



**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES  
SMALL AIRCRAFT, ROTORCRAFT, GLIDERS,  
BALLOONS, & AIRSHIPS**

**BIWEEKLY 2011-08**

This electronic copy may be printed and used in lieu of the FAA biweekly paper copy.

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Federal Aviation Administration  
Regulatory Support Division  
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## SMALL AIRCRAFT, ROTORCRAFT, GLIDERS, BALLOONS, & AIRSHIPS

AD No.	Information	Manufacturer	Applicability
Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; - See AD for additional information;			
<b>Biweekly 2011-01</b>			
2010-17-18 R1	R	Air Tractor	AT-802 and AT-802A
2010-22-08	COR	Eurocopter France	Rotorcraft: AS 350 B, BA, B1, B2, B3, and D, and Model AS355 E, F, F1, F2, and N
2010-26-04		Piper	PA-28-161
2010-26-09		Sikorsky	Rotorcraft: S-76A, B, and C
2010-26-11		Kaman Aerospace	Rotorcraft: K-1200
2011-01-52	E	Schweizer	Rotorcraft: 269A, A-1, B, C, C-1, and Th-55 series
2011-01-53	E	Piaggio	P-180
	S 2011-01-51		
<b>Biweekly 2011-02</b>			
2010-24-05	COR	Pratt & Whitney Canada	Engine: PW305A and PW305B
2010-26-54		Cessna	LC41-550FG, LC42-550FG
2011-01-03		GROB-WERKE	G102 ASTIR CS, G102 CLUB ASTIR III, G102 CLUB ASTIR IIIb, G102 STANDARD ASTIR III
2011-01-04		Embraer	EMB-500
2011-02-04		M7 Aerospace LP	SA26-AT, SA26-T, SA226-AT, SA226-T, SA226-T(B), SA226-TC, SA227-AC (C-26A), SA227-AT, SA227-BC (C-26A), SA227-CC, SA227-DC (C-26B), and SA227-TT
<b>Biweekly 2011-03</b>			
2011-01-53	S 2011-01-51	Piaggio Aero Industries	P-180
2011-02-02	S 2008-19-06	Socata	TBM 700
2011-02-08		Aircraft Industries	Glider: L 23 Super Blanik
<b>Biweekly 2011-04</b>			
2011-01-14	S 2005-17-01	Pilatus	PC-6, PC-6-H1, PC-6-H2, 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, and PC-6/C1-H2
2011-01-53	COR	Piaggio Aero Industries	P-180
	S 2011-01-51		
2011-03-04	S 2009-09-09	Cessna	LC40-550FG (300), LC41-550FG (400), and LC42-550FG (350)
2011-03-05	S 2007-11-03	Dornier Luftfahrt GmbH	Dornier 228-100, Dornier 228-101, Dornier 228-200, Dornier 228-201, Dornier 228-202, and Dornier 228-212
<b>Biweekly 2011-05</b>			
2010-17-18 R1		Air Tractor	AT-802 and AT-802A
2011-05-01		Piaggio Aero Industries	P-180
2011-05-02		Viking Air Limited	DHC-3
2011-05-06		Thielert	Engine: TAE 125-02-99 and TAE 125-02-114 reciprocating
2011-05-51	E	Turbomeca	Engine: 1E2, 1S, and 1S1 turboshaft
<b>Biweekly 2011-06</b>			
2010-26-51	S 2009-08-03	Bell Helicopter Textron Canada Limited	Rotorcraft: 206A, 206B, 206L, 206L-1, 206L-3, 206L-4, 222, 222B, 222U, 230, 407, 427, and 430
2011-03-02		Eurocopter France	Rotorcraft: SA330F, SA330G, and SA330J
2011-03-03		Bell Helicopter Textron Canada Limited	Rotorcraft: 427
2011-03-06		Eurocopter France	Rotorcraft: AS-365N2, AS 365 N3, and SA-365N1
2011-05-07	S 2008-22-21	Allied Ag Cat Productions	G-164, G-164A, G-164B, G-164B with 73" wing gap, G-164B-15T, G-164B-20T, G-164B-34T, G-164C, G-164D, G-164D with 73" wing gap
2011-05-08	S 2011-05-51	Turbomeca	Engine: Arriel 1E2, 1S, and 1S1 turboshaft
2011-06-01		APEX Aircraft	CAP10 B and CAP10 B
2011-06-06	S 2008-24-07	Eclipse	EA500

