

**FEDERAL AVIATION ADMINISTRATION
AIRWORTHINESS DIRECTIVES**

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

BIWEEKLY 2018-13

6/11/2018 - 6/24/2018



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 2018-01

No ADs were published in this biweekly period.

Biweekly 2018-02

2018-01-12	S 2015-22-53	Airbus Helicopters	AS350B3 helicopters
2018-02-01	S 2015-08-51	Enstrom	F-28A, 280, F-28C, F-28C-2, F-28C-2R, 280C, F-28F, F-28F-R, 280F, and 280FX helicopters
2018-02-04		Aerospace Welding Minneapolis, Inc.	Mufflers
2018-02-07		Various Restricted Category Helicopters	UH-1H, UH-1B, TH-1F, UH-1F, and UH-1P helicopters
2018-02-08		Bell Helicopter Textron	204B, 205A, and 205A-1 helicopters

Biweekly 2018-03

2018-02-02		Airbus Helicopters	AS350B, AS350BA, AS350B1, AS350B2, AS350B3, AS350D, AS355E, AS355F, AS355F1, AS355F2, AS355N, AS355NP, EC130B4, and EC130T2 helicopters
2018-02-05		Piper Aircraft, Inc.	PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28-180, PA-28-181, PA-28-236, PA-28-201T, PA-28R-180, PA-28R-200, PA-28R-201, PA-28R-201T, PA-28RT-201, PA-28RT-201T airplanes
2018-02-13	S 2017-07-02	Sikorsky Aircraft Corporation	269D and Model 269D Configuration A helicopters
2018-02-14		Honeywell International Inc.	TPE331-1, -2, -2UA, -3U, -3UW, -5, -5A, -5AB, -5B, -6, -6A, -8, -10, -10AV, -10GP, -10GT, -10N, -10P, -10R, -10T, -10U, -10UA, -10UF, -10UG, -10UGR, -10UR, and -11U, -12JR, -12UA, -12UAR, -12UHR, -25AA, -25AB, -25DA, -25DB, -25FA, -43A, -43BL, -47A, -55B, and -61A model turboprop engines, and TSE331-3U model turboshaft engines
2018-02-15	S 2007-08-06	British Aerospace Regional Aircraft	HP.137 Jetstream Mk.1, Jetstream Series 200 and 3101, and Jetstream Model 3201 airplanes
2018-03-01		Agusta S.p.A.	AB139 and AW139 helicopters

Biweekly 2018-04

2018-03-03		Textron Aviation Inc.	401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A, 414, 414A, 421, 421A, 421B, 421C, 425 airplanes
2018-03-05		Various Aircraft	See AD
2018-03-13		General Electric Company	CT7-5A2, CT7-5A3, CT7-7A, CT7-7A1, CT7-9B, CT7-9B1, CT7-9B2, CT7-9C and CT7-9C3 model turboprop engines
2018-03-14		Pacific Aerospace Limited	750XL airplanes
2018-03-15		Pacific Aerospace Limited	750XL airplanes
2018-03-16	R 2017-10-11	Stemme AG	S10-VT gliders
2018-03-17		Aeroclubul Romaniei	IS-28B2 gliders

Biweekly 2018-05

2018-01-12 R1	R 2018-01-12	Airbus Helicopters	AS350B3 helicopters
2018-04-11		Agusta S.p.A.	AB139 and Model AW139 helicopters
2018-05-01		Airbus Helicopters	AS332C, AS332C1, AS332L, AS332L1, and AS332L2; EC225LP helicopters
2018-05-02		AgustaWestland S.p.A.	AW189 helicopters

Biweekly 2018-06

2018-03-18		Agusta S.p.A.	AW189 helicopters
2018-04-09		Pacific Aerospace Limited	750XL airplanes
2018-04-10		Pilatus Aircraft Limited	PC-7 airplanes
2018-05-03		Safran Helicopter Engine	Arrius 2F turboshaft engines
2018-05-08	R 2013-19-12	GA 8 Airvan (Pty) Ltd	GA8, GA8-TC320, GA8-TC 320-03-025 airplanes
2018-05-09		Airbus Helicopters	AS332C, AS332C1, AS332L, and AS332L1 helicopters
2018-05-10		Agusta S.p.A.	AB412 and AB412 EP helicopters

Biweekly 2018-07

2018-06-09		Pacific Aerospace Limited	750XL airplanes
2018-06-10		Honda Aircraft Company LLC	HA-420 airplanes

