

# URGENT

\*TB 1-1520-237-20-263

## DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

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### SAFETY OF FLIGHT, TECHNICAL, RCS CSGLD-1-1860(R1), ALL H-60 SERIES AIRCRAFT, INITIAL AND RECURRING INSPECTION OF MAIN ROTOR SPINDLE LUGS

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Headquarters, Department of the Army, Washington, D. C.  
28 January 2003

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

1. **Priority Classification. URGENT**

**NOTE**

IAW AR 95-1, para 6-6A, MACOM Commanders may authorize temporary exception from ASAM message requirements. Exception may only occur when combat operations or matter of life or death in civil disasters or other emergencies are so urgent that they override the consequences of continued aircraft operation.

a. **Aircraft in Use.** Upon receipt of this message, make the following entry on the DA Form 2408-13-1. Enter a Red Horizontal Dash //--// status symbol with the following statement: "Inspect main rotor spindle lugs IAW UH-60-00-01 (TB 1-1520-237-20-221) prior to the next flight, but NLT 25 July 2000." Clear the Red Horizontal Dash //--// entry when the procedures IAW para 8 are completed. The affected aircraft shall be inspected as soon as practical but no later than 25 July 2000. Commanders who are unable to comply with the requirements of this message within the time frame specified will upgrade the affected aircraft status symbol to a Red //X//.

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

c. **Aircraft Undergoing Maintenance.** Commanders and Facility Managers will not issue aircraft until they are in compliance with is message.

\* This TB supersedes TB 1-1520-237-20-221, dated 31 July 2000.

d. Aircraft in Transit.

(1) Surface/Air Shipment. Prior to first flight at destination.

(2) Ferry Status.

(a) Same as 1a.

(b) Those aircraft that have a DD Form 250 and are at Sikorsky will be inspected prior to ferry to final destination.

e. Maintenance Trainers (Category A, and B). Same as para 1a.

f. Component/Parts in Stock at All Levels (Depot and Others), Including War Reserves. N/A.

g. Components/Parts in Work (Depot Level and Others). N/A

2. **Task/Inspection Suspense Date.** Complete the inspection IAW paragraph 8 prior to the next flight but NLT 25 July 2000 and report IAW para 14b.

3. **Reporting Compliance Suspense Date.** Report compliance IAW para 14a NLT 1 August 2000.

4. **Summary of the Problem.**

a. Background. During a routine periodic inspection, a main rotor blade spindle was found to have one lug that fractured. The subsequent CAT I investigation is ongoing. In separate and unrelated incidents, two main rotor blade expandable retention pins fractured. The investigation, to include fatigue testing of additional pins, is continuing. The required inspection of the spindle lugs will exercise the pins sufficiently to identify any pins that fracture in service.

b. For manpower/downtime and funding impacts see para 12.

**NOTE**

This TB is a revision of TB 1-1520-237-20-221 (UH-60-00-01) as required by paragraph 1.2.3 of UH-60-03-02.

c. The purpose of this TB is to:

(1) Rescind the requirement of TB 1-1520-237-20-221 (UH-06-00-01), for before the first flight of the day inspection of main rotor spindle lugs.

(2) Perform an initial inspection of the main rotor spindles for broken lugs.

(3) Implement recurring inspections of the main rotor spindle lugs.

(4) Augment existing inspections of the expandable pins.

5. **End Items to be Inspected.** All H-60 aircraft.

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

NOMENCLATURE	PART NUMBER	NSN
Spindle Assembly	70070-10030-042	1615-01-331-2480
Spindle Assembly	70070-10030-046	1615-01-249-4107
Spindle Assembly	70102-08200-044	1651-01-214-6602
Spindle Assembly	70102-08200-046	1615-01-295-1174
Spindle Assembly	70102-08200-051	N/A
Spindle Assembly	70102-08200-054	1615-01-372-9604
Spindle Assembly	70102-08200-056	1615-01-374-7203
Spindle Assembly	70102-08200-061	N/A

