

**FEDERAL AVIATION ADMINISTRATION
AIRWORTHINESS DIRECTIVES**

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

BIWEEKLY 2016-09

4/18/2016 - 5/1/2016



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 2016-01

2015-26-04	S 2002-13-11	Airbus Helicopters	EC120B helicopters
2015-26-08		Piper Aircraft, Inc.	PA-44-180, PA-44-180T airplanes
2015-26-10		Sikorsky Aircraft Corporation	S-76A, S-76B, and S-76C helicopters

Biweekly 2016-02

2015-12-09 R1	R 2015-12-09	Airbus Helicopters Deutschland GmbH	EC135P1, EC135T1, EC135P2, EC135T2, EC135P2+, EC135T2+, and MBB-BK 117 C-2
2016-01-01		Piper Aircraft, Inc.	PA-46-500TP
2016-01-06		Agusta S.p.A.	AB139 and AW139
2016-01-14		Airbus Helicopters Deutschland GmbH	MBB-BK 117 A-1, A-3, A-4, B-1, B-2, C-1, and C-2
2016-01-15		Agusta S.p.A.	AB139 and AW139
2016-01-19		MD Helicopters Inc.	500N and 600N

Biweekly 2016-03

2015-22-51		Agusta S.p.A.	A109A and A109AII helicopters
2016-02-06		Bell Helicopter Textron Canada Limited	429 helicopters

Biweekly 2016-04

2016-03-02		Turbomeca S.A.	ARRIEL 2C, 2C1, 2C2, 2S1, and 2S2 turboshaft engines
2016-03-05	S 2014-13-01	Airbus Helicopters Deutschland GmbH	MBB-BK 117 C-2 and MBB-BK 117 D-2 helicopters
2016-04-05	S 2014-03-18	B-N Group Ltd.	BN-2, BN-2A, BN-2A-2, BN-2A-3, BN-2A-6, BN-2A-8, BN-2A-9, BN-2A-20, BN-2A-21, BN-2A-26, BN-2A-27, BN-2B-20, BN-2B-21, BN-2B-26, BN-2B-27, BN2A MK. III, BN2A MK. III-2, and BN2A MK. III-3 airplanes

Biweekly 2016-05

2016-04-04		M7 Aerospace LLC	SA26-AT, SA226-T(B), SA226-AT, SA226-T, SA226-TC, SA227-AC (C-26A), SA227-AT, SA227-BC (C-26A), SA227-CC, SA227-DC (C-26B), and SA227-TT
2016-04-14		Turbomeca S.A.	Arriel IE2
2016-04-15		MD Helicopters Inc.	369A, 369D, 369E, 369FF, 369HE, 369HM, 369HS, 500N, and 600N
2016-05-06	S 2014-07-52	Airbus Helicopters	AS350B, AS350BA, AS350B1, AS350B2, AS350B3, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP

Biweekly 2016-06

2016-04-12		Turbomeca S.A.	Arriel 2B, 2B1, 2C, 2C1, 2C2, 2D, 2E, 2S1, and 2S2 turboshaft engines
2016-05-01	R 96-12-12	Piper Aircraft, Inc.	PA-31, PA-31-300, PA-31-325 and PA-31-350
2016-05-08	R 2006-23-17	Turbomeca S.A.	Turmo IV A and IV C turboshaft engines.
2016-05-09		MD Helicopters, Inc.	369A (Army OH-6A), 369H, 369HE, 369HM, 369HS, and 369D; 369E, 369F and 369FF, 500N
2016-05-10		Airbus Helicopters	AS 365 N3, EC 155B, and EC155B1
2016-05-11		Sikorsky Aircraft Corporation	S-92A
2016-05-13		Pratt & Whitney Canada Corp.	PT6A-60AG, BS919 and BS1048; PT6A-65AG, BS708, BS903, BS1101, and BS1102; PT6A-67AF; and PT6A-67AG
2016-06-01	S 2007-06-06	B-N Group Ltd.	BN-2, BN-2A, BN-2A-2, BN-2A-3, BN-2A-6, BN-2A-8, BN-2A-9, BN-2A-20, BN-2A-21, BN-2A-26, BN-2A-27, BN-2B-20, BN-2B-21, BN-2B-26, BN-2B-27, BN2A MK. III, BN2A MK. III-2, BN2A MK. III-3 BN2A, BN2B, and BN2A MKIII, BN2A, BN2B, and BN2A MKIII

