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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2009-0169; Directorate Identifier 2008-SW-42-AD; Amendment 39-15833; AD 2009-05-09]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Bell Helicopter Textron Inc. Model 412, 412CF, and 412EP Helicopters**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule; request for comments.

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**SUMMARY:** This amendment adopts a new airworthiness directive (AD) for the specified Bell Helicopter Textron Inc. (Bell) model helicopters. This action requires reidentifying a certain part-numbered main rotor yoke (yoke) based on whether it was ever installed on a Model 412CF helicopter or on a Model 412 or 412EP helicopter with a slope landing kit. This AD also requires reducing the retirement life of the reidentified yokes from 5,000 hours time-in-service (TIS) to 4,500 hours TIS. Also, this AD requires recording the reidentified yoke part number (P/N) and the reduced retirement life on the component history card or equivalent record. This amendment is prompted by fatigue analysis that shows that the retirement life should be reduced on certain yokes. The actions specified in this AD are intended to prevent fatigue cracking of a yoke, failure of a yoke, and subsequent loss of control of the helicopter.

**DATES:** Effective March 31, 2009.

Comments for inclusion in the Rules Docket must be received on or before May 15, 2009.

**ADDRESSES:** Use one of the following addresses to submit comments on this AD:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

You may get the service information identified in this AD from 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/>.

Examining the Docket: You may examine the docket that contains the AD, any comments, and other information 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 Docket Operations office (telephone (800) 647-5527) is located in Room W12-140 on the ground floor of the West Building at the street address stated in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Michael Kohner, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Rotorcraft Certification Office, Fort Worth, Texas 76193-0170, telephone (817) 222-5170, fax (817) 222-5783.

**SUPPLEMENTARY INFORMATION:** This amendment adopts a new AD for the specified Bell model helicopters. This action requires reidentifying a certain part-numbered yoke based on whether it was ever installed on a Model 412CF helicopter or on a Model 412 or 412EP helicopter with a slope landing kit. This AD also requires reducing the retirement life of the reidentified yokes from 5,000 hours TIS to 4,500 hours TIS. Also, this AD requires recording the reidentified yoke P/N and the reduced retirement life on the component history card or equivalent record. This amendment is prompted by fatigue analysis that shows that the retirement life should be reduced on certain yokes. This condition, if not corrected, could result in fatigue cracking of a yoke, failure of a yoke, and subsequent loss of control of the helicopter.

We have reviewed Bell Alert Service Bulletin (ASB) No. 412-08-128, dated March 4, 2008, for the Model 412 and 412EP helicopters and ASB No. 412CF-08-35 dated March 4, 2008, for the Model 412CF helicopters. The ASBs specify reducing the life limit of certain part-numbered yokes from 5,000 hours TIS to 4,500 hours TIS. The ASBs also describe procedures for reidentifying the yoke P/N and recording the information on a component history card or equivalent record.

This unsafe condition is likely to exist or develop on other helicopters of these same type designs. Therefore, this AD is being issued to prevent fatigue cracking of a yoke, failure of a yoke, and subsequent loss of control of the helicopter. This AD applies to Bell Model 412 and 412EP helicopters with a yoke, P/N 412-010-101-123, -127, -129, or -133, with a (BHT-412-SI-62) slope landing kit, installed. This AD also applies to Model 412CF helicopters with yoke, P/N 412-010-101-127 or -129, installed. This AD requires the following actions within 10 hours TIS for each affected model helicopter:

- Review the helicopter records to determine all of the helicopter models on which the affected yoke has been installed since its production and the hours TIS of each yoke.
- If an affected part-numbered yoke has ever been installed on a Model 412CF or on a Model 412 or 412EP helicopter with a (BHT-412-SI-62) slope landing kit, P/N 412-704-012-101, do the following:
  - Reidentify the P/N on the existing yoke data plate by using a vibrating stylus and etching two lines through the last three digits of the existing P/N and etching "137FM" adjacent to where you etched through the last three digits of the original P/N. This converts each affected yoke P/N to a new yoke P/N, 412-010-101-137FM. The serial number remains the same.
  - Record the reidentified P/N on the applicable component history card or equivalent record.
- If you cannot determine all the model helicopters on which an affected yoke has been installed since its production or whether it has ever been installed on a Model 412 or 412EP helicopter with a (BHT-412-SI-62) slope landing kit, P/N 412-704-012-101, installed, reidentify the yoke as P/N 412-010-101-137FM using a vibrating stylus. Record the reidentified P/N on the applicable component history card or equivalent record.
- For each reidentified yoke, P/N 412-010-101-137FM, record the revised 4,500-hour TIS life limit on the applicable component history card or equivalent record.

This AD revises the Airworthiness Limitations section of the applicable maintenance manual or the Instructions for Continued Airworthiness (ICAs) by reducing the retirement life from 5,000 hours TIS to 4,500 hours TIS for reidentified yoke, P/N 412-010-101-137FM.