NOMENCLATURE	PART NUMBER	NSN
Spindle Assembly	70102-08200-062	N/A
Spindle Assembly	70102-08200-063	1615-01-370-4918
Spindle Assembly	70102-08200-065	1615-01-440-6546
Spindle Assembly	70102-08200-069	1615-01-442-6926
Spindle Assembly	70102-08200-070	N/A

#### 7. Parts to be Inspected.

NOMENCLATURE	PART NUMBER	NSN
Spindle Liner Assembly	70102-08216-041	1615-01-233-1812
Spindle Liner Assembly	70102-08216-042	1615-01-222-1447
Spindle Liner Assembly	70102-08216-046	N/A
Spindle Liner Assembly	38023-10374-042	N/A
Main Rotor Expansion Pin	ALL PART NUMBERS	5315-01-329-0707

#### 8. Inspection Procedures..

##### NOTE

For the purpose of this message the areas of the spindle identified as a lug are the four protruding points of the spindle that the main rotor blade expandable pins pass through when installed to retain the blade assembly with the spindle assembly.

- a. The initial inspection of each main rotor spindle will occur prior to the next flight as follows:

(1) Inspect visually as much of lug that is exposed for fractures which may appear similar to cracks.

##### WARNING

**No cracks allowed.**

(2) Using standard maintenance procedures, relieve weight of the blade to allow pin to be rotated freely.

(3) Release expandable pin handle from the lower nut and raise to the fully open position.

(4) Check for any discrepancies in the spindle lug. If lug is broken, movement of the blade cuff and pin will cause displacement of the broken portion. Inspect visually as much of lug that is exposed for fractures which may appear similar to cracks.

(5) If any lugs are cracked or broken, correct IAW paragraph 9.

(6) If no discrepancies are noted, realign pin handles and close. Resistance should be felt while moving handle from the unlocked to the locked position.

(a) If no resistance is felt while moving the handle to the locked position accomplish the inspection steps of paragraph 8b below.

(b) If resistance is felt, proceed to paragraph 8c.

- b. Pin inspection.

(1) With handle in the unlocked position check lower ring to see if it rotates freely around the pin shaft. If lower ring will not rotate or shows evidence of dirt or contaminants, clean out lower ring.

(2) Adjust the pin as necessary IAW TM 1-1520-237-23, paragraph 5-3-9.1.

(3) If the pin can not be adjusted IAW TM 1-1520-237-23, paragraph 5-3-9.1, correct IAW paragraph 9.

c. If no discrepancies are noted during the inspection of the spindles or expandable pins, the inspection is complete and the Red Horizontal Dash //--// may be cleared from the DA Form 2408-13-1. Report results of the initial inspection IAW paragraph 14b.

d. The recurring inspections of each main rotor spindle will occur as follows:

(1) The inspection procedures IAW paragraph 8a of this message will be completed every 10 flight hours/14 days. ULLS-A units will use the inspection number A20 for this special inspection.

**9. Correction Procedures.** If any discrepancies are noted during the inspections IAW paragraph 8:

a. Immediately replace the spindle assembly, main rotor blade assembly, and the main rotor expansion pins. Dispose of discrepant material IAW paragraph 10d.

b. Notify the logistics POC IAW paragraph 16b telephonically.

c. Submit CAT I QDR. In addition to identifying the discrepancy, include the serial number (SN), time since new (TSN), and time since last installed (TSLI) for the following components in block 22 of the QDR.

(1) Spindle Assembly.

(2) Main Rotor Blade.

(3) Main Rotor Blade Cuff.

(4) Main Rotor Expandable Pin.

**10. Supply/Parts and Disposition.**

a. Parts Required. The following items may be required to replace defective items.

NOMENCLATURE	PART NO.	NSN
Spindle Assembly	70102-08200-069	1615-01-442-6926
Main Rotor Blade Assembly	70150-09100-043	1615-01-106-1903
Main Rotor Expansion Pin	70103-08107-102	5315-01-329-0707

b. Requisitioning Instructions. Requisition replacement parts using normal supply procedures. All requisitions shall use Project Code (CC 57-59) "XDI" (XRAY-DELTA-INDIA).