Biweekly 2016-07

2016-06-09		Turbomeca S.A.	Makila 2A and 2A1
2016-07-01	S 2014-07-04R1	Sikorsky Aircraft Corporation	S-92A
2016-07-02		Honeywell International Inc.	TFE731-4, -4R, -5AR, -5BR, and -5R
2016-07-11		Weatherly Aircraft Company	201, 201A, 201B, 201C, 620, 620A, 620B, 620B-TG, and 620TP

SMALL AIRCRAFT, ROTORCRAFT, GLIDERS, BALLOONS, & AIRSHIPS

AD No.	Information	Manufacturer	Applicability
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Biweekly 2016-08

2016-07-13		GE Aviation Czech s.r.o	M601E-11
2016-07-19		Technify Motors GmbH	TAE 125-02-99 and TAE 125-02-114
2016-07-21	R 2015-20-13	Piper Aircraft, Inc.	PA-28-161, PA-28-181, and PA-28R-201
2016-07-24		Textron Aviation, Inc.	310 through 310R, E310H, E310J, T310P through T310R, 310J-1, 320 through 320F, 320-1, 335, 340, 340A, 401 through 401B, 402 through 402C, 411, 411A, 414, 414A, and 421 through 421C
2016-07-26	R 2010-23-02	Airbus Helicopters	SA-365N, SA-365N1, AS-365N2, and AS 365 N3
2016-07-27		Airbus Helicopters	SA341G and SA342J
2016-07-29		Airbus Helicopters	EC225LP, AS332C, AS332L, AS332L1, and AS332L2
2016-08-08	S 92-06-10	SOCATA	MS 880B, MS 885, MS 892A-150, MS 892E-150, MS 893A, MS 893E, MS 894A, MS 894E, Rallye 100S, Rallye 150ST, Rallye 150T, Rallye 235E, and Rallye 235C

Biweekly 2016-09

2016-08-16		Turbomeca S.A.	Arriel 2E turboshaft engines
2016-08-17	2010-19-51	Bell Helicopter Textron Canada	222, 222B, 222U, 230, and 430 helicopters
2016-08-21		Kaman Aerospace Corporation	K-1200 helicopters



2016-08-16 Turbomeca S.A.: Amendment 39-18493; Docket No. FAA-2015-5539; Directorate Identifier 2015-NE-37-AD.

(a) Effective Date

This AD becomes effective May 25, 2016.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Turbomeca S.A. Arriel 2E turboshaft engines that have a pre-TU 193 adjusted high-pressure/low-pressure (HP/LP) pump and metering valve assembly, installed.

(d) Reason

This AD was prompted by reports of fuel flow non-conformities found during acceptance tests of Arriel 2E hydro-mechanical metering units. We are issuing this AD to prevent failure of the constant delta-pressure (delta-P) diaphragm of the fuel metering valve, which could result in an uncommanded in-flight shutdown and damage to the helicopter.

(e) Actions and Compliance

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

(1) Prior to exceeding 880 operating hours since new on the adjusted HP/LP pump and metering valve assembly or within 50 operating hours after the effective date of this AD, whichever occurs later:

- (i) Remove from service the adjusted HP/LP pump and metering valve assembly and replace with a part that is eligible for installation, and
 - (ii) replace the constant delta-P diaphragm of the fuel metering valve.
- (2) Reserved.

(f) Installation Prohibition

After the effective date of this AD, do not install into any engine any pre-TU 193 adjusted HP/LP pump and metering valve assembly, nor install onto any helicopter any engine that has a pre-TU 193 adjusted HP/LP pump and metering valve assembly.

(g) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

(h) Related Information

(1) For more information about this AD, contact Kyle Gustafson, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7183; fax: 781-238-7199; email: kyle.gustafson@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2015-0213, dated October 16, 2015, for more information. You may examine the MCAI in the AD docket on the Internet at <https://www.regulations.gov/#!documentDetail;D=FAA-2015-5539-0002>.

(3) Turbomeca S.A. Mandatory Service Bulletin No. 292 73 2193, Version A, dated July 16, 2015, can be obtained from Turbomeca S.A., using the contact information in paragraph (h)(4) of this AD.

(4) For service information identified in this AD, contact Turbomeca S.A., 40220 Tarnos, France; phone: 33 (0)5 59 74 40 00; fax: 33 (0)5 59 74 45 15.

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(i) Material Incorporated by Reference

None.

Issued in Burlington, Massachusetts, on April 12, 2016.
Ann C. Mollica,
Acting Manager, Engine & Propeller Directorate,
Aircraft Certification Service.



