



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

**BIWEEKLY 2012-03**

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U.S. Department of Transportation  
Federal Aviation Administration  
Engineering Procedures Office, AIR-110  
P. O. Box 25082  
Oklahoma City, OK 73125-0460



**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 2012-01</b>			
2010-19-06 R1	COR	Turbomeca	Engine: Arriel 1A, 1A1, 1B, 1C, 1C1, 1C2, 1D, 1D1, and 1S1 turboshaft
2011-26-10		Enstrom Helicopter Corporation	Rotorcraft: F-28C, F-28C-2, F-28F, 280C, 280F, 280FX, TH-28, 480, and 480B
2011-27-09		Socata	TBM 700
2012-01-01		Various Aircraft	See AD
2012-01-02		Schempp-Hirth Flugzeugbau	Glider: Discus 2cT
<b>Biweekly 2012-02</b>			
2011-18-12	S 82-13-05R1	Eurocopter France	Rotorcraft: AS350B, B1, B2, B3, BA, and D; and AS355E, F, F1, F2, and N
2011-27-08		Agusta S.p.A.	Rotorcraft: A109S and AW109SP
2011-27-51		Hawker Beechcraft	1900, 1900C, 1900C (Military), 1900D
2012-01-07		BRP-Powertrain GmbH	Engine: Rotax 914 F2, 914 F3, and 914 F4 reciprocating
2012-01-11		Cirrus Design	SR22T
2012-02-05		Thielert Aircraft Engines GmbH	Engine: TAE 125-02-99 and TAE-125-02-114 reciprocating
<b>Biweekly 2012-03</b>			
71-13-01R1		Lycoming Engines	Engine: TIO-540-A series
2012-01-03		Eurocopter France	Rotorcraft: AS332L2 and EC225LP
2012-02-02	S 2008-03-02	Cessna	172R and 172S
2012-02-06		Honeywell International	Engine: TPE331-10, -10AV, -10GP, -10GT, -10N, -10P, -10R, -10T, -10U, -10UA, -10UF, -10UG, -10UGR, -10UR, and TPE331-11U
2012-02-10	S 2011-07-13	CPAC	112, 112B, 112TC, 112TCA, 114, 114A, 114B, and 114TC
2012-02-13		Eurocopter France	Rotorcraft: EC130B4
2012-02-51	E	Bell Helicopter Textron Canada Limited	Rotorcraft: 206L, L-1, L-3, and L-4
2012-03-06	S 2011-15-10	Superior Air Parts, Lycoming Engines, and Continental Motors	Engine: Fuel injected reciprocating engines
2012-03-52	E	Mooney Aviation	M20TN and M20R



**FAA**  
**Aviation Safety**

## **AIRWORTHINESS DIRECTIVE**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

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**71-13-01R1 Lycoming Engines (formerly Textron Lycoming Division, AVCO Corporation):**  
Amendment 39-16909; Docket No. FAA-2011-0691; Directorate Identifier 2011-NE-26-AD.

**(a) Effective Date**

This AD is effective March 8, 2012.

**(b) Affected ADs**

This AD rescinds AD 71-13-01, Amendment 39-1231.

**(c) Applicability**

This AD applies to Lycoming Engines model TIO-540-A series reciprocating engines, with serial numbers lower than 1931-61.

**(d) Related Information**

For more information about this AD, contact Norm Perenson, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine & Propeller Directorate, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (516) 228-7337; fax: (516) 794-5531; email: [Norman.perenson@faa.gov](mailto:Norman.perenson@faa.gov).

**(e) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on December 29, 2011.  
Peter A. White,  
Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.



**2012-01-03 Eurocopter France:** Amendment No. 39-16914; Docket No. FAA-2012-0005; Directorate Identifier 2010-SW-091-AD.

(a) Applicability. This AD applies to Model AS332L2 and EC225LP helicopters, certificated in any category.

(b) Unsafe Condition. This AD defines the unsafe condition as degradation of the epicyclic reduction gear module within the main gearbox (MGB). This condition could result in failure of the MGB and subsequent loss of control of the helicopter.

(c) Other Affected ADs. This AD supersedes AD 2009-09-51, Amendment 39-16101, Docket No. FAA-2009-1089, Directorate Identifier 2009-SW-16-AD, (74 FR 65679, Dec. 11, 2009).

(d) Effective Date. This airworthiness directive (AD) becomes effective February 22, 2012.

(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. To prevent failure of the main gearbox (MGB) and loss of control of the helicopter:

(1) Before further flight:

(i) Determine from the maintenance records whether, within the last 200 hours time-in-service (TIS), the "CHIP" detector light illuminated because of a metal particle on the chip detector of the MGB epicyclic module (module), and if so, whether the "CHIP" detector light stayed illuminated after the "CHIP" detector switch was turned to the "CHIP PULSE" setting to activate the "fuzz burn-off" feature.

(A) If the maintenance records indicate that the "CHIP" detector light illuminated because of a metal particle on the chip detector of the module, and the "CHIP" detector light stayed illuminated after the "CHIP" detector switch was turned to the "CHIP PULSE" setting, replace the module with an airworthy module before further flight.

(B) If the maintenance records do not indicate which "CHIP" detector caused the "CHIP" detector light to illuminate, or whether the detector light stayed illuminated after the "CHIP" detector switch was turned to the "CHIP PULSE" setting, replace the module with an airworthy module before further flight.

(ii) Inspect the module magnetic chip detector electrical circuit and determine whether the system is functioning properly, including whether the "CHIP" detector light annunciates on the instrument panel (Vehicle Monitoring System Screen).

(2) After accomplishing paragraph (f)(1) of this AD, thereafter, if the "CHIP" detector light illuminates, stays illuminated after the chip detector switch is turned to the "CHIP PULSE" setting, and there is a metal particle on the module magnetic chip detector (rather than the main reduction gear (lower MGB), the flared housing (mast assembly), the intermediate gearbox, or the tail rotor gearbox chip detectors) that caused the "CHIP" detector light to illuminate, replace the module with an airworthy module.