NOTE

Project Code "XDI" is required to track and establish a data base of stock fund expenditures incurred by the field as a result of SOF actions.

c. Bulk and Consumable Materials. N/A.

d. Disposition. Hold any discrepant part/component pending disposition instruction from the logistical POC in para 16b.

e. Disposition of Hazardous Material. IAW Environmental Protection Agency directives as implemented by your servicing environment coordinator (AR 200-1).

**11. Special Tools, Jigs and Fixtures Required.** N/A.

**12. Application.**

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

b. Estimated Time Required.

- (1) To conduct the inspection IAW paragraph 8a – Total of 2 Man-hours using 2 persons.
- (2) To replace components IAW paragraph 9:
  - (a) Total of 5.8 man-hours using 5 persons.
  - (b) Total of 1.16 hours downtime for one spindle and main rotor blade assembly.
- c. Estimated cost impact to the field:

Nomenclature	Part No./NSN	Qty	Cost Each	Total Cost
Spindle Assembly	70102-08200-069 1615-01-442-6926	4	\$7,400.00	\$29,600.00
Main Rotor Blade Assy	70150-09100-043 1615-01-106-1903	4	\$101,504.00	\$406,016.00
Main Rotor Expansion Pin	70103-08107-102 5315-01-329-0707	8	\$176.00	\$1,408.00

Total cost per one spindle and blade assembly = \$109,256.00  
 Total cost per aircraft = \$437,024.00

- d. TB/MWOs to be applied prior to or concurrently with this Inspection. N/A.
- e. Publications Which Require Change as a Result of This Inspection. TM 1-1520-237-23, and TM 1-1520-250-23, shall be changed to reflect this message. A copy of this message 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 1-1520-237-23.
- c. TM 1-1520-250-23.

**14. Recording and Reporting Requirements.**

- a. Reporting Compliance Suspense Date (Aircraft). Upon entering requirements of this TB on DA Form 2408-13-1 on all subject MDS aircraft, Commanders will forward a priority message, datafax or E-Mail to Commander, AMCOM, ATTN: AMSAM-SF-A (SOF Compliance Officer), Redstone Arsenal, AL 35898-5000, IAW AR 95-1. Datafax number is DSN 897-2111 or commercial (256) 313-2111. E-Mail address is "SAFEADM@REDSTONE.ARMY.MIL". The report will cite this TB number, date of entry in DA Form 2408-13-1, the aircraft mission design series and serial numbers of aircraft in numerical order.
- b. Task/Inspection Reporting Suspense Date (Aircraft). Upon completion of inspection, commanders will forward a priority message to the logistical POC listed in para 16b. The report will cite this TB number, date of inspection, aircraft serial number, aircraft and component hours, and results of the inspection. Inspection and reports will be completed NLT 24 July 2000.
- c. Reporting Message Receipt (Spares). N/A
- d. Task/Inspection Reporting Suspense Date (Spares). N/A
- e. The following forms are applicable and are to be completed in accordance with DA Pam 738-751, 15 Mar 99.

**NOTE**

ULLS-A users will use applicable "E" Forms.

- (1) DA Form 2408-5-1, Equipment Modification Record (Spindle Assembly).
- (2) DA Form 2408-13, Aircraft Status Information Record.

- (3) DA Form 2408-13-1, Aircraft Inspection and Maintenance Record.
- (4) DA Form 2408-15, Historical Record for Aircraft.
- (5) DA Form 2408-16, Aircraft Component Historical Record. (Only if spindle, blade, or pin are replaced)
- (6) DA Form 2408-18, Equipment Inspection List. Note ULLS-A units will use an 800 inspection number for the 10-Hour/14 Day Spindle Lug Inspection.
- (7) DA Form 2410, Component Removal and Repair/Overhaul Record. (Only if spindle, blade or pin are replaced)
- (8) DD Form 1574/DD Form 1574-1, Serviceable Tag/Label, Material (Color Yellow). Annotate remarks block with "Inspected Serviceable IAW TB 1-1520-237-20-221."
- (9) DD Form 1577-2/DD Form 1577-3, Unserviceable (Repairable) Tag/Label, Material (Color Green). Annotate remarks block with "Unserviceable IAW TB 1-1520-237-20-221."
- (10) SF 368, Product Quality Deficiency Report.

