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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. 2003-SW-23-AD; Amendment 39-13966; AD 2005-03-10]**

**RIN 2120-AA64**

### **Airworthiness Directives; Bell Helicopter Textron, A Division of Textron Canada Model 222, 222B, 222U and 230 Helicopters**

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

**ACTION:** Final rule.

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**SUMMARY:** This amendment supersedes an existing airworthiness directive (AD) for Bell Helicopter Textron, A Division of Textron Canada (BHTC) Model 222, 222B, 222U, and 230 helicopters, that currently requires a visual check of each main rotor grip (grip) and pitch horn assembly without disassembling the main rotor hub assembly (hub assembly), and a visual inspection at specified intervals of each affected grip and pitch horn assembly for a crack using a 10-power or higher magnifying glass. If a crack is found, the existing AD requires replacing each unairworthy grip or pitch horn with an airworthy part before further flight. This amendment requires those same actions, and also requires an additional inspection of the grip and pitch horn assembly for a crack in the disassembled hub assembly, and replacing any cracked part with an airworthy part. This amendment is prompted by the determination that an additional enhanced inspection is needed to ensure the integrity of the hub assembly. The actions specified by this AD are intended to prevent failure of the grip or pitch horn and subsequent loss of control of the helicopter.

**DATES:** Effective March 18, 2005.

**FOR FURTHER INFORMATION CONTACT:** Charles Harrison, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Safety Management Group, Fort Worth, Texas 76193-0110, telephone (817) 222-5128, fax (817) 222-5961.

**SUPPLEMENTARY INFORMATION:** A proposal to amend 14 CFR part 39 by superseding AD 2002-08-54, Amendment 39-12835 (67 FR 50793, August 6, 2002), and a correction published on August 21, 2002 (67 FR 54259), for the specified BHTC model helicopters was published in the Federal Register on January 21, 2004 (69 FR 2855). The action proposed to require, before further flight and at specified intervals, visually checking each affected grip and pitch horn for a crack. The

action also proposed to require using a 10-power or higher magnifying glass to visually inspect each affected grip and pitch horn for a crack at specified intervals. If a crack is found, the action proposed replacing each unairworthy grip or pitch horn with an airworthy part before further flight.

BHTC has issued Bell Helicopter Textron Alert Service Bulletin No. 222-02-93, Revision A, No. 222U-02-64, Revision A, and 230-02-26, Revision A, all dated March 3, 2003. The service bulletins introduce a daily check and a recurrent 25 hour inspection requirement for grips and pitch horns with more than 1,250 hours since new. In addition, the service bulletins provide inspection instructions for the main rotor grip assemblies and pitch horns. The service bulletins also specify that all main rotor hub assemblies, which have accumulated more than 2,500 hours of operation since new, overhaul, or the last 2,500 hour scheduled inspection, be inspected in accordance with maintenance requirements listed in Chapter 5 of the applicable maintenance manual.

Transport Canada, the airworthiness authority for Canada, notified the FAA that an unsafe condition may exist on these helicopter models. They have determined that a newly developed enhanced inspection is required at 2,500 hours air time in service in addition to the daily check and 25 hour visual repetitive inspection to ensure integrity of the components. Transport Canada also advises of the need for repeated daily checks and visual inspections at specified intervals, as well as enhanced inspections at specified intervals, of the grip and pitch horn for a crack until the cause of the premature failures is determined. Transport Canada classified the BHTC alert service bulletins as mandatory and issued AD No. CF-2002-23R1, dated May 7, 2003, to ensure the continued airworthiness of these helicopters.

These helicopter models are type certificated in Canada and are type certificated for operation in the United States under the provisions of 14 CFR 21.29 and the applicable bilateral agreement. Pursuant to this bilateral agreement, Transport Canada has kept the FAA informed of the situation described above. The FAA has examined the findings of Transport Canada, reviewed all available information, and determined that AD action is necessary for products of these type designs that are certificated for operation in the United States.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comment received.

