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**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2008-0288; Directorate Identifier 2006-SW-25-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Bell Helicopter Textron, Inc., Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Supplemental notice of proposed rulemaking (SNPRM); reopening of comment period.

**SUMMARY:** We are revising an earlier proposed airworthiness directive (AD) for Bell Helicopter Textron, Inc. (Bell), Model 214B and B-1 helicopters, which proposed to require inspecting certain pylon support spindle assemblies (spindles) for any corrosion, or a nick, scratch, dent, or crack, and repairing or replacing any unairworthy spindle before further flight. This SNPRM proposes to revise those requirements by updating the cost of compliance, revising the recording requirements, adding a requirement to reduce the retirement life of an installed spindle, and adding Bell Model 214ST to the applicability.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- **Federal eRulemaking Docket:** Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.

- Fax: 202-493-2251.
- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.
- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

### **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 proposed AD, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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.

**FOR FURTHER INFORMATION CONTACT:** Martin Crane, Aviation Safety Engineer, Rotorcraft Certification Office, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5056; email [7-AVS-ASW-170@faa.gov](mailto:7-AVS-ASW-170@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

### **Discussion**

On March 3, 2008, we issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to Bell Model 214B and B-1 helicopters with a spindle, part number (P/N) 214-030-606-005, installed. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on March 13, 2008 (73 FR 13513). The NPRM proposed to require creating a component history card or equivalent for each spindle, inspecting certain spindles for any

corrosion, or a nick, scratch, dent, or crack, and repairing or replacing any unairworthy spindle before further flight. That NPRM was prompted by three in-flight failures of the spindle which resulted in forced landings and one serious injury. The proposed actions were intended to detect damage in the radii or cracking of a spindle, and to prevent failure of a spindle and subsequent loss of control of the helicopter. The proposed actions were also intended to be interim actions until a retirement life for the affected spindles could be developed and new replacement spindles became available.

### **Actions Since Previous NPRM was Issued**

Since we issued the previous NPRM (73 FR 13513, March 13, 2008), Bell conducted further evaluation of the cracked spindles and determined it necessary to establish a retirement life for the spindles because the speed at which a crack can propagate is such that a more frequent inspection interval would not be practical. As a result, Bell released Alert Service Bulletin (ASB) No. 214-08-70, dated November 11, 2008, now at Revision C, dated April 14, 2009, to establish the retirement life for the spindles on Model 214B and 214B-1 helicopters. Due to design similarities, Bell conducted further evaluation of the spindles on Model 214ST helicopters and published ASB No. 214ST-08-86, dated November 11, 2008, now at Revision B, dated April 14, 2009, to revise the retirement life for those spindles. The first actual reported crack in a Model 214ST spindle, P/N 214-030-606-103, prompted Bell to release Information Letter 214ST-12-23, dated January 30, 2012.

This SNPRM proposes the following changes:

- Adding Model 214ST helicopters to the applicability;
- Removing certain previously proposed recording requirements;

- Removing the previously proposed visual and magnetic particle inspection requirements and subsequent replacement and repair requirements;
- Establishing a retirement life of 1,250 hours TIS or total accumulated retirement index number (RIN) of 20,000, whichever occurs first, for any spindle, part number (P/N) 214-030-606-005, that is installed on a Model 214B or Model 214B-1 helicopter;
- Reducing the retirement life to 2,500 hours TIS or total accumulated RIN of 50,000, whichever occurs first, for any spindle, P/N 214-030-606-103, that is installed on a Model 214ST helicopter;
- Establishing a method of determining the total accumulated RIN; and
- Replacing any spindle which has reached its airworthiness retirement life.

This SNPRM also updates the cost of compliance information of this AD by correcting the estimated number of work-hours to replace both spindles from 15 work-hours to 24 work-hours, by updating the estimated labor cost per work-hour from \$80 to \$85 per work-hour, and by updating the cost of required parts to current replacement part costs.

## **Comments**

We gave the public the opportunity to comment on the previous NPRM (73 FR 13513, March 13, 2008). The following presents the comments received on the previous NPRM and the FAA's response to each comment.