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

AD No.	Information	Manufacturer	Applicability
Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; - See AD for additional information;			
<b>Biweekly 2011-07</b>			
2011-05-09		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, BN-2T, and BN-2T-4R
2011-06-07		Eurocopter France	Rotorcraft: EC130 B4
2011-07-03	S 2007-02-12	Reims Aviation S.A.	F406
<b>Biweekly 2011-08</b>			
2011-06-10	S 99-15-04 R1	Piper Aircraft	PA-46-310P, PA-46-350P, and PA-46R-350T
2011-07-09		Thielert Aircraft Engines GmbH	Engine: TAE 125-01, TAE 125-02-99, and TAE 125-02-114 reciprocating
2011-07-13		CPAC, Inc	112, 112B, 112TC, 112TCA, 114, 114A, 114B, and 114TC
2011-08-01	S 2010-25-51	Bell Helicopter Textron	212



**2011-06-10 Piper Aircraft, Inc. (Type Certificate Previously Held by The New Piper Aircraft, Inc.):** Amendment 39-16635; Docket No. FAA-2010-1295; Directorate Identifier 2010-CE-060-AD.

**Effective Date**

(a) This airworthiness directive (AD) is effective May 6, 2011.

**Affected ADs**

(b) This AD supersedes AD 99-15-04 R1, Amendment 39-11747.

**Applicability**

(c) This AD applies to the following Piper Aircraft, Inc. (type certificate previously held by The New Piper Aircraft, Inc.) Models PA-46-310P, PA-46-350P, and PA-46R-350T airplanes that are:

(1) Certificated in any category; and

(2) equipped with a turbine inlet temperature (T.I.T.) system identified in table 3 of this AD.

Relief from this AD is available only if the gauge and probe are replaced through STC and not if a second T.I.T. gauge was installed while retaining the Lewis or Transicoil T.I.T. gauge and probe.

**Table 1–Group 1 (Airplanes Previously Affected by AD 99-15-04 R1)**

<b>Models</b>	<b>Serial Numbers (S/N)</b>
PA-46-310P (Malibu)	46-8408001 through 46-8608067 and 4608001 through 4608140.
PA-46-350P (Malibu Mirage)	4622001 through 4622200 and 4636001 through 4636020.

**Table 2–Group 2 (Airplanes Not Previously Affected by AD 99-15-04 R1)**

<b>Models</b>	<b>S/N</b>
PA-46-350P (Malibu Mirage)	4636021 and subsequent.
PA-46R-350T (Matrix)	4692001 and subsequent.

**Table 3—Affected Airplane Models and Corresponding Affected Turbine Inlet Temperature (T.I.T.) System**

<b>Models</b>	<b>S/N</b>	<b>Indication System P/N</b>	<b>Probe P/N</b>
PA-46-310P	46-8408001 through 46-8608067 and 4608001 through 4608140	Lewis T.I.T. analog indicators P/N 471-008	471-009 or 481-387
PA-46-350P	4622001 through 4622200 and 4636001 through 4636020	Lewis T.I.T. analog indicators P/N 471-008	481-389 or 481-392 or 686-216 (preferred)
PA-46-350P	4636021 through 4636374	Lewis T.I.T. digital indicators P/N 548-811	481-389 or 481-392 or 686-216 (preferred)
PA-46-350P	4636375 and subsequent	Avidyne Entegra or other Electronic Flight Information System (EFIS) display	686-216
PA-46R-350T	4692001 and subsequent	Avidyne Entegra or other EFIS display	686-216

**Subject**

(d) Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 77, Engine Indicating.