One commenter questioned the accuracy of the statement in the preamble to the NPRM, in which we stated, "These helicopter models are manufactured in Canada and are type certificated for operation in the United States under the provisions of 14 CFR 21.29 and the applicable bilateral agreement." The commenter states that the "proposed AD is not 100% correct." He states that "[t]he 222 models were made in the USA and the 230 helicopters were made in Canada. The type certificate may have been changed to Transport Canada." We agree. However, regardless of where these helicopter models were manufactured, since the type certificates under which they operate in the United States are issued by the FAA based on the current Canadian type certificates for all these models under the provisions of 14 CFR § 21.29 and the applicable bilateral agreement, the location where they were manufactured is of limited importance for AD purposes. However, we have revised this preamble statement to more accurately reflect their status and removed the reference to the location of their "manufacture."

Also, in our proposal, although we referenced the updated Transport Canada AD, CF-2002-23R1, dated May 7, 2003, in the preamble discussion, we inadvertently referenced the previous Transport Canada AD, CF-2002-23, dated April 2, 2002, in the note at the end of our proposal. We have corrected that reference as well as corrected the "Note" numbering in this final rule.

After careful review of the available data, including the comment noted above, the FAA has determined that air safety and the public interest require adopting the rule with the changes described previously. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

The FAA estimates that this AD will affect 107 helicopters of U.S. registry, and the actions will take approximately 32 work hours per helicopter to accomplish at an average labor rate of \$65 per work hour. The cost of the main rotor grip is either \$26,226 or \$37,748 and the cost of a pitch horn is

either \$6,863 or \$15,281 (2 pitch horns and 2 grips per helicopter). Based on these figures, the total estimated cost impact of the AD on U.S. operators is \$2,080 per helicopter each year or \$222,560 for the entire fleet, and if all parts are replaced, is \$11,570,766, assuming the most expensive grips and pitch horns are required.

## **Regulatory Findings**

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (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); 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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas.

## **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 removing Amendment 39-12835 (67 FR 50793, August 6, 2002), and by adding a new airworthiness directive (AD), Amendment 39-13966, to read as follows:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "www.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2005-03-10 Bell Helicopter Textron, a Division of Textron Canada:** Amendment 39-13966.  
Docket No. 2003-SW-23-AD. Supersedes AD 2002-08-54, Amendment 39-12835, Docket No. 2002-SW-22-AD.

## Applicability

The following model helicopters with the listed part number (P/N) installed, certificated in any category:

Model	With hub assembly P/N	With grip assembly P/N	With pitch horn assembly P/N
(1) 222 or 222B	222-011-101-103, -105, -107, or -109	222-010-104-105	222-011-104-101
	222-012-101-103, or -107	222-012-104-101	222-012-102-101
(2) 222U	222-011-101-105, -107, or -109	222-010-104-105	222-011-104-101
	222-012-101-103, or -107	222-012-104-101	222-012-102-101
(3) 230	222-012-101-105, or -109	222-012-104-101	222-012-102-101

## Compliance

Required as indicated, unless accomplished previously.

To prevent failure of the grip or pitch horn and subsequent loss of control of the helicopter, if either the grip or pitch horn has accumulated 1,250 or more hours time-in-service (TIS) since initial installation on any helicopter, accomplish the following:

- (a) Before further flight and thereafter at intervals not to exceed 8 hours TIS:

(1) Wipe clean the main rotor grip and pitch horn surfaces to remove grease and dirt in the check area as shown in Figure 1 of this AD:

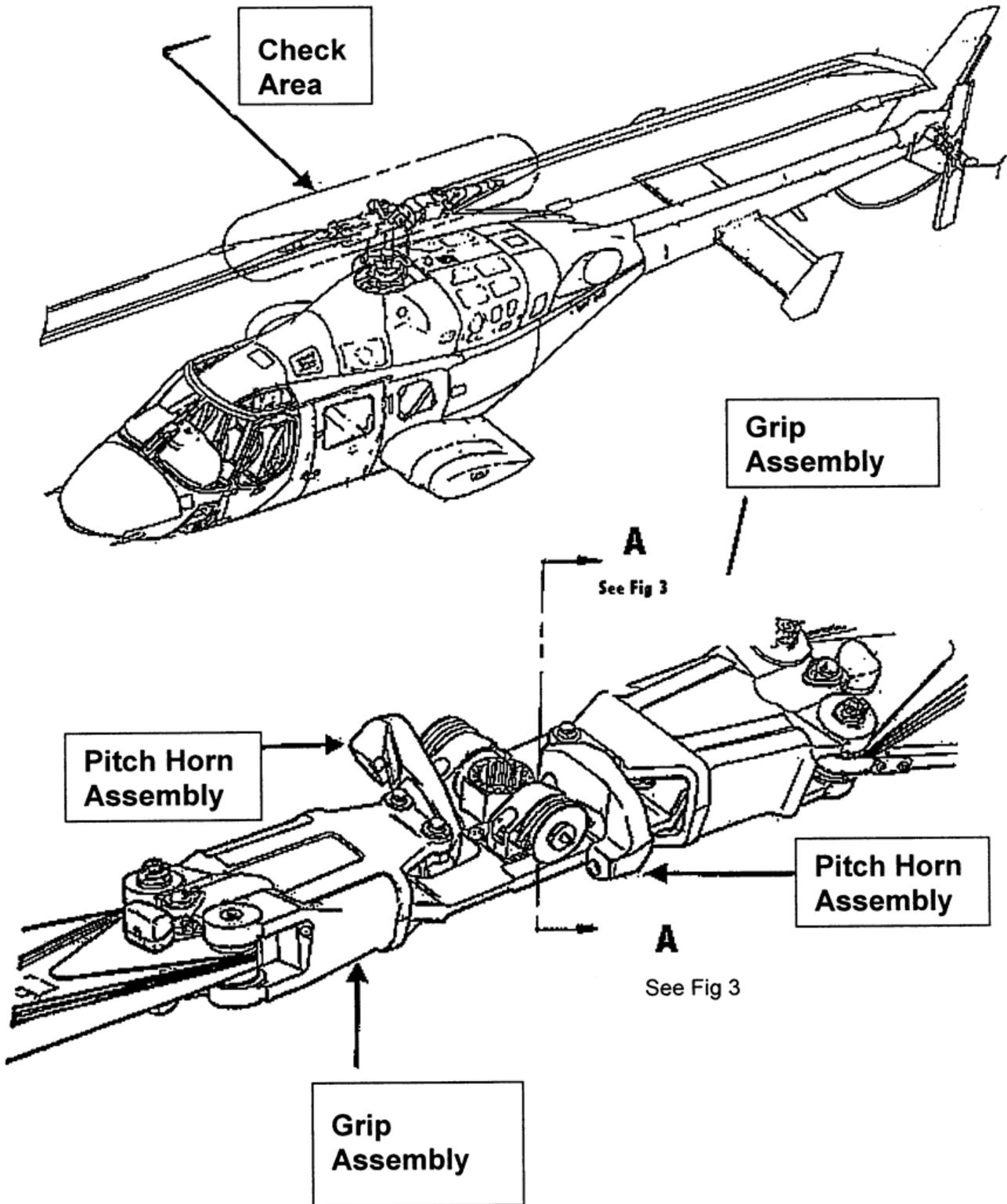