## **Request**

Bell stated that results from analysis and review of the pylon spindle assembly, P/N 214-030-606-005, identified the requirement to assign an airworthiness retirement life to that assembly. They also stated that alert service bulletins would detail the

retirement life of the spindle. We agree and have revised this SNPRM accordingly.

Bell commented that the previous NPRM (73 FR 13513, March 13, 2008) did not address conversion of torque events to RIN. We agree and have revised this SNPRM accordingly.

Bell also stated that the previous NPRM mis-identified the visual inspection requirements of using a magnifying glass on each outer radius of the spindle; that this visual inspection requirement is for the main rotor hub spindle, not the transmission spindle. They also stated that once cracks start, they progress very rapidly and visual inspection at a frequency designed to discover cracking would not be manageable. We agree. With establishment of a maximum airworthiness life limit for the spindle and after further review, we determined that deleting the previously proposed visual inspections will not impact the overall level of safety.

#### **FAA's Determination**

We are proposing this SNPRM because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other helicopters of these same type designs. Certain changes described above expand the scope of the original NPRM (73 FR 13513, March 13, 2008). As a result, we have determined that it is necessary to reopen the comment period to provide additional opportunity for the public to comment.

#### **Related Service Information**

We have reviewed Bell ASB No. 214-08-70, Revision C, dated April 14, 2009 (214-08-70), which establishes a maximum airworthiness limit of 1,250 hours TIS or a total accumulated RIN of 20,000, whichever occurs first, for any spindle, P/N 214-030-

606-005, that is installed on a Model 214B or Model 214B-1 helicopter. ASB 214-08-70 was prompted by three reported incidents of a cracked spindle, P/N 214-030-606-005. We have also reviewed Bell ASB No. 214ST-08-86, Revision B, dated April 14, 2009 (214ST-08-86), which reduces the maximum airworthiness life limit from 5,000 hours TIS to 2,500 hours TIS or a total accumulated RIN of 50,000, whichever occurs first, for any spindle, P/N 214-030-606-103, that is installed on a Model 214ST helicopter. ASB 214ST-08-86 was published after further evaluation of spindle, P/N 214-030-606-103, which was prompted by design similarities to spindle, P/N 214-030-606-005. The ASBs also specify determining the accumulated RIN by calculating a RIN factor of 1 for each lift or takeoff performed during normal operation and of 2 for each lift or takeoff performed during logging operation. When actual lift events are unknown or cannot be determined, both ASBs specify calculating RIN at 30 lift events per flight hour; ASB No. 214-08-70 further specifies calculating flight hours at a rate of 900 hours per year. Both ASBs specify replacing any spindle that has reached its maximum airworthiness limit.

Additionally, we reviewed Bell Information Letter 214ST-12-23, dated January 30, 2012, which was issued to advise owners and operators of the first actual reported crack in a Model 214ST spindle, P/N 214-030-606-103.

### **Proposed Requirements of the SNPRM**

This proposed AD would require, within 50 hours TIS:

- Creating a component history card or equivalent record for each affected spindle;
- Determining total hours TIS, if not already recorded;
- Determining total accumulated RIN;

- Recording the RIN and hours TIS on the spindle's component history card or equivalent record;
- Establishing a new retirement life for spindle, P/N 214-030-606-005, of 1,250 hours TIS or a total accumulated RIN of 20,000, whichever occurs first, for Models 214B and 214B-1, and reducing the retirement life for spindle, P/N 214-030-606-103, from 5,000 hours TIS to 2,500 hours TIS or an accumulated RIN of 50,000, whichever occurs first, for Model 214ST; and
- Replacing any spindle which has reached its airworthiness retirement life.

### **Differences Between this SNPRM and the Service Information**

The service information specifies, as part of determining the life of a currently installed spindle, accumulating a RIN factor of 2 for each lift or takeoff performed during a logging operation. This SNPRM would instead require using a RIN factor of 2 for any external load lift or takeoff in which the helicopter achieves a vertical altitude difference of greater than 200 feet indicated altitude between the pick-up and drop-off point. We have determined that other external load lift operations with the specified vertical altitude difference or greater would experience the same double torque cycle as in logging operations, and that a RIN factor of 2 would need to be used for those type of operations as well. Also, the service information for Models 214B and 214B-1 specify an initial compliance time of 150 flight hours. We are retaining the initial compliance time of 50 hours TIS from the previous NPRM in this SNPRM.

