

URGENT

*TB 1-1520-210-20-63

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

ALL UH-1 SERIES AIRCRAFT, INSPECTION OF UH-1 MAIN ROTOR PITCH HORN ATTACHMENT BOLTS

Headquarters, Department of the Army, Washington, D. C.
31 October 2002

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR
SUPERSEDED.

1. Priority Classification. URGENT.

a. Aircraft in Use. Upon receipt of this TB, inspect Main Rotor Pitch Horn Attachment Bolts IAW TB 1-1520-210-20-63.

b. Aircraft in Depot Maintenance. Depot Commanders will not issue aircraft until they are in compliance with this TB.

c. Aircraft Undergoing Maintenance. Commanders and Facility Managers will not issue aircraft until they are in compliance with this TB.

d. Aircraft In Transit.

(1) **Surface/Air Shipment.** Same as paragraph 1.a.

(2) **Ferry Status.** Same as paragraph 1.a.

e. Maintenance Trainers. Not applicable.

f. Component/Parts in Stock at All Levels (Depot and Others) Including War Reserves. Not applicable.

g. Components/Parts in Work. (Depot Level and Others). Depot and other Maintenance Activity Commanders will ensure items listed in paragraph 7 are not issued until they are in compliance with this TB.

* This TB supersedes TB 1-1520-210-20-62, dated 2 August 2002, and UH-1-MIM-2003-001, dated 18 Oct 02.

2. **Task/Inspection Suspense Date.** Complete the inspection IAW paragraph 8 within the next 50 hours.

3. **TAMMS Reporting Compliance Suspense Date.** Not applicable.

4. **Summary of Problem.**

a. Bell Helicopter has informed the Army that they have investigated a few incidents where one of the main rotor grip pitch horn attachment bolts failed. The investigation revealed that the bolts failed in fatigue due to low torque. The Army has experienced one known recent failure of this bolt. A new bolt, Part Number NAS6606H27, which will prevent future failures, has been approved to replace the current bolt.

b. **For Manpower/Downtime and Funding Impacts.** See paragraph 12.

c. **The Purpose of this TB is to** inspect main rotor pitch horn attachment bolts for proper torque and to provide revised maintenance procedures for replacement with preferred bolts.

5. **End Items to be inspected.** All UH-1H/V series aircraft.

6. **Assembly Components to be Inspected.**

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Main Rotor Hub Assembly	204-012-101-141	1615-01-270-2982

7. **Parts to be Inspected.**

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Machine Bolt	AN6H22A	5306-00-638-5765

8. **Inspection Procedures.** Check torque of installed Main Rotor Pitch Horn Attachment Bolts. The installed bolts may be used until replaced if the torque is checked every 50 hours IAW paragraph 9. Make an entry on the DA Form 2408-18 for the Main Rotor Pitch Horn Attachment Bolts torque check, due every 50 hours. ULLS-A units will use one of their 800 inspection numbers for this 50 hour recurring torque check.

9. **Corrective Procedures.**

NOTE

All entries made on DA Form 2408-13-1 IAW TB 1520-210-20-62 and UH-1-MIM-2003-001, dated 18 Oct 02, can be cleared at this time.

NOTE

Check torque of pitch horn attachment bolts IAW TB 1-1520-210-20-63 every 50 hours until all four bolts are replaced with the preferred NAS6606H27 bolts. It is recommended that all four bolts are replaced at the same time.

a. **Initial/Recurring Torque Check.**

(1) Remove lockwire that secures the pitch horn attachment bolts.

(2) Set torque wrench at 160 inch-lbs.

(3) Perform torque check. A minimum of 160 inch-lbs is required per TM 55-1520-210-23-1, paragraph 5.22.h.

- (4) If any bolt does not hold a minimum of 160 inch-lbs torque, proceed to paragraph 9.b.
- (5) For those bolts that meet the required torque, secure with lockwire.

CAUTION

One at a time, remove and replace the pitch horn attachment bolts.

CAUTION

When removing the pitch horn attachment bolts, do not allow the main rotor blades to rotate on the pitch-change axis. Use Grip Positioning Link (T41), to prevent rotation of blades and damage to the TT straps.

NOTE

TM 55-1520-210-23-1, Figure 5.2, page 5-3, shows the bolt head on the right. Figure 5-27, page 5-54.47 shows the bolt head on the left. Figure 5-27 is the preferred position that facilitates the attachment of the Grip Positioning Link without removing the bolt and distributing the Pitch Change Link.

b. Bolt Replacement Procedures.

- (1) Attach the Grip Positioning Links (T-41) per TM 55-1520-210-23-1, Figure 5.2.
- (2) Remove lockwire that secures the AN6H22A pitch horn attachment bolts.
- (3) Remove the upper pitch horn attachment bolts (item 79) and washers (item 80) securing the pitch horn to the main rotor grip, Figure 138, TM 55-1520-210-23P-1.
- (4) Discard bolts (item 79), AN62H22A.

NOTE

Do not apply CPC to the threads.