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2018-06-11		Textron Aviation Inc.	A36TC and B36TC; S35, V35, V35A, and V35B airplanes
2018-06-51		Agusta S.p.A.	A109A, A109A II, A109C, A109E, A109K2, A109S, A119, AW109SP, and AW119 MKII helicopters
2018-07-01		Airbus Helicopters Deutschland GmbH	EC135 P1, P2, P2+, P3, T1, T2, T2+, and T3 helicopters
2018-07-02		Agusta S.p.A.	A109E, A109S, AW109SP, A119, and AW119 MKII helicopters
Biweekly 2018-08			
2018-07-03	R 2018-02-05	Piper Aircraft, Inc	PA-28 airplanes
2018-07-08		Agusta S.p.A.	A109E, A109K2, A109S, AW109SP, A119, and AW119 MKII helicopters
2018-07-13		Textron Aviation Inc.	510, 680, 680A airplanes
2018-07-14		Pacific Aerospace Limited	750XL
2018-07-15		XtremeAir GmbH	XA42 airplanes
2018-07-16		Austro Engine GmbH	E4 and E4P diesel piston engines
2018-07-17		Safran Helicopter Engines	Arrius 2B1, 2B1A, 2B2, and 2K1 turboshaft engines
Biweekly 2018-09			
2018-07-22	R 2017-08-09	DG Flugzeugbau GmbH	DG-500MB and DG-1000M gliders
2018-08-01		Airbus Helicopters	EC225LP helicopters
Biweekly 2018-10			
2018-03-03 R1	R 2018-03-03	Textron Aviation Inc.	400-series airplanes
2018-04-02		Viking Air Limited	DHC-6-1, DHC-6-100, DHC-6-200, DHC-6-300, and DHC-6-400 airplanes (Note: Should have been included in Biweekly 2018-05)
2018-10-01		Safran Helicopter Engines, S.A.	Arriel 2E turboshaft engines
Biweekly 2018-11			
2018-06-51		Agusta S.p.A.	A109A, A109A II, A109C, A109E, A109K2, A109S, A119, AW109SP, and AW119 MKII helicopters
2018-10-03		Pacific Aerospace Limited	750XL airplanes
2018-10-04	R 2018-03-15	Pacific Aerospace Limited	750XL airplanes
2018-10-06		Bell Helicopter Textron Canada Limited	407 helicopters
2018-10-07		Sikorsky Aircraft Corporation	S-76C helicopters
2018-10-09	S 2017-11-03	DG Flugzeugbau GmbH	DG-500MB and DG-1000M gliders
2018-10-10	R 2017-01-12	Diamond Aircraft Industries GmbH	DA 42 airplanes
	R 2017-11-08		
	R 2017-15-09		
2018-11-01		Airbus Helicopters	AS332L2 and Model EC225LP helicopters
2018-11-05	R 2018-06-10	Honda Aircraft Company LLC	HA-420 airplanes
Biweekly 2018-12			
2018-11-03		Airbus Helicopters	SA-365C, SA-365C1, and SA-365C2 helicopters
2018-11-04		Aircraft Industries a.s.	L 410 UVP-E20 and L 410 UVP-E20 CARGO airplanes
Biweekly 2018-13			
2018-13-05		Honeywell International Inc.	TPE331-1, -2, -2UA, -3U, -3UW, -5, -5B, -6, -6A, -8, -10, -10AV, -10N, -10P, -10R, -10T, -10U, -10UA, -10UF, -10UR model turboprop and TSE331-3U turboshaft engines



FAA
Aviation Safety

AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/
www.gpoaccess.gov/fr/advanced.html

2018-13-05 Honeywell International Inc. (Type Certificate previously held by AlliedSignal, Garrett Engine Division; Garrett Turbine Engine Company; and AiResearch Manufacturing Company of Arizona): Amendment 39-19317; Docket No. FAA-2016-9450; Product Identifier 2016-NE-25-AD.

(a) Effective Date

This AD is effective July 26, 2018.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Honeywell International Inc. (Honeywell) TPE331-1, -2, -2UA, -3U, -3UW, -5, -5B, -6, -6A, -8, -10, -10AV, -10N, -10P, -10R, -10T, -10U, -10UA, -10UF, -10UR model turboprop and TSE331-3U turboshaft engines with hydraulic torque sensor gear assemblies, part numbers (P/Ns) 3101726-1, -2, or -3, installed.

(d) Subject

Joint Aircraft System Component (JASC) Code 7210, Turbine Engine Reduction Gear.