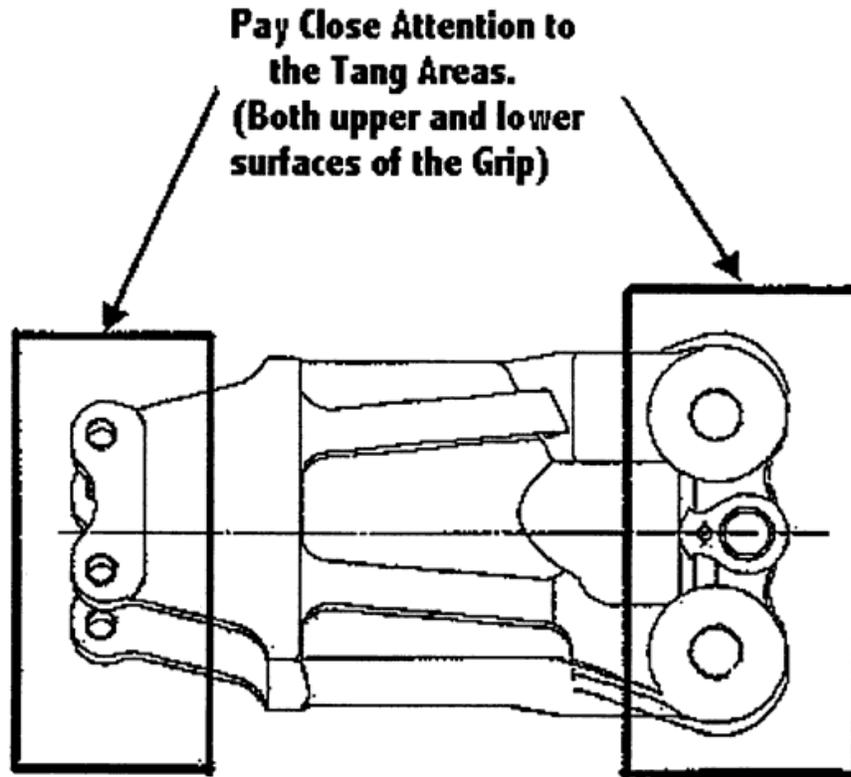