(3) Within 50 hours TIS, remove, modify, reidentify, and reinstall the chip collector as shown in Figures 2 through 5, and in accordance with the Accomplishment Instructions, paragraph 2.B.3.b.1) through 2.B.3.b.5) of Eurocopter Emergency Alert Service Bulletin (EASB) No. 05.00.81, Revision 2, dated April 23, 2009, or Eurocopter EASB No. 05A017, Revision 2, dated April 23, 2009, for your model helicopter.

(4) Before installing a MGB, modify, reidentify, and reinstall the chip collector in accordance with paragraph (f)(3) of this AD.

**Note 1 to paragraph (f) of this AD:** Eurocopter has issued two EASBs with four different numbers (Nos. 05.00.81, 05.00.58, 05A017, and 05A016) that apply to 5 different Eurocopter model helicopters. EASB No. 05.00.58 is for Eurocopter military Model AS532A2, and U2 helicopters, and EASB No. 05A016 is for Eurocopter military Model EC725AP helicopters that are non-FAA type-certificated. EASB No. 05.00.81 is for FAA type-certificated Eurocopter Model AS332L2 helicopters and EASB No. 05A017 is for FAA type-certificated Eurocopter Model EC225LP helicopters. This AD does not incorporate by reference EASB Nos. 05A016 or 05.00.58.

(g) Alternative Methods of Compliance (AMOCs).

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Rao Edupuganti, Aerospace Engineer, FAA, Rotorcraft Directorate, Regulations and Policy Group, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone: (817) 222-4389; fax: (817) 222-5961, email rao.edupuganti@faa.gov.

(2) For operations conducted under a Part 119 operating certificate or under 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. The subject of this AD is addressed in European Aviation Safety Agency AD No. 2009-0099-E, dated April 23, 2009.

(i) Subject. JASC Code: 6300: Rotor Drive System.

(j) Material Incorporated by Reference. You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51:

(1) Eurocopter Emergency Alert Service Bulletin No. 05.00.81, Revision 2, dated April 23, 2009, for the model AS332L2; and

(2) Eurocopter Emergency Alert Service Bulletin No. 05A017, Revision 2, dated April 23, 2009, for the model EC225LP helicopters.

(3) For service information identified in this AD, contact American Eurocopter Corporation, 2701 N. Forum Drive, Grand Prairie, Texas 75052, telephone (972) 641-0000 or (800) 232-0323, fax (972) 641-3775, or at <http://www.eurocopter.com/techpub>.

(4) You may review copies of the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth Texas 76137 or 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/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Fort Worth, Texas, on December 28, 2011.

M. Monica Merritt,  
Acting Manager, Rotorcraft Directorate,  
Aircraft Certification Service.



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**2012-02-02 Cessna Aircraft Company:** Amendment 39-16925; Docket No. FAA-2011-1245; Directorate Identifier 2011-CE-033-AD.

**(a) Effective Date**

This airworthiness directive (AD) is effective March 13, 2012.

**(b) Affected ADs**

This AD supersedes AD 2008-03-02, Amendment 39-15351 (73 FR 5737, January 31, 2008).

**(c) Applicability**

This AD applies to the following Cessna Aircraft Company airplanes, certificated in any category:

- (1) Group 1: Model 172R, serial numbers (S/N) 17281188 through 17281390;
- (2) Group 2: Model 172S, S/N 172S9491 through 172S10489;
- (3) Group 3: Model 172R, S/N 17281391 through 17281572; and
- (4) Group 4: Model 172S, S/N 172S10490 through 172S11073.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code Fuel, 28.

**(e) Unsafe Condition**

This AD was prompted by a field report of a fuel return line chafing incident on a Cessna Model 172 airplane with a serial number that was not in the Applicability statement of AD 2008-03-02 (73 FR 5737, January 31, 2008). Chafing of the fuel return line assembly could result in fuel leaking and fuel vapors, which could lead to fire. We are issuing this AD to correct the unsafe condition on these products.

**(f) Compliance**

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

**(g) Inspection Requirement Retained From AD 2008-03-02, Amendment 39-15351 (73 FR 5737, January 31, 2008)**

(1) For Group 1 and Group 2 Airplanes: Within the next 100 hours time-in-service (TIS) after March 6, 2008 (the effective date retained from AD 2008-03-02) or within the next 12 months after March 6, 2008 (the effective date retained from AD 2008-03-02), whichever occurs first, inspect the fuel return line assembly (Cessna part number (P/N) 0500118-49) for chafing. Do the inspection

following Cessna Service Bulletin SB07-28-01, dated June 18, 2007; or Cessna Service Bulletin SB07-28-01, Revision 1, dated September 22, 2011.

(2) For Group 3 and Group 4 Airplanes: Within the next 100 hours TIS after March 13, 2012 (the effective date of this AD) or within the next 12 months after March 13, 2012 (the effective date of this AD), whichever occurs first, inspect the fuel return line assembly (Cessna P/N 0500118-49) for chafing. Do the inspection following Cessna Service Bulletin SB07-28-01, Revision 1, dated September 22, 2011.

**(h) Replacement Requirement Retained From AD 2008-03-02, Amendment 39-15351 (73 FR 5737, January 31, 2008)**

For All Airplanes: Before further flight after the inspection required in paragraph (g)(1) or (g)(2) of this AD where evidence of chafing was found, replace the fuel return line assembly (Cessna P/N 0500118-49). Do the replacement following Cessna Service Bulletin SB07-28-01, dated June 18, 2007; or Cessna Service Bulletin SB07-28-01, Revision 1, dated September 22, 2011.

**(i) Inspection and Adjustment Requirement Retained From AD 2008-03-02, Amendment 39-15351 (73 FR 5737, January 31, 2008)**

For All Airplanes: Before further flight after the inspection required in paragraph (g)(1) or (g)(2) of this AD if no chafing is found or after the replacement required in paragraph (h) of this AD, whichever of the previous situations applies, inspect for a minimum clearance of 0.5 inch between the following parts throughout the entire range of copilot rudder pedal travel. If less than 0.5 inch clearance is found, before further flight, adjust the clearance. Follow paragraph 6 of the Instructions section of Cessna Service Bulletin SB07-28-01, dated June 18, 2007; or Cessna Service Bulletin SB07-28-01, Revision 1, dated September 22, 2011. This AD requires a minimum clearance of 0.5 inch. The requirements of this AD take precedence over the actions required in the service information.