**Unsafe Condition**

(e) This AD was prompted by field reports that indicated service accuracy problems with the existing T.I.T. system on certain Models PA-46-310P, PA-46-350P, and PA-46R-350T airplanes. We are issuing this AD to prevent improper engine operation caused by improperly calibrated T.I.T. indicators or defective T.I.T. probes, which could result in engine damage/failure with consequent loss of control of the airplane.

**Compliance**

(f) For Group 1 airplanes: Comply with this AD within the compliance times specified, unless already done.

**Table 4—Group 1 Airplanes (Airplanes Previously Affected by AD 99-15-04 R1)**

<b>Actions</b>	<b>Compliance</b>	<b>Procedures</b>
(1) Clean and inspect the T.I.T. gauge and probe.	Within the next 100 hours time-in-service (TIS) after August 31, 1999 (the effective date retained from AD 99-15-04).	Follow Piper Airplane Maintenance Manual PA-46-310P/PA-46-350P Part Number 761-783, Chapter 77-20-00, section A.(1)(d), pages 1 and 2, dated July 1, 1998; and Piper Airplane Maintenance Manual PA-46-350P/PA-46R-350T Part Number 761-876, Chapter 77-20-00, section 1.C, pages 1 and 2, dated July 31, 2008, as applicable.

(2) Calibrate the T.I.T. system.	Within the next 100 hours TIS after August 31, 1999 (the effective date retained from AD 99-15-04).	Follow Piper Airplane Maintenance Manual PA-46-310P/PA-46-350P Part Number 761-783, Chapter 77-20-00, section A.(1)(g), pages 3 and 4, dated July 1, 1998; and Piper Airplane Maintenance Manual PA-46-350P/PA-46R-350T Part Number 761-876, Chapter 77-20-00, section 1.F, page 2, dated July 31, 2008, and pages 3 and 4, dated August 28, 2007, as applicable; or Piper Service Bulletin No. 995C, dated November 17, 2009.
(3) If the T.I.T. probe fails the inspection required in paragraph (f)(1) of this AD and/or the T.I.T. system indicator cannot be calibrated as required in paragraph (f)(2) of this AD, replace any failed parts with a serviceable part listed in table 3 of this AD as long as it has been inspected, passed the inspection, and been properly calibrated.	Before further flight after the cleaning and inspection required in paragraph (f)(1) and the calibration required in paragraph (f)(2) of this AD.	Follow Piper Airplane Maintenance Manual PA-46-310P/PA-46-350P Part Number 761-783, Chapter 77-20-00, section A.(1)(f), page 2, dated July 1, 1998; and Piper Airplane Maintenance Manual PA-46-350P/PA-46R-350T Part Number 761-876, Chapter 77-20-00, section 1.E., page 2, dated July 31, 2008, as applicable; or Piper Service Bulletin No. 995C, dated November 17, 2009.
(4) Incorporate the information from Appendix 1 and Appendix 2, as applicable, of this AD into the Emergency Procedures section of the pilot operating handbook (POH). This may be done by inserting a copy of this AD into the POH.	Within the next 100 hours TIS after August 31, 1999 (the effective date retained from AD 99-15-04).	Not applicable.
(5) Only install a part listed in table 3 of this AD after it has been inspected and properly calibrated.	As of July 28, 2000 (the effective date of AD 99-15-04 R1).	Not applicable.
(6) <u>Model PA-46-350P airplanes only</u> : Replace the T.I.T. probe with a new part number 481-389, 481-392, or 686-216 probe (preferred). This action is not required for Model PA-46-310P.	Upon accumulating 250 hours TIS on the currently installed T.I.T. probe or within the next 100 hours TIS after August 31, 1999 (the effective date retained from AD 99-15-04), whichever occurs later, and thereafter at intervals not to exceed 250 hours TIS.	For serial numbers 4622001 through 4622200: Follow Piper Airplane Maintenance Manual PA-46-310P/PA-46-350P Part Number 761-783, Chapter 77-20-00, section A.(1)(f), page 2, dated July 1, 1998; or Piper Service Bulletin No. 995C, dated November 17, 2009.  For serial numbers 4636001 through 4636020: Follow Piper Airplane Maintenance Manual PA-46-350P/PA-46R-350T Part Number 761-876, Chapter 77-20-00, section 1.E., page 2, dated July 31, 2008; or Piper Service Bulletin No. 995C, dated November 17, 2009.