The short compliance time involved is required because the previously described critical unsafe condition can adversely affect the structural integrity and controllability of the helicopter. Therefore, to prevent fatigue cracking, the actions described previously are required within 10 hours TIS. Also, replacing certain yokes that have exceeded 4,500 hours TIS but have not reached their previous 5,000 hours TIS retirement life is required before further flight, and this AD must be issued immediately.

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

We estimate that this AD will affect 115 helicopters and will take about:

- 1 hour to review the records,
- 2 hours to revise the maintenance manual or ICAs, record the new retirement life, reidentify the P/N, and
- 20 hours to replace a yoke.

The average labor rate is estimated to be \$80 per work hour. Required parts will cost about \$40,157 per helicopter. Based on these figures, we estimate the total cost of the AD on U.S. operators will be \$278,142 (\$27,600 to review and revise the records and \$250,542 to replace the yokes, assuming 5 percent of the fleet or a total of 6 yokes have exceeded the 4,500-hour life limit).

## **Comments Invited**

This AD is a final rule that involves requirements that affect flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any written data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "Docket No. FAA-2009-0169; Directorate Identifier 2008-SW-42-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the AD. We will consider all comments received by the closing date and may amend the AD in light of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of our docket Web site, you can find and read the comments to any of our dockets, including the name of the individual who sent the comment. You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

## **Regulatory Findings**

We have determined that 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 the regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. 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. See the AD docket to examine the economic evaluation.

## **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.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Safety.

## **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. Section 39.13 is amended by adding a new airworthiness directive to read as follows:



**2009-05-09 Bell Helicopter Textron, Inc.:** Amendment 39-15833. Docket No. FAA-2009-0169; Directorate Identifier 2008-SW-42-AD.

**Applicability:** The following model helicopters with the listed part-numbered main rotor yoke assembly (yoke), installed, certificated in any category.

<b>Model</b>	<b>With yoke part number (P/N) installed</b>
412 and 412EP	412-010-101-123, -127, -129, or -133,
412CF	412-010-101-127, -129

**Compliance:** Within 10 hours time-in-service (TIS), unless accomplished previously:

To prevent fatigue cracking of a yoke, failure of the yoke, and subsequent loss of control of the helicopter, do the following:

(a) Review the helicopter records to determine all of the helicopter models on which the affected yoke has been installed since its production and the hours TIS of each affected yoke.

(b) If an affected part-numbered yoke is installed or has ever been installed on a Model 412CF helicopter or on a Model 412 or 412EP helicopter with a (BHT-412-SI-62) slope landing kit, P/N 412-704-012-101, installed, do the following:

(1) Reidentify the P/N on the existing yoke data plate by using a vibrating stylus and etching two lines through the last three digits of the existing P/N and etching "137FM" adjacent to where you etched through the last three digits of the original P/N. This converts each affected yoke P/N to a new yoke P/N 412-010-101-137FM. The serial number remains the same.

Note 1: The "FM" P/N suffix denotes a field modified part.

(2) Record the reidentified P/N on the applicable component history card or equivalent record.

(c) If you cannot determine all the model helicopters on which an affected yoke has been installed since its production or whether it has ever been installed on a Model 412 or 412EP helicopter with a (BHT-412-SI-62) slope landing kit, P/N 412-704-012-101, installed, reidentify the yoke P/N as P/N 412-010-101-137FM using a vibrating stylus in accordance with paragraph (b)(1) of this AD. Record the reidentified P/N on the applicable component history card or equivalent record.

(d) For each reidentified yoke, P/N 412-010-101-137FM, reduce the retirement life from 5,000 hours TIS to 4,500 hours TIS. Record the revised life limit on the applicable component history card or equivalent record.

Note 2: Bell Helicopter Textron, Inc. Alert Service Bulletins No. 412-08-128 and No. 412CF-08-35, both dated March 4, 2008, pertain to the subject of this AD.

(e) This AD revises the Airworthiness Limitations section of the applicable maintenance manual or the Instructions for Continued Airworthiness (ICAs) by reducing the retirement life from 5,000 hours TIS to 4,500 hours TIS for each reidentified yoke, P/N 412-010-101-137FM.

(f) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Contact the Manager, Rotorcraft Directorate, FAA, ATTN: Michael Kohner, Aviation Safety Engineer, Rotorcraft Certification Office, Fort Worth, Texas 76193-0170, telephone (817) 222-5170, fax (817) 222-5783, for information about previously approved alternative methods of compliance.

(g) Special flight permits will not be issued.

(h) This amendment becomes effective on March 31, 2009.

Issued in Fort Worth, Texas, on February 12, 2009.  
Scott A. Horn,  
Acting Manager, Rotorcraft Directorate,  
Aircraft Certification Service.