(1) The fuel return line assembly (Cessna P/N 0500118-49) and the steering tube assembly (Cessna P/N MC0543022-2C); and

(2) The fuel return line assembly (Cessna P/N 0500118-49) and the airplane structure.

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

(1) The Manager, Wichita Aircraft Certification Office (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.

**(k) Related Information**

For more information about this AD, contact Trenton Shepherd, Aerospace Engineer, Wichita ACO, FAA, 1801 Airport Road, Room 100, Wichita, Kansas 67209; phone: (316) 946-4143; fax: (316) 946-4107; email: trent.shepherd@faa.gov.

**(I) Material Incorporated by Reference**

(1) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) under 5 U.S.C. 552(a) and 1 CFR part 51 of the following service information:

(i) Cessna Service Bulletin SB07-28-01, Revision 1, dated September 22, 2011, approved for IBR March 13, 2012.

(ii) Cessna Service Bulletin SB07-28-01, dated June 18, 2007, approved for IBR March 6, 2008 (73 FR 5737, January 31, 2008)

(2) For service information identified in this AD, contact Cessna Aircraft Company, Product Support, P.O. Box 7706, Wichita, KS 67277; telephone: (316) 517-6000; fax: (316) 517-8500; email: [Customercare@cessna.textron.com](mailto:Customercare@cessna.textron.com); Internet: <http://www.cessna.com>.

(3) You may review copies of the service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 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 NARA, call (202) 741-6030, or go to: [http://www.archives.gov/federal-register/cfr/ibr\\_locations.html](http://www.archives.gov/federal-register/cfr/ibr_locations.html).

Issued in Kansas City, Missouri, on January 18, 2012.

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



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**2012-02-06 Honeywell International Inc. (formerly AlliedSignal Inc., Garrett Engine Division; Garrett Turbine Engine Company; and AiResearch Manufacturing Company of Arizona):**  
Amendment 39-16929; Docket No. FAA-2011-0789; Directorate Identifier 2011-NE-04-AD.

**(a) Effective Date**

This AD is effective March 15, 2012.

**(b) Affected ADs**

None.

**(c) Applicability**

Honeywell International Inc. TPE331-10, -10AV, -10GP, -10GT, -10N, -10P, -10R, -10T, -10U, -10UA, -10UF, -10UG, -10UGR, -10UR, and TPE331-11U model turboprop engines with a first stage turbine disk, part number (P/N) 3101520-1 or 3107079-1, with a serial number (S/N) listed in Table 2 of Honeywell International Inc. Alert Service Bulletin (ASB) TPE331-72-A2156, dated December 2, 2008, installed.

**(d) Unsafe Condition**

This AD was prompted by a report of an uncontained failure of a first stage turbine disk that had a metallurgical defect. We are issuing this AD to prevent uncontained failure of the first stage turbine disk and damage to the airplane.

**(e) Compliance**

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

**(f) Initial Inspection**

(1) For first stage turbine disks, P/N 3101520-1 or 3107079-1, that have an S/N listed in Table 2 of Honeywell International Inc. ASB TPE331-72-A2156, dated December 2, 2008, inspect the disks as follows:

(i) For turbine disks with 4,100 or fewer cycles-since-new (CSN) on the effective date of this AD, perform an initial fluorescent penetrant inspection (FPI) by using paragraph 3.B.(2) through 3.B.(5) of Honeywell International Inc. ASB TPE331-72-A2156, dated December 2, 2008, within 4,500 CSN or at the next access, whichever occurs first.

(ii) For turbine disks with more than 4,100 CSN on the effective date of this AD, perform an initial FPI by using paragraph 3.B.(2) through 3.B.(5) of Honeywell International Inc. ASB TPE331-72-A2156, dated December 2, 2008, within 400 cycles-in-service (CIS) after the effective date of this AD or at the next access, whichever occurs first.

(iii) If the disk passes the FPI inspection, perform a special eddy current inspection (ECI) by using paragraph 3.B.(6) of Honeywell International Inc. ASB TPE331-72-A2156, dated December 2, 2008, before returning the disk to service.

(2) If you find a crack in the disk, remove the disk from service.

### **(g) Repetitive Inspection**

(1) Thereafter, for first stage turbine disks, P/N 3101520-1 or 3107079-1, that have an S/N listed in Table 2 of Honeywell International Inc. ASB TPE331-72-A2156, dated December 2, 2008, inspect the disks as follows:

(i) Perform a repetitive inspection at each scheduled hot section inspection, but not to exceed 3,600 hours-since-last inspection. Use paragraph 3.B.(2) through 3.B.(5) of Honeywell International Inc. ASB TPE331-72-A2156, dated December 2, 2008.

(ii) If the disk passes the FPI inspection, perform a special ECI by using paragraph 3.B.(6) of Honeywell International Inc. ASB TPE331-72-A2156, dated December 2, 2008, before returning the disk to service.

(2) If you find a crack in the disk, remove the disk from service.

### **(h) Definition**

For the purpose of this AD, "next access to the first stage turbine disk" is defined as the removal of the second stage turbine nozzle from the turbine stator housing.

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

The Manager, Los Angeles Aircraft Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

### **(j) Related Information**

(1) For more information about this AD, contact Joseph Costa, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, Transport Airplane Directorate, 3960 Paramount Blvd., Lakewood, CA 90712-4137; phone: (562) 627-5246; fax: (562) 627-5210; email: joseph.costa@faa.gov.

(2) Contact Honeywell International Inc., 111 S. 34th Street, Phoenix, AZ 85034-2802; phone: (800) 601-3099 (toll free in U.S. or Canada) or (602) 365-3099 (International direct); Web site: <http://portal.honeywell.com>; for a copy of the service information referenced in this AD.

### **(k) Material Incorporated by Reference**

(1) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51:

(i) Honeywell International Inc., Alert Service Bulletin TPE331-72-A2156, December 2, 2008.

(2) For service information identified in this AD, contact Honeywell International Inc., 111 S. 34th Street, Phoenix, AZ 85034-2802; Web site: <http://portal.honeywell.com>; or call Honeywell toll free at (800) 601-3099 (U.S./Canada) or (602) 365-3099 (International Direct).

(3) You may review copies of the service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7125.

(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).

Issued in Burlington, Massachusetts, on January 12, 2012.

Peter A. White,  
Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.