(g) For Group 2 airplanes: Comply with this AD within the compliance times specified, unless already done.

**Table 5–Group 2 Airplanes (Airplanes Not Previously Affected by AD 99-15-04 R1)**

Actions	Compliance	Procedures
(1) <u>Model PA-46-350P airplanes, S/Ns 4636021 through 4636374 only</u> : Clean and inspect the T.I.T. gauge and probe.	Within the next 100 hours TIS after the effective date of this AD.	Follow Piper Airplane Maintenance Manual PA-46-350P/PA-46R-350T Part Number 761-876, Chapter 77-20-00, section 1.C, page 1, dated August 28, 2007, and page 2, dated July 31, 2008.
(2) <u>Model PA-46-350P airplanes, S/Ns 4636021 through 4636374 only</u> : If the T.I.T. probe fails the inspection required in paragraph (g)(1) of this AD, replace any failed parts with a serviceable part listed in table 3 of this AD as long as it has been inspected and has passed the inspection.	Before further flight after the cleaning and inspection required in paragraph (g)(1) of this AD.	Follow Piper Service Bulletin No. 995C, dated November 17, 2009.
(3) <u>All Group 2 airplanes</u> : Replace the T.I.T. probe with a new part number 686-216 probe.	Upon accumulating 250 hours TIS on the currently installed T.I.T. probe or within the next 100 hours TIS after the effective date of this AD, whichever occurs later, and thereafter at intervals not to exceed 250 hours TIS.	Piper Service Bulletin No. 995C, dated November 17, 2009.
(4) <u>All Group 2 airplanes</u> : Incorporate the information from Appendix 2 of this AD into the Emergency Procedures section of the POH. This may be done by inserting a copy of this AD into the POH.	Within the next 100 hours TIS after the effective date of this AD.	Not applicable.
(5) <u>All Group 2 airplanes</u> : Only install a part listed in table 3 of this AD after it has been inspected and properly calibrated.	As of the effective date of this AD.	Not applicable.

#### Alternative Methods of Compliance (AMOCs)

(h)(1) The Manager, Atlanta Aircraft Certification Office, 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 identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your Principal Maintenance Inspector or Principal Avionics Inspector, as appropriate, or lacking a principal inspector, your local Flight Standards District Office.

(3) AMOCs approved for AD 99-15-04 R1 are approved as AMOCs for this AD.

### Related Information

(i) For more information about this AD, contact Darby Mirocha, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, 1701 Columbia Avenue, College Park, Georgia 30337; phone: (404) 474-5573; fax: (404) 474-5605; e-mail: darby.mirocha@faa.gov.

### Material Incorporated by Reference

(j) You must use the service information contained in Table 6 of this AD to do the actions required by this AD, unless the AD specifies otherwise.

**Table 6—All Material Incorporated by Reference**

<b>Document</b>	<b>Revision</b>	<b>Date</b>
Piper Service Bulletin No. 995C	N/A	November 17, 2009
Piper Airplane Maintenance Manual PA-46-310P/PA-46-350P Part Number 761-783, Chapter 77, “Engine Indicating,” Section 77-20-00, pages 1 through 4.	N/A	July 1, 1998
Piper Airplane Maintenance Manual PA-46-350P/PA-46R-350T Part Number 761-876, Chapter 77, “Engine Indicating,” Section 77-20-00, pages 1 through 4.	N/A	July 31, 2008. Section 77-20-00: pages 1, 3, and 4, dated August 28, 2007; page 2, dated July 31, 2008.

