC). The FAA is issuing this AD to prevent failure of the TEC. The unsafe condition, if not addressed, could result in engine separation and loss of the airplane.

**(f) Compliance**

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

**(g) Required Actions**

(1) At the next engine shop visit, but not later than 4,000 flight cycles (FCs) after the effective date of this AD, perform an eddy current inspection (ECI) and high sensitivity fluorescent penetrant inspection (FPI) of the TEC front and rear mount stiffener rails for cracking indications as follows:

(i) Perform an ECI using the Accomplishment Instructions, Part I–For Engines Installed on Aircraft, paragraphs 2 through 19 inclusive, or Part II–For Engines Not Installed on Aircraft, paragraphs 2 through 18 inclusive, of IAE Non-Modification Service Bulletin (NMSB) V2500-ENG-72-0694, Revision No. 2, dated July 2, 2018 (“IAE NMSB V2500-ENG-72-0694”).

(ii) If a rejectable indication was found during the ECI, perform a local high sensitivity FPI to confirm a crack.

(iii) If a rejectable indication was found during the ECI, but no crack(s) were confirmed using the local high sensitivity FPI, then clean, blend and repeat the ECI in the local area of the part. Use the Accomplishment Instructions, Part I–For Engines Installed on Aircraft, paragraph 20.A.(3), or

Part II–For Engines Not Installed on Aircraft, paragraph 19.A.(3), of IAE NMSB V2500-ENG-72-0694 to perform the cleaning and blending. Use the Accomplishment Instructions, Part I–For Engines Installed on Aircraft, paragraphs 2 through 19 inclusive, or Part II–For Engines Not Installed on Aircraft, paragraphs 2 through 18 inclusive, of IAE NMSB V2500-ENG-72-0694 to perform the repeat ECI.

(iv) If a rejectable indication was again found during the repeat ECI, then repeat the local high sensitivity FPI inspection in the local area of the part. If the local high sensitivity FPI does not confirm a crack, follow the instructions in the Accomplishment Instructions, Part I–For Engines Installed on Aircraft, paragraph 20.A.(5)(a), or Part II–For Engines Not Installed on Aircraft, paragraph 19.A.(5)(a), of IAE NMSB V2500-ENG-72-0694.

(2) If no cracks were found, within 2,000 FCs since the last inspection, and thereafter, repeat the inspections of paragraphs (g)(1)(i) through (iv) of this AD.

(3) If a crack was confirmed during the FPI and visual inspection required by paragraphs (g)(1)(ii) or (iv), before further flight, remove the part from service and replace with a part eligible for installation.

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

You may take credit for the inspections required by paragraph (g)(1) of this AD if you performed these inspections before the effective date of this AD, using IAE NMSB V2500-ENG-72-0694, Revision No. 1, dated February 7, 2018; or IAE NMSB V2500-ENG-72-0694, Original Issue, dated January 5, 2018.

### **(i) No Reporting Requirement**

No reporting requirement contained within the NMSB referenced in paragraph (g) of this AD is required by this AD.

### **(j) Definition**

For the purpose of this AD, an “engine shop visit” is the induction of an engine into the shop for maintenance involving the separation of pairs of major mating engine case flanges, except that the separation of engine flanges solely for the purposes of transportation without subsequent engine maintenance does not constitute an engine shop visit.

### **(k) Special Flight Permit**

A special flight permit is not permitted if the crack indication extends past the mount stiffener rail or if there is evidence of an FPI indication on the outer diameter of the case.

### **(l) 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 (m) 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.

**(m) Related Information**

For more information about this AD, contact Martin Adler, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7157; fax: 781-238-7199; email: Martin.Adler@faa.gov.

**(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 the AD specifies otherwise.

(i) International Aero Engines Non-Modification Service Bulletin V2500-ENG-72-0694, Revision No. 2, dated July 2, 2018.

(ii) [Reserved]

(3) For International Aero Engines service information identified in this AD, contact International Aero Engines AG, 400 Main Street, East Hartford, CT, 06118; phone: 800-565-0140; email: help24@pw.utc.com; internet: <http://fleetcare.pw.utc.com>.

(4) You may view this referenced 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.

(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 August 7, 2019.