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**2012-02-10 CPAC, Inc. (Type Certificate Formerly Held by Commander Aircraft Corporation, Gulfstream Aerospace Corporation, and Rockwell International):** Amendment 39-16933; Docket No. FAA-2011-1128; Directorate Identifier 2011-CE-031-AD.

**(a) Effective Date**

This airworthiness directive (AD) is effective March 15, 2012.

**(b) Affected ADs**

This AD supersedes AD 2011-07-13, Amendment 39-16650 (76 FR 18376, April 4, 2011).

**(c) Applicability**

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.

**(d) Subject**

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

**(e) Unsafe Condition**

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.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done. The inspection intervals and procedures in this AD take precedence over those contained in Parts Manufacturer Approval (PMA) Elevator Spars 44211-RE9 and 44211-RE10, Instructions for Continued Airworthiness, original issue date May 5, 2011.

**(g) Inspection Requirement Retained From AD 2011-07-13, Amendment 39-16650 (76 FR 18376, April 4, 2011)**

Within the next 5 hours time-in-service (TIS) after April 4, 2011 (the effective date retained from AD 2011-07-13 (76 FR 18376, April 4, 2011)), visually inspect the left-hand (LH) and right-hand (RH) elevator spar behind and around the outboard hinge bracket on the elevator spar for cracks. Do the inspection following the procedures specified in paragraph (j) of this AD. If cracks are found during this inspection, take the necessary corrective actions specified in paragraph (k) of this AD.

**(h) Reporting Requirement Retained From AD 2011-07-13, Amendment 39-16650 (76 FR 18376, April 4, 2011)**

Within 30 days after the inspection required in paragraph (g) of this AD, report the results of the inspection to the FAA, Wichita Aircraft Certification Office (ACO), Attn: T.N. Baktha, Senior Aerospace Engineer, 1801 Airport Road, Room 100; Wichita, Kansas 67209; phone: (316) 946-4155; fax: (316) 946-4107; email: t.n.baktha@faa.gov. Include the following information:

- (1) Airplane model and serial number.
- (2) Hours TIS 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.

**(i) Repetitive Inspection Requirement**

As a result of the inspection required in paragraph (g) of this AD, if the elevator spar was:

(1) Replaced with a new elevator spar, within the next 300 hours TIS after the replacement, visually inspect the elevator spar behind the outboard hinge bracket and surrounding area for cracks. Repetitively inspect thereafter at intervals not to exceed 12 months or 150 hours TIS, whichever occurs first. Do the inspection following the procedures specified in paragraph (j) of this AD.

(2) Replaced with a serviceable elevator spar (one that was in service before and had no cracks and/or corrosion), within the next 150 hours TIS after the replacement, visually inspect the elevator spar behind the outboard hinge bracket and surrounding area for cracks. Repetitively inspect thereafter at intervals not to exceed 12 months or 150 hours TIS, whichever occurs first. Do the inspection following the procedures specified in paragraph (j) of this AD.

(3) Found free of cracks, within the next 150 hours TIS after the inspection, visually inspect the elevator spar behind the outboard hinge bracket and surrounding area for cracks. Repetitively inspect thereafter at intervals not to exceed 12 months or 150 hours TIS, whichever occurs first. Do the inspection following the procedures specified in paragraph (j) of this AD.

**(j) Inspection Procedures**

- (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 bracket, P/N 44285.

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

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

### **(k) Corrective Actions**

(1) If cracks are found during any inspection required in paragraphs (g), (i)(1), (i)(2), or (i)(3) of this AD, before further flight, either replace the elevator spar with a new spar or a serviceable spar that is found free of cracks and/or corrosion or repair/modify the elevator spar following a procedure approved for this AD by the FAA, Wichita ACO;

(2) After doing the actions required in paragraph (k)(1) of this AD, before further flight, 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; and

(3) After taking corrective action, continue with the repetitive inspections required in paragraphs (i)(1), (i)(2), and (i)(3) of this AD.

### **(l) Special Flight Permit**

(1) Special flight permits are permitted for daytime visual flight rules (VFR) only, restricted to crew, calm weather, reduced speed not to exceed 111 knots calibrated air speed (KCAS), and not to exceed 5 flight hours when cracks are found in the elevator spar if:

- (i) The cracks are at or near the outboard hinge bracket;
- (ii) The cracks are 1.25 inches long or less; and
- (iii) There is no more than one crack on the top and one at the bottom of the hinge bracket.

(2) Special flight permits are not allowed if:

- (i) The crack length is greater than 1.25 inches; or
- (ii) The number of cracks is more than two.

### **(m) Paperwork Reduction Act Burden Statement**

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.

### **(n) AMOCs**

(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.

(3) AMOCs approved for AD 2011-07-13, Amendment 39-16650 (76 FR 18376, April 4, 2011), are approved for this AD.

**(o) Related Information**

For more information about this AD, contact T.N. Baktha, Senior Aerospace Engineer, Wichita ACO, FAA, 1801 Airport Road, Room 100, Wichita, Kansas 67209; phone: (316) 946-4155; fax: (316) 946-4107; email: t.n.baktha@faa.gov.

Issued in Kansas City, Missouri, on January 25, 2012.  
John Colomy,  
Acting Manager, Small Airplane Directorate,  
Aircraft Certification Service.



**2012-02-13 Eurocopter France:** Amendment 39-16936; Docket No. FAA-2012-0086; Directorate Identifier 2011-SW-045-AD.

(a) Applicability. This AD applies to Model EC130B4 helicopters that do not have Eurocopter Modification (MOD) 073880 incorporated, all serial numbers, certificated in any category.

(b) Unsafe Condition. This AD defines the unsafe condition as cracks on the tailboom/Fenestron junction frame. This condition could result in structural failure of the tailboom, detachment of the Fenestron, and subsequent loss of control of the helicopter.

(c) Effective Date. This airworthiness directive (AD) becomes effective February 22, 2012.

(d) Compliance. You are responsible for performing each action required by this AD within the specified compliance time unless accomplished previously.

(e) Corrective Actions.

(1) Within 10 hours time-in-service (TIS):

(i) Inspect the right hand side of the tailboom/Fenestron junction frame for cracks in the web from the inside as depicted in Details C and D of Figure 2 of Eurocopter Emergency Alert Service Bulletin 53A019, dated June 14, 2011 (EASB).