### **Costs of Compliance**

We estimate that this proposed AD would affect 12 Model 214B/B-1 and

24 Model 214ST helicopters of U.S. registry. We estimate that operators may incur the following costs in order to comply with this AD. It would take about 1 work-hour for the record keeping requirements of this proposed AD, and about 24 work-hours to replace both spindles. Labor costs are estimated at \$85 per work-hour and the cost of parts would be about \$39,806 for both spindles for a Model 214B or 214B-1, and \$40,802 for both spindles for a Model 214ST. Based on these estimates, for record keeping and the replacement of a pair of spindles, the total per helicopter cost would be \$41,931 for a Model 214B or 214B-1 and \$42,927 for a Model 214ST. The total cost of recordkeeping would be about \$3,060.

#### **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**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed 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);
- (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 proposed 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.

## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

**Bell Helicopter Textron, Inc., Helicopters:** Docket No. FAA-2008-0288;

Directorate Identifier 2006-SW-25-AD.

#### **(a) Applicability.**

This AD applies to Bell Helicopter Textron, Inc. (Bell), Model 214B, 214B-1, and 214ST helicopters, with pylon support spindle assembly (spindle), part number (P/N) 214-030-606-005 or -103, installed, certificated in any category.

#### **(b) Unsafe Condition.**

This AD defines the unsafe condition as fatigue cracking of a spindle. This condition could result in failure of the spindle and subsequent loss of control of the helicopter.

#### **(c) 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.

#### **(d) Required Actions.**

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

(i) Create a component history card or equivalent record for each spindle, P/N 214-030-606-005 and 214-030-606-103, recording the spindle's P/N and serial number (S/N).

(ii) Review the helicopter records to determine the hours TIS of each spindle, if the hours TIS are not already recorded for your model helicopter. For each month for which the hours TIS is unknown, record 75 hours TIS.

(iii) Determine the total accumulated retirement index number (RIN) for each spindle. For the purpose of this AD, count 1 RIN for each takeoff and 2 RIN for each external load lift in which the helicopter achieves a vertical altitude difference of greater than 200 feet indicated altitude between the pick-up and drop-off point. For any time period for which the accumulated RIN cannot be determined while the spindle was installed on a helicopter, multiply the hours TIS by 30 to calculate the spindle's accumulated RIN.

(iv) Record the hours TIS and total accumulated RIN for each spindle on the component history card or equivalent record.

(2) Revise the Airworthiness Limitations section of the applicable maintenance manual or Instructions for Continued Airworthiness as follows:

(i) By establishing a new retirement life for the spindle, P/N 214-030-606-005, of 1,250 hours TIS or a total accumulated RIN of 20,000, whichever occurs first.

(ii) By reducing the retirement life for the spindle, P/N 214-030-606-103, from 5,000 hours TIS to 2,500 hours TIS or a total accumulated RIN of 50,000, whichever occurs first.

(3) Replace any spindle, P/N 214-030-606-005, that has been in service for 1,250 or more hours TIS, or a total accumulated RIN of 20,000 or more, whichever occurs first.

(4) Replace any spindle, P/N 214-030-606-103, that has been in service for 2,500 or more hours TIS, or a total accumulated RIN of 50,000 or more, whichever occurs first.

(5) Continue to count and record the accumulated RIN count and hours TIS for each spindle on its component history card or equivalent record.

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

(1) The Manager, Rotorcraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Martin Crane, Aviation Safety Engineer, Rotorcraft Certification Office, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5056; email [7-AVS-ASW-170@faa.gov](mailto: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.

**(f) Subject.**

Joint Aircraft Service Component (JASC) Code: 6330, Transmission Mount.

Issued in Fort Worth, Texas, on May 17, 2013.

Kim Smith,

Directorate Manager, Rotorcraft Directorate,  
Aircraft Certification Service.

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