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



**2019-16-02 GE Honda Aero Engines:** Amendment 39-19705; Docket No. FAA-2019-0352; Product Identifier 2019-NE-09-AD.

**(a) Effective Date**

This AD is effective September 13, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all GE Honda Aero Engines (GHAE) HF120 model turbofan engines with fuel pump metering unit (FPMU) assembly, part number (P/N) 24100-Q0A-F000, installed.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7321, Fuel Control/Turbine Engines.

**(e) Unsafe Condition**

This AD was prompted by damage found on the permanent magnetic alternator drive gear within the FPMU assembly. The FAA is issuing this AD to prevent failure of the FPMU 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**

Within 20 engine hours after the effective date of this AD, or before accumulating 600 engine hours since new, whichever occurs later, remove the affected FPMU assembly from service and replace it with a part eligible for installation.

**(h) Installation Prohibition**

After the effective date of this AD, do not install on any engine an FPMU assembly, P/N 24100-Q0A-F000.

**(i) Definition**

For the purposes of this AD, a “part eligible for installation” is:

- (1) an FPMU assembly, P/N 24100-Q0A-G000 or P/N 24100-Q0A-F100; or
- (2) an FPMU assembly, P/N 24100-Q0A-F000, that is rebuilt and marked as P/N 24100-Q0A-G000 or P/N 24100-Q0A-F100.

**(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 Michael Richardson-Bach, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7747; fax: 781-238-7199; email: michael.richardson-bach@faa.gov.

**(l) Material Incorporated by Reference**

None.

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

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



**2019-16-04 Engine Alliance:** Amendment 39-19707; Docket No. FAA-2019-0465; Product Identifier 2018-NE-19-AD.

**(a) Effective Date**

This AD is effective August 30, 2019.

**(b) Affected ADs**

This AD replaces AD 2019-03-04, Amendment 39-19556 (84 FR 4694, February 19, 2019).

**(c) Applicability**

This AD applies to all Engine Alliance (EA) GP7270 and GP7277 model turbofan engines.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by an uncontained failure of the engine fan hub. The FAA is issuing this AD to detect defects, damage, and cracks that could result in an uncontained failure of the engine fan hub assembly. The unsafe condition, if not addressed, could result in uncontained failure of the engine fan hub assembly, 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 EA GP7270 and GP7277 model turbofan engines, with engine fan hub assembly part numbers (P/Ns) 5760221 or 5760321, and with serial numbered engine fan hub assemblies identified in Planning Information, Table 4, in EA Alert Service Bulletin (ASB) EAGP7-A72-389, Revision No. 4, dated June 14, 2019, within 3,000 cycles since new, or before further flight after the effective date of this AD, whichever occurs later:

(i) For engine fan hub assemblies at the low-pressure compressor (LPC) module assembly level:

(A) Perform a visual inspection of the engine fan hub assembly, in accordance with the Accomplishment Instructions, For Fan Hubs at LPC Module Assembly Level, paragraphs 1.A.(1), 1.A.(4), and 1.A.(6)(a), of EA ASB EAGP7-A72-389, Revision No. 4, dated June 14, 2019.

(B) Perform an eddy current inspection (ECI) of the engine fan hub blade slot bottoms and front edges in accordance with the Accomplishment Instructions, For Fan Hubs at LPC Module Assembly Level, paragraphs 2.A and 2.B, of EA ASB EAGP7-A72-389, Revision No. 4, dated June 14, 2019.

(ii) For engine fan hub assemblies at the piece part level:

(A) Perform a visual inspection of the engine fan hub assembly, in accordance with the Accomplishment Instructions, For Fan Hubs at Piece Part Level, paragraphs 1.A.(1) and 1.A.(3), of EA ASB EAGP7-A72-389, Revision No. 4, dated June 14, 2019.

(B) Perform an ECI of the engine fan hub blade slot bottoms and front edges, in accordance with the Accomplishment Instructions, For Fan Hubs at Piece Part Level, paragraphs 2.A and 2.B, of EA ASB EAGP7-A72-389, Revision No. 4, dated June 14, 2019.

(iii) For engine fan hub assemblies installed in an engine (on-wing or off-wing):

(A) Perform a visual inspection of the engine fan hub assembly, in accordance with the Accomplishment Instructions, For Fan Hubs Installed in an Engine, paragraphs 1.C.(1), 1.C.(5), and 1.C.(7)(a), of EA ASB EAGP7-A72-389, Revision No. 4, dated June 14, 2019.