(ii) Strip the paint on the areas of the right hand side of the tailboom/Fenestron junction frame depicted in Detail E of Figure 3 of the EASB. Apply a coat of primer to the stripped area. Apply varnish to the stripped area.

(iii) Inspect the stripped area of the frame for cracks from the outside.

(2) Thereafter at intervals not to exceed 50 hours TIS, inspect the frame by following the inspection requirements of paragraphs (1)(i) and (1)(iii) of this AD.

(3) If there is a crack, before further flight, replace the tailboom with an airworthy tailboom that incorporates Eurocopter MOD 073880.

(4) After the effective date of this AD, do not install a tailboom that does not incorporate Eurocopter MOD 073880 on any helicopter.

(f) Special flight permits. Special flight permits may be issued for up to 2 hours TIS to ferry the helicopter to a repair facility if the crack does not extend into the web of the tailboom/Fenestron junction frame.

(g) Alternative Methods of Compliance (AMOCs).

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Jim Grigg, Manager, FAA, Rotorcraft Directorate, Safety Management Group, 2601 Meacham Blvd., Fort Worth, TX 76137, telephone (817) 222-5126, email: [jim.grigg@faa.gov](mailto:jim.grigg@faa.gov).

(2) For operations conducted under a Part 119 operating certificate or under 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) Subject. Joint Aircraft System Component (JASC) Code: 5302: Rotorcraft Tail Boom.

(i) Additional Information. The subject of this AD is addressed in European Aviation Safety Agency (France) AD No. 2011-0116, dated July 6, 2011.

(j) Material Incorporated by Reference. You must use the specified portions of Eurocopter Emergency Alert Service Bulletin 53A019, dated June 14, 2011, to do the specified actions required by this AD.

(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 American Eurocopter Corporation, 2701 N. Forum Drive, Grand Prairie, TX 75052, telephone (972) 641-0000 or (800) 232-0323, fax (972) 641-3775, or at <http://www.eurocopter.com/techpub>.

(3) You may review copies of the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth Texas 76137 or 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/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Fort Worth, Texas, on January 23, 2012.

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



**DATE: February 1, 2012**

**AD #: 2012-02-51**

This emergency airworthiness directive (EAD) 2012-02-51 is being sent to owners and operators of Bell Helicopter Textron Canada Limited (Bell) Model 206L, 206L-1, 206L-3, and 206L-4 helicopters with certain main rotor blades installed.

### **Discussion**

Transport Canada Civil Aviation (TCCA), has issued TCCA AD No. CF-2011-44R1, dated February 1, 2012, to correct an unsafe condition for the Bell 206L, L-1, L-3, and L-4 helicopters. TCCA advises that there is no reliable inspection method to detect the cracks on these blades before blade failure and has mandated a reduced life limit on all affected blades, and removal from service for any main rotor blades exceeding the new life limit. This EAD is prompted by two accident investigations which revealed the main rotor blade failed because of fatigue cracking. Bell has determined the fatigue cracks occurred as a result of the use by a Bell supplier of unapproved manufacturing processes, which have since been corrected, and are limited to a specific range of part numbers and serial numbers. These EAD actions are intended to prevent failure of the main rotor blade and subsequent loss of control of the helicopter.

### **FAA's Determination**

These helicopters have been approved by the aviation authority of Canada and are approved for operation in the United States. Pursuant to our bilateral agreement with Canada, TCCA has notified us of the unsafe condition described in the TCCA AD. We are issuing this EAD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

### **Related Service Information**

Bell Helicopter Alert Service Bulletin No. 206L-09-159 Revision A, dated November 13, 2009 (ASB 206L-09-159), describes procedures to identify and mark the affected main rotor blades, requires a "recurring wipe check," and requires performing a one-time radiographic inspection with the results to be determined by Bell.

### **EAD Requirements**

This EAD requires reducing the life limit from 3,600 hours time-in-service (TIS) to 1,400 hours TIS for certain part numbered and serial numbered main rotor blades, revising the life limit in the Airworthiness Limitations section of the Instructions for Continued Airworthiness or maintenance manual, and recording the revised life limit on the component history card or equivalent record.

### **Differences Between This EAD and the TCCA AD**

There are no significant differences between this EAD and the TCCA AD.

## Costs of Compliance

We estimate that this EAD will affect 697 helicopters of U.S. Registry. We estimate that operators may incur the following costs in order to comply with this EAD. Determining the part number and serial number of the main rotor blades will require approximately one work hour at an average labor rate of \$85 per hour, for a cost per helicopter of \$85 and a cost to the U.S. fleet of \$59,245. Replacing any affected main rotor blade will require approximately 8 work hours at an average labor rate of \$85 per hour and the required parts will cost approximately \$44,958, for a total cost per helicopter of \$45,638.

## Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. "Subtitle VII, Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701, General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## Adoption of the Emergency Airworthiness Directive (EAD)

We are issuing this EAD under 49 U.S.C. Sections 106(g), 40113, and 44701 according to the authority delegated to me by the Administrator.

**2012-02-51 BELL HELICOPTER TEXTRON CANADA LIMITED:** Directorate Identifier 2012-SW-007-AD.

(a) **Applicability.** This EAD applies to Bell Helicopter Textron Canada Limited (Bell) Model 206L, 206L-1, 206L-3, and 206L-4 helicopters, certificated in any category, with a main rotor blade part number (P/N) 206-015-001-107, 206-015-001-109, 206-015-001-111, 206-015-001-115, 206-015-001-117, 206-015-001-119, or 206-015-001-121, and a main rotor blade serial number listed in Table 1 of this AD.