Figure 1

(2) Visually check both main rotor grips for a crack. Pay particular attention to the inboard and outboard tangs portions of the grip, which are in direct contact with the pitch horns and the main rotor blades and check the area to at least 3 inches beyond the grip to pitch and grip to blade contact areas as shown in Figure 2 of this AD:

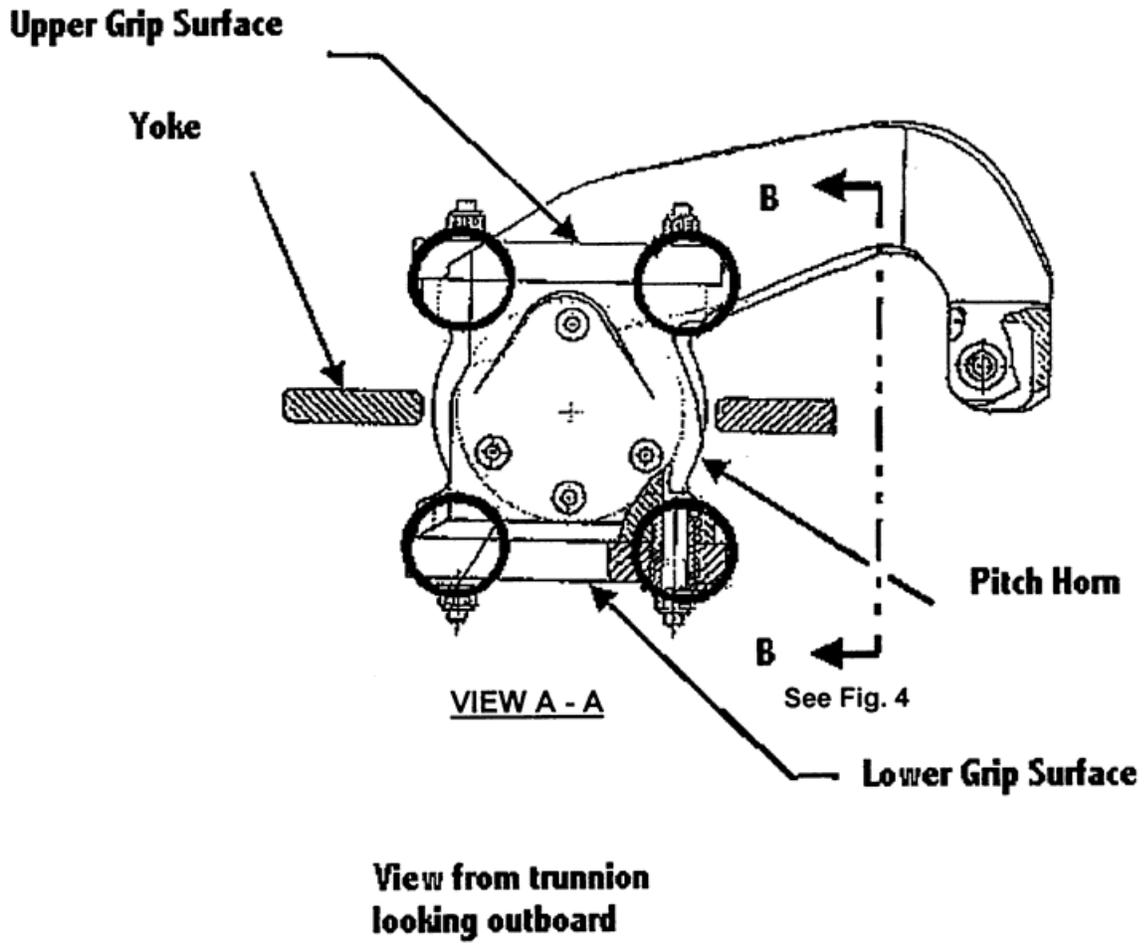


**Main Rotor Grip**

**Entire surface of the grip must be checked**

Figure 2

(3) Visually check all visible portions of each pitch horn for a crack. Pay particular attention to the attachment lugs of the pitch horns, which are in direct contact with the inboard tangs of the main rotor grips, as shown in Figure 3 of this AD, and the four large bolt cutouts, as shown in Figure 4 of this AD:



**All visible portions of the pitch horn must be checked.  
Pay particular attention to the circled areas shown above and View B-B, Fig. 4.**