2016-08-17 Bell Helicopter Textron Canada: Amendment 39-18494; Docket No. FAA-2013-0734; Directorate Identifier 2012-SW-080-AD.

(a) Applicability

This AD applies to Bell Helicopter Textron Canada (Bell) Model 222, 222B, 222U, 230, and 430 helicopters, with a main rotor hydraulic servo actuator (servo actuator) part number (P/N) 222-382-001-107 installed, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as corrosion or a nonconforming grind relief on the output piston rod assembly (piston rod). This condition could lead to failure of the piston rod, failure of the servo actuator, and subsequent loss of helicopter control.

(c) Affected ADs

This AD supersedes AD 2010-19-51, Amendment 39-16523 (75 FR 71540, November 24, 2010).

(d) Effective Date

This AD becomes effective May 31, 2016.

(e) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(f) Required Actions

Before further flight:

(1) Disassemble each servo actuator to gain access to the piston rod as shown in Figures 1 through 5 and by following the Accomplishment Instructions, paragraph 3.A., Part I., of Woodward HRT Alert Service Bulletin No. 141600-67-02, dated August 18, 2010 (Woodward ASB).

(2) Clean the entire piston rod and nut using acetone and a nylon bristle brush removing all contaminants to allow for inspection. Inspect the grind relief configuration for the piston rod and nut as shown in Figure 6 of the Woodward ASB. If the grind relief is unacceptable as shown in Figure 6, replace the piston rod and the nut with airworthy parts.

(3) Using a 10X or higher magnifying glass, visually inspect the nut for any corrosion or any damage to the threads. If you find any corrosion or any damage to the threads, replace the nut with an airworthy nut.

(4) Using a 10X or higher magnifying glass, visually inspect the piston rod as shown in Figure 7 of the Woodward ASB for any corrosion, visible lack of cadmium plate (gold or gray color), or

damage to the piston rod. For the purposes of this AD, damage to the piston rod is defined as pitting, a visible scratch, a crack, or a visible abrasion.

(i) If there is any corrosion or visible lack of cadmium plate or any damage to the piston rod in the Critical Areas as shown in Figure 7 of the Woodward ASB, replace the servo actuator with servo actuator P/N 222-382-001-111 or P/N 222-382-001-111FM before further flight.

(ii) If there is any corrosion or visible lack of cadmium plate on the piston rod in areas that are not considered Critical Areas as shown in Figure 7 of the Woodward ASB, rework the piston rod by removing any surface corrosion that has not penetrated into the base material by lightly buffing. Clean the part using acetone and a nylon bristle brush to remove any residue. Comply with paragraphs (f)(5) through (f)(6) of this AD. Within 1,200 hours time-in-service (TIS) or 1 year, whichever occurs first, replace the servo actuator with servo actuator P/N 222-382-001-111 or P/N 222-382-001-111FM.

(iii) If there is any corrosion that is red or orange in color, magnetic particle inspect the piston rod for a crack.

(A) If there is a crack, replace the servo actuator with servo actuator, P/N 222-382-001-111 or P/N 222-382-001-111FM before further flight.

(B) If there is no crack, comply with paragraphs (f)(5) through (f)(6) of this AD. Within 2,400 hours TIS or 2 years, whichever occurs first, replace the servo actuator with servo actuator P/N 222-382-001-111 or P/N 222-382-001-111FM.

(iv) If there is no corrosion, visible lack of cadmium plate, or damage to the piston rod, comply with paragraphs (f)(5) through (f)(6) of this AD. Within 3,000 hours TIS or 4 years, whichever occurs first, replace the servo actuator with servo actuator P/N 222-382-001-111 or P/N 222-382-001-111FM.

(5) Inspect the portion of the piston rod for any absence of cadmium plating (bare base metal), as shown in Figure 7 of the Woodward ASB. If there is any bare base metal on the piston rod in this area, apply brush cadmium plating to all bare and reworked areas using SPS5070 or equivalent 0.0002 to 0.0005 inch thick and rework the piston rod by following the Accomplishment Instructions, paragraph C., Part III, C.1.1.1. through C.1.1.3., of the Woodward ASB.

(6) Reassemble the servo actuator by following the Accomplishment Instructions, paragraph C, Part III, 1.1.4. through 3.3.4. of the Woodward ASB.