**Table 1**

<b>Affected Main Rotor Blade Serial Numbers</b>				
901 through 928	2285 2286	2787 2788	4293 through 4298	4684
930 through 935	2290	2808 through 2817	4301	4686 through 4708
937 938	2292 through 2294	2819 through 2822	4305	4710
941	2297	2824	4308	4713 through 4716
943 through 994	2301 2302	2826 through 2828	4314 4315	4719 through 4722

996 through 1000	2304 2305	2832	4318	4725
1002 through 1020	2308	2835	4330	4728 4729
1022 through 1032	2311	2840 through 2842	4334 through 4336	4731
1034 through 1047	2313 2314	2844	4381 4382	4734 through 4737
1049 through 1134	2316	2848 through 2850	4392	4739 through 4742
1136 through 1140	2318 2319	2852 2853	4394 4395	4744 through 4751
1142 through 1157	2322 through 2324	2855	4405 through 4409	4753 through 4757
1159 through 1166	2328 through 2331	2858	4416	4759
1168 through 1182	2357	2862 through 2864	4418	4762
1184 through 1351	2374	2900	4423 through 4426	4764
1353 through 1363	2379	2996	4433	4774
1365 through 1382	2515	3212	4445	4778 through 4780
1384 through 1401	2553 2554	3219	4448	4784
1403 through 1519	2561 2562	3339	4462 4463	4786 through 4825
1521 through 1590	2564 through 2570	3369	4484	4827 through 4840
1593 through 1646	2573	3381	4500	4842 through 4863
1648 through 1718	2576	3447	4508	4865 through 4905
1720 through 1798	2580	3571 3572	4512	4907 through 4948
1800 through 1821	2583	3622	4517	4950 through 4957
1824 through 1829	2585 2586	3705	4522	4959 through 4963
1832 through 2060	2588 2589	3831	4528 4529	4965
2062 through 2072	2593 2594	3971 3972	4532	4969 through 4973
2074	2596 2597	4025 through 4030	4534	4975
2077 through 2081	2599	4117	4547	4979 4980
2092 through 2095	2602	4143	4550	4983 4984
2098 2099	2604 2605	4201 through 4205	4567	4987
2101 through 2104	2607 through 2610	4209	4573	4989
2107 2108	2621	4214 through 4217	4590	4992
2110 through 2124	2623 2624	4248	4604 4605	4994 through 5006
2126 through 2145	2638	4250 4251	4608 4609	5010
2147 through 2158	2640 through 2672	4253 4254	4612 through 4621	5015

2161 through 2163	2674 through 2701	4256 through 4260	4624 through 4629	5018
2165	2706 through 2708	4262 through 4267	4631	5023
2166			4632	
2169 through 2175	2727 2728	4269	4638 4639	5036
2177 through 2183	2730 through 2742	4271 4272	4652	5047
2185 through 2192	2744 through 2764	4274 through 4276	4654	5054
2220	2766	4278	4657	5066
2221	2767			5067
2248	2769	4280 through 4284	4659	5071 5072
2257 through 2267	2771 2772	4286 4287	4662	5075 5076
2272 through 2283	2775 through 2777	4290 4291	4666 through 4682	5081
5087	5397	5535 through 5537	5679 through 5686	5851
5094	5399 through 5400	5539 5540	5688	5856
5152	5402 through 5411	5542	5690 through 5705	5861 through 5865
5155	5413 5414	5546 through 5549	5707 through 5709	5870
5158	5416 through 5439	5552	5711	5882
5159		5553	5712	
5163	5441	5556 through 5561	5716 through 5721	5884 through 5886
5164				
5166 through 5171	5443 through 5445	5566 through 5568	5723 through 5726	5889 through 5891
5176 through 5178	5447	5570 through 5574	5729 through 5734	5899 through 5901
5180 through 5182	5450	5576 through 5583	5736 through 5745	5903 through 5905
5186 through 5191	5459	5588 through 5591	5747 through 5752	5912
5193 through 5199	5465 through 5468	5594	5757	5915
5201 through 5205	5472	5598 through 5600	5762	5921
5207	5475	5602 through 5605	5766 through 5769	5925 5926
5209 through 5212	5481	5608 5609	5771	5929 through 5951
5218 through 5253	5483	5612	5781 5782	5992
5255 through 5273	5488	5616 through 5623	5791	6216
5275 through 5288	5491 5492	5625 5626	5793 through 5800	6247
5291	5495	5628	5808	6270
5292				
5297	5497 through 5507	5637 through 5641	5815 through 5817	6597
5298				
5301 through 5321	5509 through 5512	5643	5822 through 5826	6611 6612
5323 through 5331	5516	5645 through 5653	5828 5829	6661
5333 through 5340	5518 through 5521	5655 through 5666	5833	6714

5343	5526 through 5530	5668 5669	5837	
5345 through 5395	5533	5671 through 5677	5844 5845	

All blade serial numbers listed in Table 1 of this EAD have the prefix "A-."

(b) **Unsafe Condition.** This EAD defines the unsafe condition as fatigue cracking of a main rotor blade. This condition could result in failure of the main rotor blade and subsequent loss of control of the helicopter.

(c) **Effective Date.** This EAD is effective upon receipt.

(d) **Compliance.** You are responsible for performing each action required by this EAD within the specified compliance time unless it has already been accomplished prior to that time.

(e) **Required Action.** Before further flight:

(1) Reduce the life limit of the main rotor blades with a serial number listed in Table 1 of this EAD from 3,600 hours time-in-service (TIS) to 1,400 hours TIS; revise the life limit in the Airworthiness Limitations section of the Instruction for Continued Airworthiness or maintenance manual; and record the revised life limit on the component history card or equivalent record.

(2) Remove from service any main rotor blade which has accumulated 1,400 or more hours TIS.

(f) **Special flight permits.** Special flight permits are prohibited.

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

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this EAD. Send your proposal to: Sharon Miles, Aerospace Engineer, FAA, Rotorcraft Directorate, Regulations and Policy Group, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222 5110, e-mail [sharon.y.miles@faa.gov](mailto:sharon.y.miles@faa.gov).

(2) For operations conducted under a Part 119 operating certificate or under 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 EAD through an AMOC.

(h) **Additional Information.**

(1) Bell Helicopter Alert Service Bulletin (ASB) No. 206L-09-159 Revision A, dated November 13, 2009, which is not incorporated by reference, contains additional information about the subject of this EAD. For this service information, 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 this service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth Texas 76137.

(2) For further information contact: Sharon Miles, Aerospace Engineer, FAA, Rotorcraft Directorate, Regulations and Policy Group, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222 5110, e-mail [sharon.y.miles@faa.gov](mailto:sharon.y.miles@faa.gov).

(3) The subject of this EAD is addressed in Transport Canada Civil Aviation AD No. CF-2011-44R1, dated February 1, 2012.