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

(2) For service information identified in this AD, contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, Florida 32960; telephone: (772) 567-4361; fax: (772) 978-6573; Internet: <http://www.piper.com/home/pages/publications.cfm>.

(3) You may review copies of the service information at the FAA, Small Airplane Directorate, 901 Locust St., Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call 202-741-6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

### Appendix 1 to AD 2011-06-10—Model PA-46-310P (Malibu); Emergency Procedures for the Pilot's Operating Handbook (POH)

(1) If the turbine inlet temperature indication fails or is suspected of failure during takeoff, climb, descent, or landing, maintain FULL RICH mixture to assure adequate fuel flow for engine cooling.

(2) If the turbine inlet temperature indication fails or is suspected of failure after cruise power has been set, maintain cruise power setting and lean to 6 gallons per hour (GPH) fuel flow above that specified in the Power Setting Table in Section 5 of the AFM/POH. Continually monitor engine cylinder head and oil temperatures to avoid exceeding temperature limits.

**Appendix 2 to AD 2011-06-10–Model PA-46-350P (Malibu Mirage) and Model PA-46R-350T (Matrix); Emergency Procedures for the Pilot's Operating Handbook (POH)**

(1) If the turbine inlet temperature indication fails or is suspected of failure during takeoff, climb, descent or landing, set power per the POH Section 5 Power Setting Table and then lean to the approximate POH Power Setting Table fuel flow plus 4 GPH.

(2) If the turbine inlet temperature indication fails or is suspected of failure after cruise power has been set, maintain the power setting and increase indicated fuel flow by 1 GPH. Continually monitor engine cylinder head and oil temperatures to avoid exceeding temperature limits.

Issued in Kansas City, Missouri, on March 9, 2011.

Earl Lawrence,  
Manager, Small Airplane Directorate,  
Aircraft Certification Service.



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**2011-07-09 Thielert Aircraft Engines GmbH:** Amendment 39-16646. Docket No. FAA-2010-0820; Directorate Identifier 2010-NE-31-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective May 5, 2011.

**Affected ADs**

- (b) None.

**Applicability**

(c) This AD applies to Thielert Aircraft Engines GmbH models TAE 125-01, TAE 125-02-99, and TAE 125-02-114 reciprocating engines installed in, but not limited to, Cessna 172 and (Reims-built) F172 series (European Aviation Safety Agency (EASA) STC No. EASA.A.S.01527); Piper PA-28 series (EASA STC No. EASA.A.S. 01632); APEX (Robin) DR 400 series (EASA STC No. A.S.01380); and Diamond Aircraft Industries Models DA 40, DA 42, and DA 42M NG airplanes.

**Reason**

(d) This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. We are issuing this AD to prevent engine in-flight shutdown or power loss, possibly resulting in reduced control of the airplane.

**Actions and Compliance**

- (e) Unless already done, do the following actions.
- (1) Within 110 flight hours after the effective date of the AD or during next maintenance, whichever occurs first, install full-authority digital electronic control (FADEC) software version 2.91.
  - (2) Guidance on FADEC software installation can be found in the following:
    - (i) For TAE 125-01 engines, Operation & Maintenance Manual OM-02-01, Version 3, Revision 15.
    - (ii) For TAE 125-02-99 and TAE 125-02-114 engines, Operation & Maintenance Manual OM-02-02, Version 2, Revision 1.

**Prohibition of FADEC Software Earlier Versions**

(f) Once FADEC software version 2.91 is installed, do not install any earlier version of FADEC software.

## **FAA AD Differences**

(g) EASA AD 2010-0137 permits installation of earlier FADEC software versions, once version 2.91 is installed. This AD does not.