(e) Unsafe Condition

This AD was prompted by recent reports of failures of the direct drive fuel control gears and bearings in the hydraulic torque sensor gear assembly, P/N 3101726-3. We are issuing this AD to prevent failure of the hydraulic torque sensor gear assembly. The unsafe condition, if not addressed, could result in failure of the hydraulic torque sensor gear assembly, in-flight shutdown, and reduced control of the airplane.

(f) Compliance

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

(g) Oil Filter Sampling and Analysis

(1) Obtain an initial engine oil filter sample of the affected engines within 150 hours time in service after the effective date of this AD. You can find guidance for obtaining oil filter samples in Honeywell's engine training manuals; for example, see the TPE331 Line Maintenance Training Manual.

(2) Submit the engine oil filter sample within 3 days of sampling to an ISO/IEC 17025-accredited laboratory capable of performing analysis using ASTM D5185, Standard Test Method for

Multielement Determination of Used and Unused Lubricating Oils and Base Oils by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES). You can find a list of Honeywell-authorized laboratories capable of performing this analysis in paragraph 1.D.(10) of Honeywell Service Information Letter (SIL) P331-97, Revision 11, dated July 23, 2008.

(3) Perform an oil filter analysis for wear metals and evaluate filter contents using paragraphs 1.D.(4) and (5) of Honeywell SIL P331-97, Revision 11, dated July 23, 2008. Guidelines for interpreting analysis results can be found in paragraph (8) of Honeywell SIL P331-97.

(4) For those engines where the oil filter analysis indicates the need for an inspection or resample, as specified in Figures 1, 2 or 3 of the Honeywell SIL P331-97, Revision 11, dated July 23, 2008, accomplish the following:

(i) If Figures 1, 2, or 3 indicate an inspection is required, within 5 days after receiving notification from the laboratory that performed the analysis, inspect the torque sensor gear assembly using paragraph (g)(4)(iii) of this AD.

(ii) If Figures 1, 2, or 3 indicate a resample is required, perform a repeat oil filter sample and analysis, within 25 hours time in service after receiving notification from the laboratory that performs the analysis to evaluate for wear metals in accordance with paragraphs (g)(1), (2) and (3) of this AD.

(A) If the resample indicates a second resample or inspection is required, within 5 days after receiving notification from the laboratory that performed the analysis, inspect the hydraulic torque sensor gear assembly using paragraph (g)(4)(iii) of this AD.

(B) Reserved.

(iii) Inspect the hydraulic torque sensor gear assembly using the following steps:

(A) Remove bearings, P/Ns 358893-1, 3103035-1, 3103585-1 or 70100168-1, from the assembled spur gear and fuel control drive gearshaft and inspect or replace. Guidance for performing the inspection can be found in Section 70-00-00, Standard Practices of the applicable TPE331 engine maintenance manual. For example, see paragraph 5., "Bearing Inspection," on pages 11-12 of Honeywell Maintenance Manual 70-00-00, TPE331-10 (Report No. 72-00-27), dated February 29, 2000.

(B) Visually inspect the gearshaft teeth for scoring, pitting, chipping, metal deposits or corner breakage. Visual defects on gear teeth are acceptable if defects cannot be felt using a 0.031 inch diameter stylus. No corner breakage is allowed.

(5) Thereafter, repeat the steps identified in paragraphs (g)(1) through (4) of this AD every additional 150 hours time in service after last oil filter sampling.

(6) For any hydraulic torque sensor gear assembly that fails the inspection required by paragraph (g) of this AD, remove the affected hydraulic torque sensor gear assembly and, before further flight, replace with a part eligible for installation.

(h) Hydraulic Torque Sensor Gear Assembly Overhaul

After the effective date of this AD, do not use the Honeywell Torque Sensor Gear Assembly Overhaul Manual with Illustrated Parts List, 72-00-17, Revision No. 9, dated, July 20, 1992, or earlier versions, to overhaul TPE331 or TSE331 hydraulic torque sensor gear assemblies, P/Ns 3101726-1, -2, or -3.

(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) 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

For more information about this AD, contact Joseph Costa, Aerospace Engineer, Los Angeles ACO Branch, FAA, 3960 Paramount Blvd., Lakewood, CA 90712-4137; phone: 562-627-5246; fax: 562-627-5210; email: joseph.costa@faa.gov.

(k) Material Incorporated by Reference

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

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

(i) Honeywell Service Information Letter P331-97, Revision 11, dated July 23, 2008.

(ii) Reserved.

(3) For Honeywell service information identified in this AD, contact Honeywell International Inc., 111 S 34th Street, Phoenix, AZ 85034-2802; phone: 800-601-3099; internet: <https://myaerospace.honeywell.com/wps/portal>.

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

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on June 14, 2018.

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