(i) **Subject.** Joint Aircraft Service Component (JASC) Code: 6210: Main Rotor Blades.

Issued in Fort Worth, Texas, on February 1, 2012.

Lance T. Gant,  
Acting Manager, Rotorcraft Directorate,  
Aircraft Certification Service.



**CORRECTED:** The AD number at the beginning of the regulatory text was incorrectly listed as "012-03-06" in the Federal Register. The Office of the Federal Register will issue a correction.

**2012-03-06 Superior Air Parts, Lycoming Engines (formerly Textron Lycoming), and Continental Motors, Inc. (formerly Teledyne Continental Motors, Continental) Fuel-Injected Reciprocating Engines:** Amendment 39-16947; Docket No. FAA-2011-0547; Directorate Identifier 2011-NE-13-AD.

**(a) Effective Date**

This AD is effective February 24, 2012.

**(b) Affected ADs**

This AD supersedes AD 2011-15-10, Amendment 39-16757 (76 FR 45655, August 1, 2011).

**(c) Applicability**

This AD applies to all Superior Air Parts, Lycoming Engines, and Continental Motors, Inc., fuel injected reciprocating engine models with an AVStar Fuel Systems, Inc. (AFS) fuel servo diaphragm, part number (P/N) AV2541801 or P/N AV2541803, installed.

**(d) Unsafe Condition**

This AD was prompted by an accident involving a Piper PA32R-301 airplane, and by the discovery of additional engines being affected by the unsafe condition since we issued AD 2011-15-10, Amendment 39-16757 (76 FR 45655, August 1, 2011). We are issuing this AD to prevent an in-flight engine shutdown due to a failed fuel servo diaphragm, and damage to the airplane.

**(e) Compliance**

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

**(f) Remove Fuel Servo**

(1) Within 5 flight hours after the effective date of this AD, determine if an AFS fuel servo diaphragm P/N AV2541801 or P/N AV2541803, from an affected production lot was installed in your fuel servo at any time after May 20, 2010. Use AFS Mandatory Service Bulletin (MSB) No. AFS-SB6, Revision 2, dated April 6, 2011 to determine if your fuel servo has an affected diaphragm. If you determine that your fuel servo has an affected diaphragm, remove the fuel servo from service before further flight.

(2) After the effective date of this AD, do not install any fuel servo containing an AFS fuel servo diaphragm, P/N AV2541801 or P/N AV2541803 from the production lots listed in AFS MSB No. AFS-SB6, Revision 2, dated April 6, 2011, into any airplane.

**(g) Special Flight Permit**

Special flight permits are not authorized.

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

The Manager, Atlanta Aircraft Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

**(i) Related Information**

For more information about this AD, contact Kevin Brane, Aerospace Engineer, Atlanta Certification Office, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5582; fax: (404) 474-5606; email: kevin.brane@faa.gov.

**(j) Material Incorporated by Reference**

(1) You must use AVStar Fuel Systems Mandatory Service Bulletin No. AFS-SB6, Revision 2, dated April 6, 2011, to do the actions required by this AD, unless the AD specifies otherwise.

(2) The Director of the Federal Register approved the incorporation by reference (IBR) under 5 U.S.C. 552(a) and 1 CFR part 51 on August 16, 2011.

(3) For service information identified in this AD, contact AVStar Fuel Systems, Inc., 1365 Park Lane South, Jupiter, FL 33458; (561) 575-1560; Web site: [www.avstardirect.com](http://www.avstardirect.com).

(4) You may review copies of the service information at the FAA, 12 New England Executive Park, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7125.

(5) 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).

Issued in Burlington, Massachusetts, on January 31, 2012.

Peter A. White,  
Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.



**FAA**  
**Aviation Safety**

## **EMERGENCY**

# **AIRWORTHINESS DIRECTIVE**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)

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**DATE: February 10, 2012**

**AD #: 2012-03-52**

Emergency Airworthiness Directive (AD) 2012-03-52 is sent to owners and operators of Mooney Aviation Company, Inc. (Mooney) Models M20TN and M20R airplanes.

### **Background**

This emergency AD was prompted by a report of an incident on a Mooney Model M20TN airplane regarding the tail pitch trim assembly. In this report, the affected airplane experienced an uncommanded significant pitch up attitude within seconds after takeoff and during the climb. The pilot then pushed the yoke forward and the aircraft still maintained a nose-up attitude.

The pilot stated that the "forces acting on the control column were so large that single pilot wasn't able to handle that for more than just a few minutes." The pilot and copilot had to use their knees to hold forward pressure on the flight controls to aid in preventing a departure from controlled flight. They had to maintain between 80 to 100 percent power to keep the aircraft at about 90 knots indicated airspeed to prevent the airplane from stalling. The only way they were able to descend was to introduce a series of turns.

On Mooney Models M20TN and M20R airplanes, the pitch trim is adjusted by rotating the entire tail assembly. The actuating arm pushes on a hinge fixed to the empennage forward bulkhead. The hinge attaches to the bulkhead using 10 Huck Bolt fasteners with swaged collars.

This aircraft was immediately inspected, and all 10 swaged collars that hold the tail trim assembly together had become unattached.

Mooney inspected several other aircraft and found that on one airplane the filler plate was incorrectly installed. The filler plate was not correctly installed between the aft side of the hinge and the bulkhead. Instead, the filler plate was located on the forward side of the hinge between the hinge and trim fitting. It was then noted the incident aircraft had the same issue, as shown in the upper circle of figure 1.

Because the hinge has a lip on the bottom, on the side toward the bulkhead (as shown in the bottom circle of figure 1), if the filler plate is not installed correctly, the hinge will not fit flush against the bulkhead, the Huck Bolt fasteners will not fit perpendicular to the bulkhead, and the collars will not swage properly. The condition also causes excessive tension pre-load on the Huck Bolts.