(h) EASA AD 2010-0137 requires compliance within 110 flight hours after the effective date of the AD or during next maintenance, whichever occurs first, but no later than 6 months after the effective date of the AD. This AD requires compliance within 110 flight hours after the effective date of the AD or during next maintenance, whichever occurs first.

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

(i) The Manager, Engine Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

## **Related Information**

(j) Refer to EASA AD 2010-0137, dated June 30, 2010, for related information. Contact Thielert Aircraft Engines GmbH, Platanenstrasse 14 D-09350, Lichtenstein, Germany, phone: 37204-696-0; fax: 37204-696-2912; e-mail: info@centurion-engines.com, for a copy of the service information referenced in this AD.

(k) Contact Alan Strom, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: alan.strom@faa.gov; phone: (781) 238-7143; fax: (781) 238-7199, for more information about this AD.

## **Material Incorporated by Reference**

(l) None.

Issued in Burlington, Massachusetts, on March 22, 2011.  
Peter A. White,  
Acting Manager, Engine and Propeller Directorate,  
Aircraft Certification Service.



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**2011-07-13 CPAC, Inc. (Type Certificate Formerly Held by Commander Aircraft Corporation, Gulfstream Aerospace Corporation, and Rockwell International):** Amendment 39-16650; Docket No. FAA-2011-0302; Directorate Identifier 2011-CE-008-AD.

**Effective Date**

- (a) This AD is effective April 4, 2011.

**Affected ADs**

- (b) None.

**Applicability**

(c) This AD applies to CPAC, Inc. (type certificate formerly held by Commander Aircraft Corporation, Gulfstream Aerospace Corporation, and Rockwell International) Models 112, 112B, 112TC, 112TCA, 114, 114A, 114B, and 114TC airplanes, all serial numbers, certificated in any category. Type Certificate No. A12SO does not include Models 112A and 115. The Model 112A is a Rockwell "marketing name" for the Model 112. The Model 115 is a Rockwell "marketing name" for the Model 114. Since they are type-certificated as Model 112 and Model 114, this AD is applicable to the Models 112A and 115.

**Subject**

(d) Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 55, Stabilizers.

**Unsafe Condition**

(e) This AD was prompted by reports of a total of nine elevator spar cracks across seven of the affected airplanes, including a crack of 2.35 inches just below the outboard hinge of the right-hand elevator. We are issuing this AD to prevent structural failure of the elevator spar due to such cracking, which could result in separation of the elevator from the airplane with consequent loss of control.

**Compliance**

- (f) Comply with this AD within the compliance times specified.

**Inspection/Repair**

- (g) Within the next 5 hours time-in-service after the effective date of this AD, do the following for the left-hand and right-hand elevators:
- (1) Disconnect the elevator trim pushrod at the trim tab.
  - (2) Remove the hinge bolts at the horizontal stabilizer points.

(3) Remove six screws and two bolts at the inboard end of the elevator and remove the elevator.

(4) Remove all fasteners common to the elevator outboard aft end rib, part number (P/N) 44330, and elevator skin, P/N 44323.

(5) Remove the remaining two fasteners common to the elevator outboard aft End rib (P/N 44330) and the elevator spar, P/N 44211.

(6) Remove the elevator aft end rib, P/N 44330, to gain access to the aft side of the elevator spar.

(7) Remove the four bolts, washers, and nuts that secure the outboard elevator hinge, P/N 44285.

(8) Remove elevator hinge, P/N 44285, from the elevator spar.

(9) Clean in and around the location of the outboard bracket on the elevator spar and visually inspect for cracks. Use a 10X magnifier to facilitate the detection of any crack.

(10) If cracks are found, before further flight, do the following:

(i) Either replace the elevator spar with a serviceable spar that is found free of cracks or repair/modify the elevator spar following a procedure approved for this AD by the FAA, Wichita Aircraft Certification Office (ACO); and

(ii) Reassemble the elevator assembly, rebalance the elevator, and reinstall on the airplane following standard repair practices. Ensure elevator rigging is within tolerance, and that the system operates with ease, smoothness, and positiveness appropriate to its function.

