



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

**[Docket No. FAA-2012-0082; Directorate Identifier 2010-SW-036-AD;
Amendment 39-17318; AD 2013-01-04]**

RIN 2120-AA64

Airworthiness Directives; Bell Helicopter Textron, Inc., Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for Bell Helicopter Textron, Inc. (Bell), Model 412 and 412EP helicopters. This AD requires creating a component history card or equivalent record and begin counting and recording the number of accumulated landings for each high aft crosstube assembly (crosstube). Also, this AD requires installing “caution” decals regarding towing of a helicopter at or above 8,900 pounds. This AD also requires confirming the crosstube is within the horizontal deflection limits and replacing it if it is not. This AD also requires a recurring fluorescent penetrant inspection (FPI) of each crosstube and upper center support for a crack, any corrosion, nick, scratch, dent, or any other damage. This AD requires repairing damaged crosstubes and upper center supports that are within acceptable limits, reworking crosstubes by bonding on abrasion strips, and replacing each unairworthy crosstube with an airworthy crosstube. This AD was prompted by analysis of the crosstubes conducted as a result of recent field failures and corrosion problems of the affected crosstubes. The

actions are intended to prevent failure of a crosstube, collapse of the landing gear, and subsequent loss of control of the helicopter.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain document listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this AD, contact Bell Helicopter Textron, Inc., P.O. Box 482, Fort Worth, Texas 76101; telephone (817) 280-3391; fax (817) 280-6466; or at <http://www.bellcustomer.com/files/>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

Examining the AD Docket:

You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, any incorporated-by-reference service information, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (phone: 800-647-5527) is U.S. Department of Transportation, Docket Operations Office, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Michael Kohner, Aviation Safety Engineer, Rotorcraft Certification Office, Rotorcraft Directorate, FAA,

2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5170;
email 7-avs-asw-170@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On February 3, 2012, at 77 FR 5427, the Federal Register published our notice of proposed rulemaking (NPRM), which proposed to amend 14 CFR part 39 to include an AD that would apply to Bell Model 412 and 412EP helicopters. That NPRM proposed to require counting and recording the number of accumulated landings for each crosstube on a component history card or equivalent record and installing CAUTION decals regarding towing a helicopter that weighs at or above 8,900 pounds. The NPRM also proposed to require confirming that the crosstube is within the horizontal deflection limits and replacing it if it is not. Also, the NPRM proposed to require a recurring FPI of each crosstube and upper center support for a crack, any corrosion, a nick, scratch, dent, or other damage, repairing each damaged crosstube and upper center support if there is damage within acceptable limits, reworking each crosstube by bonding abrasion strips, and replacing each unairworthy crosstube.

The affected crosstubes are the older non-anodized configuration and have had a service history of corrosion problems. In response to reports of field failures, Bell has completed a load level survey, material coupon testing, and additional analysis of the crosstubes. The results indicate that fatigue damage can occur during towing and landing. The proposed requirements were intended to prevent failure of a crosstube, collapse of the landing gear, and subsequent loss of control of the helicopter.

Comments

After our NPRM (77 FR 5427, February 3, 2012) was published, we received comments from one commenter.

Request

One commenter objected to the proposal because of “continual noise, pollution and aggravation as a result of low flying planes.” The commenter expressed concern about additional airplanes operating at lower altitudes for longer periods of time over her home near Peachtree-Dekalb Airport, Georgia. We find that this comment does not pertain to the NPRM (77 FR 5427, February 3, 2012) regarding Bell Model 412 and 412EP helicopters, and believe the comment was attached to the NPRM in error. We find the comment does not warrant extending the comment period or withdrawing the proposed action.

FAA’s Determination

We have reviewed the relevant information, considered the comment received, and determined that an unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs and that air safety and the public interest require adopting the AD requirements as proposed.

Related Service Information

We have reviewed Bell Helicopter Alert Service Bulletin No. 412-09-135, dated August 25, 2009 (ASB). The ASB specifies, within 6 months after receiving the ASB, for each affected crosstube, a recurring 12 month/2500 landing FPI, a recurring 12 month/2500 landing deflection check, and use of a towing retention kit per

BHT-412-SI-58 Gross Weight Towing Kit Provisions and Puller Equipment for helicopters that weigh 8900 pounds or higher.

Costs of Compliance

We estimate that this AD will affect 115 helicopters of U.S. Registry. We estimate that operators may incur the following costs in order to comply with this AD. It will take about 1 work-hour to create a component history card or equivalent record and begin to determine and record the number of accumulated landings; 0.5 work-hour to install caution decals on the pilot and co-pilot side of each helicopter; 0.5 work-hour to measure the horizontal deflection of each crosstube; 3 work-hours to inspect and prepare the area and do an FPI on each crosstube; 4 work-hours to rework a crosstube, assuming 5 will need to be reworked; and 2 work-hours to replace a crosstube, assuming 3 will need to be replaced. The average labor rate is \$85 per work-hour and required parts for a replacement crosstube will cost about \$9,315 per helicopter. Based on these figures, we estimate the total cost impact of this AD on U.S. operators to be \$79,030.