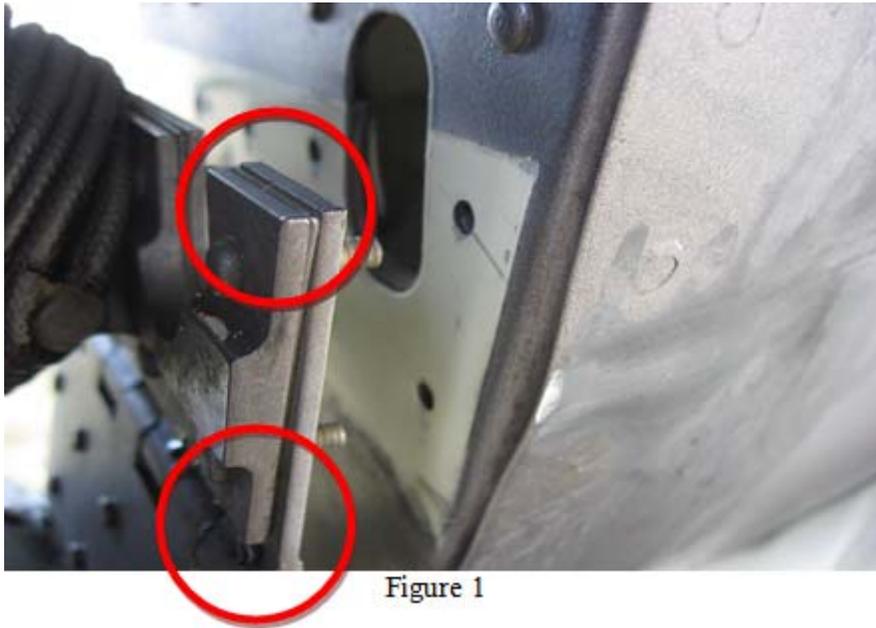


Figure 1

The incident aircraft was manufactured in 2008. Mooney has determined the incorrect installation was a manufacturing quality escape during production.

We are issuing this AD to detect incorrect positioning and improper attachment of the trim fitting, hinge, and filler plate of the tail pitch trim assembly and to verify security of the attaching Huck Bolt fasteners, which could lead to failure of the tail pitch trim assembly with consequent loss of pitch control.

### **Relevant Service Information**

We reviewed Mooney Aviation Company, Inc. Service Bulletin No. M20-313, dated February 7, 2012. The service information describes procedures for inspecting the trim fitting, hinge, filler plate, and attaching fasteners of the tail pitch trim assembly.

### **FAA's Determination**

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

### **AD Requirements**

This AD requires inspecting the trim fitting, hinge, and filler plate of the tail pitch trim assembly for correct positioning and proper attachment, and inspecting the Huck Bolt fasteners for proper security. If incorrect positioning or improper/loose attachment is found, the owner/operator must contact Mooney for FAA-approved repair instructions. The AD also requires sending the inspection results to the FAA and Mooney.

### **Interim Action**

We consider this AD interim action. Mooney and the FAA will analyze the results of the inspection required by this AD. We may take further rulemaking action in the future.

## Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## Presentation of the Actual AD

We are issuing this AD under 49 U.S.C. Section 44701 according to the authority delegated to me by the Administrator.

**2012-03-52 Mooney Aviation Company, Inc. (Mooney):** Directorate Identifier 2012-CE-005-AD.

### (a) Effective Date

This Emergency AD is effective upon receipt.

### (b) Affected ADs

None.

### (c) Applicability

This AD applies to the following Mooney Aviation Company, Inc. airplanes, certificated in any category:

	<b>Models</b>	<b>Serial Numbers</b>
(1)	M20R	29-0465 through 29-0519
(2)	M20TN	31-0003 through 31-0127

### (d) Subject

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

### (e) Unsafe Condition

This AD was prompted by a report of an incident on a Mooney Model M20TN airplane regarding failure of the tail pitch trim assembly. We are issuing this AD to detect incorrect positioning and improper attachment of the trim fitting, hinge, and filler plate of the tail pitch trim

assembly; and detect improper security of the Huck Bolt fasteners to prevent failure of the tail pitch trim assembly, which could result in loss of control.

**(f) Compliance**

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

**(g) Inspection**

Before further flight after receipt of this emergency AD, inspect the trim fitting, hinge, and filler plate of the tail pitch trim assembly for correct positioning and proper attachment; and also inspect that the Huck Bolt fasteners are properly secured following Mooney Aviation Company, Inc. Service Bulletin No. M20-313, dated February 7, 2012.

**(h) Corrective Action**

If during the inspection required in paragraph (g) of this AD you find incorrect positioning or improper attachment of the trim fitting, hinge, and filler plate of the tail pitch trim assembly; and/or you find loose or improperly installed Huck Bolt fasteners, before further flight, contact Mooney for FAA-approved repair instructions and perform the repair. Use the contact information found in paragraph (m)(2) of this AD.

**(i) Reporting Requirement**

Within 24 hours after the inspection required in paragraph (g) of this AD, send the inspection results to Mooney and to the FAA using the following contact information. Use the form on page 4 of Mooney Aviation Company, Inc. Service Bulletin No. M20-313, dated February 7, 2012, to comply with this AD action:

(1) Mooney Aviation Company, Inc., 165 Al Mooney Road North, Kerrville, Texas 78028; telephone: (830) 896-6000; email: technicalsupport@mooney.com; Internet: www.mooney.com; and

(2) Andrew McAnaul, Aerospace Engineer, ASW-150 (c/o MIDO-43), 10100 Reunion Place, Suite 650, San Antonio, Texas 78216; telephone: (210) 308-3365; facsimile: (210) 308-3370; email: andrew.mcanaul@faa.gov.

**(j) Paperwork Reduction Act Burden Statement**

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.

**(k) Special Flight Permit**

Special flight permits are prohibited for this AD.

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

(1) The Manager, Fort Worth 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.

**(m) Related Information**

(1) For further information about this AD, contact: Andrew McAnaul, Aerospace Engineer, ASW-150 (c/o MIDO-43), 10100 Reunion Place, Suite 650, San Antonio, Texas 78216; telephone: (210) 308-3365; facsimile: (210) 308-3370; email: andrew.mcanaul@faa.gov.

(2) For copies of the service information referenced in this AD, contact: Mooney Aviation Company, Inc., 165 Al Mooney Road North, Kerrville, Texas 78028; telephone: (830) 896-6000; email: technicalsupport@mooney.com; Internet: www.mooney.com.

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

Issued in Kansas City, Missouri on February 10, 2012.

John Colomy,  
Acting Manager, Small Airplane Directorate,  
Aircraft Certification Service.