(B) Perform an ECI of the engine fan hub blade slot bottoms and front edges, in accordance with the Accomplishment Instructions, For Fan Hubs Installed in an Engine, paragraphs 1.D.(1) and 1.D.(2), of EA ASB EAGP7-A72-389, Revision No. 4, dated June 14, 2019.

(iv) If the engine fan hub assembly visual inspection reveals defects or damage to the engine fan hub assembly outside the serviceable limits specified in Table 6 in the Accomplishment Instructions of EA ASB EAGP7-A72-389, Revision No. 4, dated June 14, 2019, before further flight, remove the engine fan hub assembly from service and replace with a part eligible for installation.

(v) If the engine fan hub assembly ECI results in a rejectable indication per the Appendix, Added Data, of EA ASB EAGP7-A72-389, Revision No. 4, dated June 14, 2019, remove the engine fan hub assembly from service and, before further flight, replace with a part that is eligible for installation.

(2) For all GP7270 and GP7277 model turbofan engines, after the effective date of this AD:

(i) At the next disassembly of the engine fan hub blade lock assembly, visually inspect the following areas for damage:

(A) The fan hub blade lock retention hooks (also known as lock ring contact area); and

(B) The fan hub rim face.

(ii) At the next reassembly of the fan hub blade lock assembly, visually inspect the following areas of the engine fan hub for damage:

(A) The fan hub scallop areas;

(B) The fan hub bore area behind the balance flange;

(C) The fan hub fan blade lock retention hooks;

(D) The fan hub rim face; and

(E) The clinch nut holes.

(iii) After any reassembly per paragraph (g)(2)(ii), before further flight, perform an independent inspection of all areas of the engine fan hub referenced in paragraph (g)(2)(ii) of this AD for damage.

(iv) Thereafter, repeat inspections as required by paragraph (g)(2)(i), (g)(2)(ii), and (g)(2)(iii) of this AD at each disassembly and reassembly of the engine fan hub blade lock assembly.

(v) As an optional terminating action to the inspection requirements and independent inspection requirements of paragraph (g)(2)(i), (g)(2)(ii), and (g)(2)(iii) of this AD, insert the requirements for the visual inspections and independent inspections required by these paragraphs as Required Inspection Items in the approved continuous airworthiness maintenance program for the airplane.

(vi) If damage is found outside serviceable limits as the result of the inspections required by (g)(2)(i), (g)(2)(ii), or (g)(2)(iii) of this AD, before further flight, remove the engine fan hub assembly from service and replace with a part eligible for installation.

(3) For GP7270 and GP7277 model turbofan engines with engine serial numbers P550101 through P550706, remove the engine fan hub blade lock assembly, P/N 5700451, by September 1, 2020, and replace with a part eligible for installation. Refer to EA ASB EAGP7-A72-418, Revision No. 1, dated January 11, 2019, for guidance on replacement of the engine fan hub blade lock assembly.

**(h) Credit for Previous Actions**

You may take credit for the inspection required by paragraph (g)(1) of this AD if you performed the inspection before the effective date of this AD using EA ASB EAGP7-A72-389, Revision No. 3, dated October 18, 2018, or an earlier version.

**(i) Definitions**

(1) For the purpose of this AD, a part eligible for installation for replacement of the engine fan hub blade lock assembly is:

(i) A part that is not P/N 5700451, or

(ii) An engine fan hub blade lock assembly that has been modified in accordance with EA ASB EAGP7-A72-418, Revision No. 1, dated January 11, 2019 or EA ASB EAGP7-A72-418, Revision No. 0, dated December 7, 2018.

(2) For the purpose of this AD, an independent inspection is a second inspection performed by an individual qualified to perform inspections who was not involved in the original inspection of the engine fan hub assembly following disassembly and reassembly of the engine fan hub blade lock assembly.

**(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.

(3) AMOCs approved for AD 2018-11-16 (83 FR 27891, June 15, 2018) and AD 2019-03-04 (84 FR 4694, February 19, 2019) are approved as AMOCs for the corresponding provisions of this AD.

**(k) 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.

**(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) Engine Alliance (EA) Alert Service Bulletin EAGP7-A72-389, Revision No. 4, dated June 14, 2019.

(ii) [Reserved]

(3) For EA 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.

(4) You may view this service information at the 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 August 9, 2019.

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