**15. Weight and Balance.** N/A.

**16. Points of Contact.**

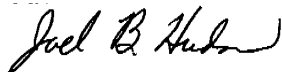
- a. Technical point of contact for this TB is Ralph Vemmer, AMSAM-RD-AE-I-D-U, DSN 897-2350 ext 9719. or (256) 705-9719. Alternate number is DSN 897-2350, ext 9715 or (256) 705-9715, Datafax is (256) 705-9896. Email is "ralph.vemmer@rdc.redstone.army.mil".
- b. Logistical point of contact for this TB is Mr. Joe Hoover, SFAE-AV-UH-L, DSN 645-7898 or commercial (256) 955-7898, Datafax is DSN 897-3778 or (256) 313-3778. E-mail is "joe.hoover@uh.redstone.army.mil".
- c. Wholesale materiel point of contact is Ms. Julia Moore, AMSAM-MMC-AV-UA, DSN 897-1301 or commercial (256) 313-1301. Datafax is DSN 897-4769. Email is "julia.moore@redstone.army.mil"
- d. Forms and records point of contact for this TB is Ms. Ann Waldeck, AMSAM-MMC-MA-NM, DSN 746-5564 or (256) 876-5564. Datafax is DSN 746-4904. E-mail is "ann.waldeck@redstone.army.mil".
- e. Safety points of contact are:
  - (1) Primary - Mr. Frank Rosebery (SAIC), AMSAM-SF-A, DSN 788-8631 or commercial (256) 842-8631. Datafax is DSN 897-2111 or (256) 313-2111. Email is "frank.rosebery@redstone.army.mil".
  - (2) Alternate - Mr. Ron Price, AMSAM-SF-A, DSN 788-8636 or commercial (256) 842-8636. Datafax is (256) 313-2111. Email is "ron.price@redstone.army.mil".
- f. Foreign Military Sales is Mr. Ronnie W. Sammons, AMSAM-SA-AS-UT, DSN 897-0407 or (256) 313-0407. Datafax is DSN 897-0411 or (256) 313-0411. Email "ronnie.sammons@redstone.army.mil". Huntsville, Alabama is GMT minus 6 hours.
- g. After hours contact AMCOM Operations Center (AOC) DSN 897-2066/7 or (256) 313-2066/7.

**17. Reporting of Errors and Recommended 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), or DA Form 2028-2 located in the back of this manual, directly to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5000. A reply will be furnished to you. You may also provide DA Form 2028 information to AMCOM via e-mail, fax, or the World Wide Web. Our fax number is: DSN 788-6546 or Commercial 256-842-6546. Our e-mail address is: 2028@redstone.army.mil. Instructions for sending an

electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028. For the World Wide Web use: <https://amcom2028.redstone.army.mil>.

By Order of the Secretary of the Army

Official:



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0301706

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*General, United States Army  
Chief of Staff*

**DISTRIBUTION:**

To be distributed in accordance with Initial Distribution Number (IDN) 314078, requirements for TB 1-1520-237-20-263.

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whomever" <whomever@avma27.army.mil>

To: 2028@redstone.army.mil

Subject: DA Form 2028

1. **From:** Joe Smith
2. **Unit:** home
3. **Address:** 4300 Park
4. **City:** Hometown
5. **St:** MO
6. **Zip:** 77777
7. **Date Sent:** 19-OCT-93
8. **Pub no:** 55-2840-229-23
9. **Pub Title:** TM
10. **Publication Date:** 04-JUL-85
11. **Change Number:** 7
12. **Submitter Rank:** MSG
13. **Submitter FName:** Joe
14. **Submitter MName:** T
15. **Submitter LName:** Smith
16. **Submitter Phone:** 123-123-1234
17. **Problem:** 1
18. **Page:** 2
19. **Paragraph:** 3
20. **Line:** 4
21. **NSN:** 5
22. **Reference:** 6
23. **Figure:** 7
24. **Table:** 8
25. **Item:** 9
26. **Total:** 123
27. **Text:**

This is the text for the problem below line 27.