Note: Elevator rigging and rebalancing, torque values, and other general maintenance information can be found in the maintenance manual.

### **Reporting Requirement**

(h) Report the results of the inspection to the FAA, Wichita ACO, FAA, Attn: T.N. Baktha, Senior Aerospace Engineer, 1801 Airport Road, Room 100; phone: (316) 946-4155; fax: (316) 946-4107; e-mail: t.n.baktha@faa.gov. Include the following information:

(1) Airplane model and serial number.

(2) Hours time-in-service at time of inspection.

(3) Annotate any cracking found, including the exact location and length of any cracks.

(4) Any installations, repairs, modifications, etc. that have been done on your airplane in the elevator spar area or that could have affected the elevator spar.

(5) Type of operation primarily flown in.

### **Paperwork Reduction Act Burden Statement**

(i) A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave., SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

**Alternative Methods of Compliance (AMOCs)**

(j)(1) The Manager, Wichita ACO, 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 identified in the Related Information section 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.

**Related Information**

(k) For more information about this AD, contact T.N. Baktha, Senior Aerospace Engineer, Wichita ACO, FAA, 1801 Airport Road, Room 100; phone: (316) 946-4186; fax: (316) 946-4107; e-mail: t.n.baktha@faa.gov.

Issued in Kansas City, Missouri, on March 28, 2011.  
Earl Lawrence,  
Manager, Small Airplane Directorate,  
Aircraft Certification Service.



**2011-08-01 Bell Helicopter Textron, Inc. (Bell):** Amendment 39-16651; Docket No. FAA-2011-0323; Directorate Identifier 2011-SW-005-AD.

**Effective Date**

(a) This AD is effective on April 21, 2011.

**Other Affected ADs**

(b) This AD supersedes Emergency AD 2010-25-51, issued on November 24, 2010, Directorate Identifier 2010-SW-096-AD.

**Applicability**

(c) This AD applies to Model 212 helicopters certificated in any category, with a main rotor hub inboard strap fitting (fitting), part number (P/N) 212-010-103-007, installed, with the serial numbers (S/Ns) listed in the following Table 1:

**Table 1**

<b>Serial Numbers with a Prefix of:</b>
"A" or "A-FS": 7 through 10946
"A1": 430 through 7606
"DI": 22296 through 22681
"EA": 333 through 381
"LK": 4619 through 4631
"MB": 11908 through 11916
"SH": 52, 54, 55, 57 through 65, 67, 69, 70, 71, 73, 103, 112, 113, 137, and 139
"WR": 275 through 319

**Unsafe Condition**

(d) This AD is prompted by a recent accident that resulted in several fatalities. During the investigation of the accident, a crack was found on a fitting. We have determined that certain fittings were not manufactured in accordance with approved manufacturing processes and controls. Due to the severity of a fitting failure, we are requiring replacing certain serial-numbered fittings, and we are expanding the applicability to require performing a magnetic particle inspection (MPI) for a crack on the remaining serial numbers of the fittings with the same part number. The actions specified by this AD are intended to prevent failure of a fitting, loss of a main rotor blade, and subsequent loss of control of the helicopter.

## Compliance

(e) Required as indicated, unless accomplished previously.

(f) Before further flight, for any helicopter with a fitting, serial number (S/N) 9956 through 10005 with a prefix of "A", and S/N 52, 54, 55, 57 through 65, 67, 69, 70, 71, 73, 103, 112, 113, 137, and 139 with a prefix of "SH" installed, replace the fitting with an airworthy fitting. Any fitting with a S/N identified in this paragraph is no longer eligible for installation on any helicopter.