Figure 3

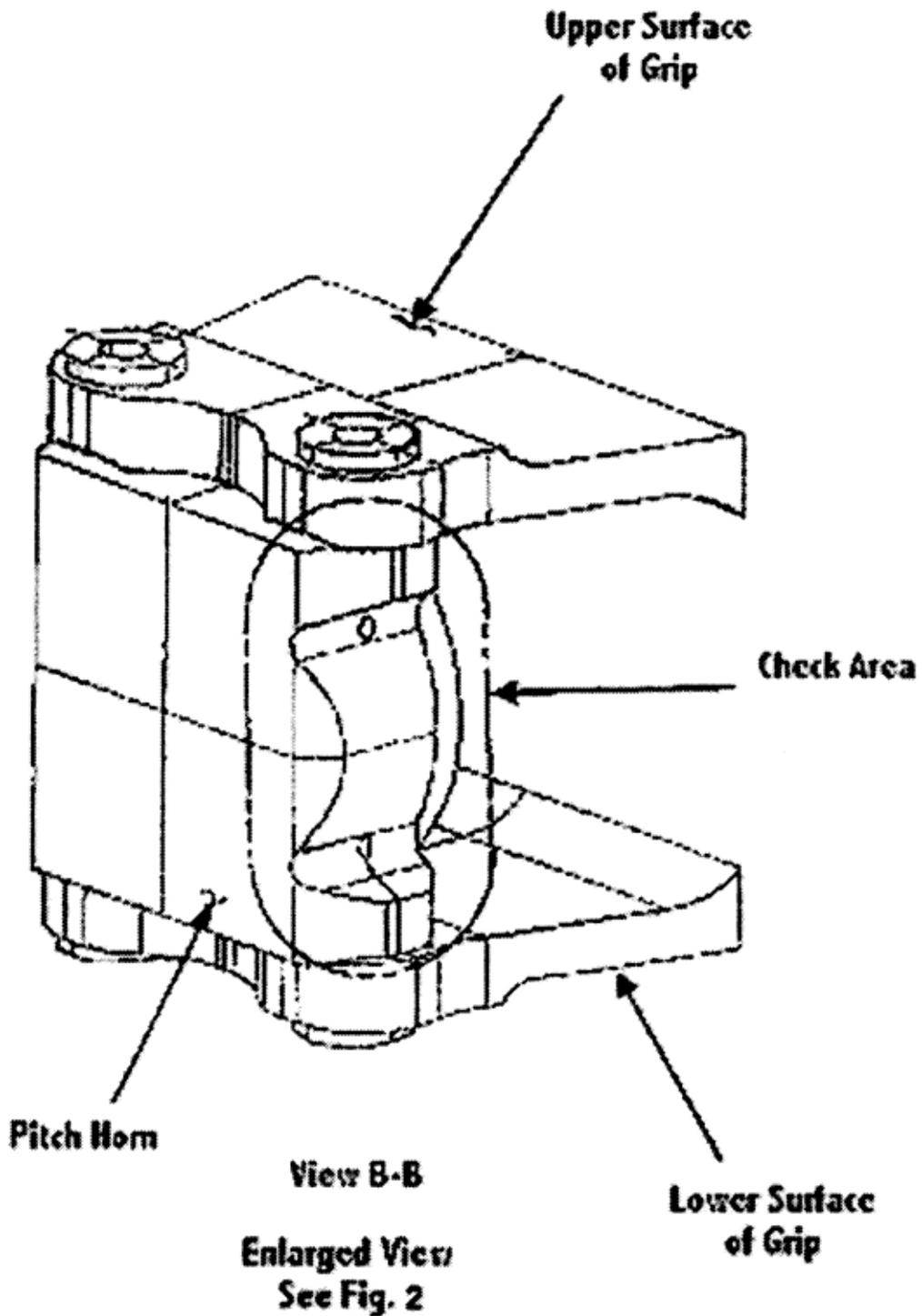


Figure 4

(4) An owner/operator (pilot) holding at least a private pilot certificate may perform the visual check required by paragraph (a) of this AD. The pilot must enter compliance with this paragraph into the helicopter records in accordance with 14 CFR 43.11 and 91.417(a)(2)(v)).

(b) Within 7 days or 10 hours TIS, whichever occurs first, and thereafter at intervals not to exceed 25 hours TIS, without disassembling the main rotor hub assembly (hub assembly) and using a 10-power or higher magnifying glass, inspect each grip and pitch horn assembly for a crack in accordance with paragraphs (a)(1), (a)(2), and (a)(3) of this AD.

(c) Within 300 hours TIS or 6 months, whichever occurs first, for each hub assembly with 2,500 or more and less than 4,500 hours TIS, and within 2,500 hours TIS for each hub assembly with less than 2,500 hours TIS:

(1) Disassemble and clean the main rotor hub assembly.

(2) Inspect the grip and pitch horn assembly using a fluorescent-penetrant inspection method.

(3) Inspect the pitch horn-to-grip attachment bolts and the flapping bearing-to-yoke attachment bolts using a magnetic-particle inspection method. If any of these attachment bolts are made from non-magnetic material, inspect those attachment bolts using a fluorescent-penetrant inspection method.

(4) During reassembly, install new buffers on the pitch horn and flapping bearing assemblies.

(d) If a crack is found, replace the cracked part with an airworthy part before further flight.

**Note 1:** Bell Helicopter Textron Alert Service Bulletin No. 222-02-93, Revision A, No. 222U-02-64, Revision A, and 230-02-26, Revision A, all dated March 3, 2003, pertain to the subject of this AD.

(e) 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 Safety Management Group, Rotorcraft Directorate, FAA, for information about previously approved alternative methods of compliance.

(f) This amendment becomes effective on March 18, 2005.

**Note 2:** The subject of this AD is addressed in Transport Canada (Canada) AD No. CF-2002-23R1, dated May 7, 2003.

Issued in Fort Worth, Texas, on February 2, 2005.

David A. Downey,

Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. 05-2609 Filed 2-10-05; 8:45 am]

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