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.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866;
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2013-01-04 **BELL HELICOPTER TEXTRON, INC.:** Amendment 39-17318;

Docket No. FAA-2012-0082; Directorate Identifier 2010-SW-036-AD.

(a) Applicability.

This AD applies to Bell Helicopter Textron, Inc. (Bell), Model 412 and 412EP helicopters with a high aft crosstube assembly (crosstube), part number (P/N) 412-050-011-101, -103, -105, -107; or 412-050-045-105, installed, certificated in any category.

(b) Unsafe Condition.

This AD defines the unsafe condition as failure and corrosion of the affected crosstubes. This condition could result in collapse of the landing gear and subsequent loss of control of the helicopter.

(c) Effective Date.

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(d) Compliance.

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

(e) Required Actions.

(1) Within 50 hours time-in-service (TIS):

(i) For each crosstube, create a component history card or equivalent record.

Begin to count and record the number of accumulated landings for each crosstube. For the purposes of this AD, a landing would be counted anytime the helicopter lifts off into the air and then lands again with any further reduction of the collective after the landing gear touches the ground.

(ii) Install CAUTION decals, P/N 212-070-600-143, on the pilot and co-pilot sides of each helicopter as depicted in Figure 3 of Bell Helicopter Alert Service Bulletin No. 412-09-135, dated August 25, 2009 (ASB), and by following the Accomplishment Instructions, Part III – Towing, paragraph 1., of the ASB.

(2) Within 6 months and thereafter at intervals not to exceed 12 months or 2,500 landings, whichever occurs first, determine the horizontal deflection of each crosstube from the centerline of the helicopter (BL 0.0) to the outside edge of each skid tube. Before further flight, replace any crosstube that exceeds any maximum allowable deflection limit contained in the maintenance manual.

(3) Within 6 months and thereafter at intervals not to exceed 12 months or 2,500 landings, whichever occurs first:

(i) Remove and disassemble the landing gear assembly to prepare each crosstube for a fluorescent penetrant inspection (FPI) by following the Accomplishment Instructions, Part I, paragraphs 1. through 9., of the ASB.

Note 1 to paragraph (e)(3)(i) of this AD: Abrasion strip, P/N 206-050-301-111; lower center support, P/N 412-050-007-101, with the incorporated Larson L101 abrasion

strip; and lower center support, P/N 604-026-003, if installed on any crosstube, P/N 412-050-045-105, or reworked crosstubes, P/N 412-050-011-101, -103, -105, or -107, are only removed if required by following the instructions in the ASB (see items 2, 5, and 6 in Figure 1 of the ASB).

(ii) Clean and prepare the crosstube for the FPI by removing the sealant and paint in the area depicted in Figure 2 of the ASB by following the Accomplishment Instructions, Part I, "Cleaning and Preparation," paragraphs 1. through 5., of the ASB.

(iii) Perform an FPI of each crosstube and upper center support, P/N 412-050-006-101, for a crack, any corrosion, a nick, scratch, dent, or any other damage by following the Accomplishment Instructions, Part I, "Inspection," paragraphs 1. through 3. of the ASB. Use Table 2 in the ASB to determine the appropriate Inspection Criteria Table to use in the maintenance manual, which list the maximum repair damage limits for each crosstube P/N applicable to this AD.

(iv) Repair the crosstube or upper center support if there is any corrosion, a nick, scratch, dent, or any other damage that is within the maximum repair damage limits, before further flight, or replace the crosstube with an airworthy crosstube.

Note 2 to paragraph (e)(3)(iv) of this AD: The repair procedures are specified in the Component Repair and Overhaul Manual.

(v) If there is a crack or other damage beyond any of the maximum repair damage limits, before further flight, replace the crosstube with an airworthy crosstube.

(4) Before further flight, after completing paragraph (e)(3) of this AD, rework each crosstube P/N 412-050-011-101, -103, -105, or -107 by applying the bonding procedures and abrasion strips on the under side of the crosstubes at BL 0.0 and BL 14 by

following the Accomplishment Instructions, Part I, “Rework of Crosstubes,” paragraphs 1. through 10. of the ASB. Record on the component history card or equivalent record an “FM” to the end of the part number sequence of each crosstube that has been reworked (for example, 412-050-011-107FM). Omit the Larson L101 abrasion strip at BL 0.0 on each crosstube when installing lower center support, P/N 604-026-003 (see item 6 in Figure 1 of the ASB).

(f) Special Flight Permits.

Special flight permits for inspections only may be issued under 14 CFR 21.197 and 21.199 to operate the helicopter to a location where the requirements of this AD can be accomplished.

(g) Alternative Methods of Compliance (AMOCs).

(1) The Manager, Rotorcraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Michael Kohner, Aviation Safety Engineer, Rotorcraft Certification Office, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5170; email 7-avs-asw-170@faa.gov.

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

(h) Subject.

Joint Aircraft Service Component (JASC) Code: 3210, Main Landing Gear.

(i) Material Incorporated by Reference.

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

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

(i) Bell Helicopter Alert Service Bulletin No. 412-09-135, dated August 25, 2009.

(ii) Reserved.

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

(4) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to:

<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Fort Worth, Texas, on January 9, 2013.

Kim Smith,

Directorate Manager, Rotorcraft Directorate,
Aircraft Certification Service.

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