(g) Before further flight, for any helicopter with a fitting, S/N 9911 through 9955, 10006 through 10049, 10075 through 10174, 10455 through 10460, 10581 through 10655, 10742 through 10791, and 10862 through 10946 with a prefix of "A", perform an MPI of each fitting for a crack. If a fitting is cracked, replace it with an airworthy fitting. If a fitting is not cracked, reidentify and refinish the fitting using a vibrating stylus (not to exceed 0.005 inch depth nor to extend within 0.10 inch of part edge) by adding "FM" at the end of the P/N. Touch up the reworked area with brush cadmium plating or zinc chromate primer. Reidentify the historical service records with "FM" at the end of the P/N.

Note 1: The Bell Model 212 Component, Repair, and Overhaul Manual, which is not incorporated by reference, contains additional information about MPI procedures.

(h) For any fitting with a S/N identified in Table 1 of the Applicability section of this AD, and not identified in paragraph (f) or (g) of this AD, perform an MPI of each fitting for a crack as follows:

(1) For a fitting with 400 or less hours time-in-service (TIS), perform an MPI within 25 hours TIS or 15 days, whichever comes first.

(2) For a fitting with more than 400 but less than 800 hours TIS, perform an MPI within 100 hours TIS or 30 days, whichever comes first.

(3) For a fitting with 800 or more hours TIS, perform an MPI at the next main rotor hub teardown inspection or tension-torsion strap replacement, whichever comes first.

(4) If a fitting is cracked, replace it with an airworthy fitting.

(5) If a fitting is not cracked, reidentify and refinish the fitting in accordance with the instructions in paragraph (g) of this AD.

(i) Within 24 hours after finding any cracked fitting, report the information requested in Appendix 1 of this AD to the Manager, Rotorcraft Certification Office, to the address, fax number, or email specified in the Appendix.

## Paperwork Reduction Act Burden Statement

(j) A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid Office of Management and Budget (OMB) Control Number. Under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the OMB has approved the information collection requirements contained in this AD and has assigned OMB Control Number 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

**Subject**

(k) The Joint Aircraft System Component/Air Transport Association of America Code is 6220: Main rotor hub.

**Alternative Methods of Compliance (AMOCs)**

(l) The Manager, Rotorcraft Certification Office, 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 identified in the "Additional Information" section of this AD.

Note 2: Before using any approved AMOC, we request that you notify your appropriate principal inspector, or if you have no principal inspector, your local Flight Standards District Office.

**Additional Information**

(m)(1) For service information identified in this AD, contact Bell Helicopter Textron, Inc., P.O. Box 482, Fort Worth, TX 76101, telephone (817) 280-3391, fax (817) 280-6466, or at <http://www.bellcustomer.com/files/>.

(2) You may review copies of the service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas.

(3) Bell Helicopter Alert Service Bulletin No. 212-10-141, Revision A, dated November 18, 2010, and Alert Service Bulletin No. 212-10-142, Revision A, dated March 21, 2011, contain additional guidance pertaining to the subject of this AD but are not incorporated by reference. A picture of a crack indication on an actual fitting is shown in Figure 1 of Bell Alert Service Bulletin 212-10-142, Rev. A.

**Appendix 1 to AD 2011-08-01****AD Compliance Inspection Report (Sample Format)**

Provide the following information and mail, fax, or e-mail report to: Manager, Rotorcraft Certification Office, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137, fax (817) 222-5783, e-mail 7-AVS-ASW-170@faa.gov.

Aircraft Registration No.	
Helicopter Serial No.	
Helicopter Owner/Operator	
Contact Phone No.	
Fitting Part Number	
Fitting Serial Number	
Hours Time-in-Service on Fitting at Time of Inspection	
Description of Findings	
Who Performed the Inspection?	
Date and Location the Inspection was Performed	
Describe the crack size, location, orientation (provide a sketch or pictures with the fitting part and serial numbers).	
Provide any other comments.	

Issued in Fort Worth, Texas, on March 29, 2011.

Kim Smith,  
 Manager, Rotorcraft Directorate,  
 Aircraft Certification Service.