- (5) Coat shank of new bolts, NAS6606H27, with CPC (C87).
- (6) Install the new upper bolts and washers. Torque 160 to 190 inch-lbs.
- (7) Repeat the above procedure for the lower pitch horn attachment bolts.
- (8) Secure bolts with lockwire.
- (9) Remove Grip Positioning Link.
- (10) Reinstall nut. Torque 200 to 250 inch-lbs.
- (11) Install cotter pin.

10. Supply/Parts and Disposition.

a. Parts Required. Items cited in paragraph 12.c. may be required to replace defective items.

b. Requisitioning Instructions. Replacement bolts are anticipated to be available in the supply system by March 2003. Local purchase is authorized to obtain NAS6606H27 bolts. Possible suppliers, but not limited to, for the NAS6606H27 bolts are as follows:

(1) Fastener Dimensions. 9403 104th Street, Ozone Park, New York, NY 11416, phone (718) 847-6321. Fax (718) 817-8414.

(2) WESCO Aircraft, 27727 Avenue Scott, Valencia, CA 91355, phone (661) 295-1414. Fax (661) 295-0695.

c. Bulk and Consumable Materials.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
CPC	MIL-C-16173, Grade 2	8030-00-244-1297

d. **Disposition.** Dispose of removed parts/components using normal Supply procedures.

e. **Disposition of Hazardous Material.** Not applicable.

11. **Special Tools, Jigs and Fixtures Required.** Not applicable.

12. **Application.**

a. **Category of Maintenance.** AVIM. Aircraft downtime will be charged to AVIM maintenance. Report aircraft non-mission capable maintenance (NMCM) while undergoing inspection and correction IAW this TB.

b. **Estimated Time Required.**

(1) **Inspection.**

(a) Total of 1 man-hour using 1 person.

(b) Total of 2 hours downtime for one end item.

(2) **Bolt Replacement.**

(a) Total of 6 man-hours using 2 persons.

(b) Total of 3 hours downtime for one end item.

c. **Estimated Cost Impact to the Field.** (All hardware will be included and confirmed during prototype.)

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER	QTY	COST EA.	TOTAL COST
Bolt	NAS6606H27	5306-01-385-6139	4	\$33.56	\$134.24
TOTAL COST PER AIRCRAFT			\$134.24		

d. **TB/MWOs to be Applied Prior to or Concurrently with this Inspection.** Not applicable.

e. **Publications which Require Change as a Result of this Inspection.** TM 55-1520-210-23P-1 shall be changed to reflect this TB. A copy of this TB shall be inserted in the appropriate TM as authority to implement the change until the printed change is received.

13. **References.**

a. DA PAM 738-751, 15 Mar 99.

b. TM 55-1520-210-23-1.

c. TM 55-1520-210-23P-1.

d. TB 1-1520-210-20-62.

e. UH-1-MIM-2003-001, dated 18 Oct 02.

14. **Recording and Reporting Requirements.** Complete DA Form 2408-18, Equipment Inspection List, in accordance with DA Pamphlet 738-751, dated 15 March 1999.

NOTE

Unit Level Logistics System-Aviation (ULLS-A) users will use applicable electronic "E" forms.

15. Weight and Balance. Not applicable.

16. Points of Contact:

a. Technical point of contact for this TB is: Mr. Darrell Hutson, AMSAM-RD-AE-I-D-U, DSN 897-2350 (Ext. 9718), or Commercial (256) 705-9718. Datafax is Commercial (256) 705-9896. E-mail is <darrell.hutson@RDEC.redstone.army.mil>.

b. Logistical point of contact for this TB is Mr. Charles Elkins, SFAE-AV-AS-ASH, DSN 645-0073 or Commercial (256) 955-0073. Datafax is DSN 645-7125 or Commercial (256) 955-7125. E-mail is: <charlie.elkins@redstone.army.mil>.

c. Forms and Records point of contact for this TB is Ms. Ann Waldeck, AMSAM-MMC-MA-NM, DSN 746-5564 or Commercial (256) 876-5564. Datafax is DSN 746-4904 or Commercial (256) 876-4904. E-mail is <ann.waldeck@redstone.army.mil>.

d. Foreign Military Sales recipients requiring clarification of action advised by this TB should contact: Mr. Ronnie W. Sammons, AMSAM-SA-AS-UT, DSN 897-0407 or Commercial (256) 313-0407. Datafax is DSN 897-0411 or Commercial (256) 313-0411. E-mail is <ronnie.sammons@redstone.army.mil>

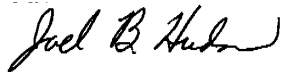
e. After hours contact the AMCOM Operations Center (AOC) DSN 897-2066/2067 or Commercial (256) 313-2066/2067.

17. Reporting of Errors and Recommending Improvements. You can improve this TB. If you find any mistakes or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, Alabama 35898-5000. A reply will be furnished to you. You may also send in your comments electronically to our e-mail address at <2028@redstone.army.mil>, or by datafax at DSN 788-6546 or commercial (256) 842-6546. Instructions for sending a DA Form 2028 by E-mail may be found at the back of most Technical Manuals.

TB 1-1520-210-20-63

By Order of the Secretary of the Army:

Official:



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