(g) Credit for Actions Previously Completed

Compliance with the Woodward ASB or with AD 2010-19-51 (75 FR 71540, November 24, 2010) before the effective date of this AD is considered acceptable for compliance with the corresponding inspections specified in paragraph (f) of this AD. If you replaced the piston rod pursuant to the Woodward ASB or paragraph (d)(1) or (d)(3) of AD 2010-19-51, apply the requirements of paragraph (f)(4)(iv) of this AD.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Matt Wilbanks, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email 9-ASW-FTW-AMOC-Requests@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

(i) Additional Information

(1) Bell Alert Service Bulletin (ASB) No. 222-11-111 for Model 222 and 222B helicopters, ASB No. 222U-11-82 for Model 222U helicopters, ASB No. 230-11-43 for Model 230 helicopters, and ASB No. 430-11-46 for Model 430 helicopters, all Revision A and all dated June 22, 2012, which are not incorporated by reference, contain additional information about the subject of this AD. For service information identified in this AD, contact Bell Helicopter Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4; telephone (450) 437-2862 or (800) 363-8023; fax (450) 433-0272; or at <http://www.bellcustomer.com/files/>. You may review a copy of the service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177.

(2) The subject of this AD is addressed in the Transport Canada Civil Aviation (TCCA) AD No. CF-2010-29R1, dated July 26, 2012. You may view the TCCA AD on the Internet at <http://www.regulations.gov> in Docket No. FAA-2013-0734.

(j) Subject

Joint Aircraft Service Component (JASC) Code: 6730, Rotorcraft Servo System.

(k) Material Incorporated by Reference

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

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

(3) The following service information was approved for IBR on December 9, 2010 (75 FR 71540, November 24, 2010).

(i) Woodward HRT Alert Service Bulletin No. 141600-67-02, dated August 18, 2010.

(ii) Reserved.

(4) For Woodward HRT service information identified in this AD, contact Bell Helicopter Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4; telephone (450) 437-2862 or (800) 363-8023; fax (450) 433-0272; or at <http://www.bellcustomer.com/files/>.

(5) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

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

Issued in Fort Worth, Texas, on April 13, 2016.

Scott A. Horn,
Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.



2016-08-21 Kaman Aerospace Corporation (Kaman): Amendment 39-18498; Docket No. FAA-2016-0183; Directorate Identifier 2015-SW-016-AD.

(a) Applicability

This AD applies to Model K-1200 helicopters, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as a main rotor (M/R) blade striking the opposing rotor's flight controls. This condition could result in damage to the M/R flight controls and subsequent loss of control of the helicopter.

(c) Effective Date

This AD becomes effective May 31, 2016.

(d) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(e) Required Actions

Within 10 hours time-in-service, revise Section 2 Limitations of the Kaman K-1200 Rotorcraft Flight Manual (RFM) by inserting a copy of this AD into the RFM or by making pen-and-ink changes, as follows:

(1) In the "Flight Limitations–NO LOAD" and "Flight Limitations–WITH LOAD" sections, add the information in Figure 1 to paragraph (e)(1) of this AD.

WARNING

When departing from rearward to forward flight, avoid high rates of turn and minimize yaw and cyclic control inputs to prevent exceeding 17 knot sideward flight limit.

Figure 1 to paragraph (e)(1)

(2) In the "Flight Limitations–NO LOAD" and "Flight Limitations–WITH LOAD" sections, add the following: Maximum rearward flight speed: 25 knots. Maximum sideward flight speed: 17 knots. Weather-vanning takeoffs/departures as a method to turn aircraft: Prohibited.

(f) Credit for Actions Previously Completed

Incorporating the changes contained in Kaman K-1200 RFM, Revision 5, dated April 14, 2015, before the effective date of this AD is considered acceptable for compliance with the corresponding actions specified in paragraph (e) of this AD.

(g) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Boston Aircraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Kirk Gustafson, Aviation Safety Engineer, Boston Aircraft Certification Office, Engine & Propeller Directorate, FAA, 1200 District Avenue, Burlington, Massachusetts 01803; telephone (781) 238-7190; email kirk.gustafson@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

(h) Additional Information

Kaman K-1200 RFM, Revision 5, dated April 14, 2015, which is not incorporated by reference, contains additional information about the subject of this final rule. For service information identified in this final rule, contact Kaman Aerospace Corporation, Old Windsor Rd., P.O. Box 2, Bloomfield, Connecticut 06002-0002; telephone (860) 242-4461; fax (860) 243-7047; or at <http://www.kamanaero.com>. You may review a copy of this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177.

(i) Subject

Joint Aircraft Service Component (JASC) Code: 6710, Main Rotor Control.

Issued in Fort Worth, Texas, on April 15, 2016.
Scott A. Horn,
Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.