

# URGENT

\*TB 1-1520-237-20-235

## DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

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### SAFETY OF FLIGHT, TECHNICAL, RCS CSGLD-1860 (R1), ALL H-60 SERIES AIRCRAFT, INSPECTION OF THE MAIN ROTOR HUB ASSEMBLY

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Headquarters, Department of the Army, Washington, D. C.  
10 September 2001

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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 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 TB 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 blade expandable pins IAW TB 1-1520-237-20-235 prior to next flight, but NLT 7 September 2001." Clear the Red Horizontal Dash// entry when the procedures IAW para 8 and 9 are completed. The affected aircraft shall be inspected as soon as practical but no later than 7 September 2001. Commanders who are unable to comply with the requirements of this TB within the time frame specified will upgrade the affected aircraft status symbol to a Red//X//.

b. Aircraft in maintenance .

(1) Aircraft in AVUM, AVIM or Depot level maintenance. Same as paragraph 1.a..

(2) Aircraft at Contractor Facility. Same as paragraph 1.a..

\* This TB supersedes USAAMCOM Aviation Safety of Flight Message (SOF), 232013Z AUG 01, UH-60-01-11.

- c. Aircraft in Transit.

**NOTE**

For aircraft away from home station, this TB authorizes a one time flight not to exceed four hours, with intermediate stops, to return to the nearest secured maintenance facility/home station.

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

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

- d. Maintenance Trainers (Category A, and B). Same as paragraph 1.a..

- e. Component/Parts in Stock at All Levels (Depot Level and Others), including War Reserves. Upon receipt of this TB, depot and materiel activity commanders at all levels will ensure the material condition tags of all items listed in paragraph 6. are annotated to read: "TB 1-1520-237-20-235, Inspection of the Main Rotor Hub, not complied with."

- (1) Wholesale Stock. N/A

- (2) Retail Stock. Report receipt of this TB IAW paragraph 14.c.(1) NLT 29 August 2001. Upon receipt of this TB, commanders and facility managers maintaining retail stock at installation level and below shall contact the supported aviation unit to perform the procedures required IAW paragraphs 8 and 9 on suspect material. Dispose of discrepant material IAW paragraph 10.d.. Report compliance with this TB IAW paragraph 14.c.(2) NLT 7 September 2001.

- f. Components/Parts in Work (Depot Level and Others). Depot and other maintenance activity commanders will ensure items listed in paragraph 6 are not issued until they are in compliance with this TB.

**2. Task/Inspection Suspense Date.** Complete the inspection IAW paragraphs 8 prior to next flight but NLT 7 September 2001 and report IAW para 14.a.(2) NLT 10 September 2001.

**3. TAMMS Reporting Compliance Suspense Date.** Report compliance IAW para 14.a.(1) NLT 29 August 2001.

**4. Summary of Problem.**

- a. A P/N 70103-08101-101 Hub , was found with a crack that had propagated beyond that predicted for the inspection interval of 200 hours that was established by TB 1-1520-237-20-215 (UH-60-00-ASAM-01). The manufacturing feature that makes the 70103-08101-101/-103 Hub susceptible to cracking from the 11 O'Clock bolt hole is not present on the 70103-08112-047/ -048/ -049/ -050 rotor hub assembly, and has been eliminated from those hubs that have been re-identified to a 70070-10046-055/ -056 part number.

- b. Manpower/downtime and funding impacts see para 12.

- c. The purpose of this TB is to:

- (1) Decrease the interval between required inspections of the main rotor hub assembly for cracks in specified areas from every 200 hours, to every 100 flight hours.

- (2) Implement a before the first flight of the day visual inspection of the area near the 11O'Clock bolthole.

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

**NOTE**

Aircraft serial number 00-26862 and subsequent are not affected.

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

NOMENCLATURE	PART NUMBER	NSN
Hub, Rotor	70103-08101-101	1615-01-432-9269
Hub, Rotor	70103-08101-103	(MH-60K)
Hub, Rotor Assembly	70103-08112-042	1615-01-432-9268
Hub, Rotor Assembly	70103-08112-046	(MH-60K)
Hub, Rotor Assembly	70103-08112-041	1615-01-096-5247
Hub, Rotor Assembly	70103-08112-045	(MH-60K)

**7. Parts to be Inspected.** N/A.

**8. Inspection Procedures.**

**NOTE**

This message does not apply to the 70103-08112-047/ -048/ -049/ -050 rotor hub assembly, or hubs that have been re-identified to a 70070-10046-055/ -056 part number.

**NOTE**

The 70070-10046-055 & -056 hubs have the damper mount bracket 11O’Clock bolt hole insert removed, the hole drilled oversize and completely through the inner wall. When installing this hub, each damper mount bracket is installed using 7 bolts instead of 8, leaving the 11O’Clock position empty.

- a. Inspect the time change DA Form 2408-16-
  - (1) If a hub assembly other than the items listed in para 6 is installed, proceed to para 9.d..
  - (2) If an item listed in para 6 is installed, proceed to para 8.b..
- b. If an item listed in para 6 is installed, conduct the visual inspection required IAW para 9.c. of this TB. If no cracks are found, proceed to para 8.c..
- c. For all items listed in para 6., regardless of time since new (TSN), perform a records check to determine the time of the last recurring 200 hour NDI required IAW TB 1-1520-237-20-215.
  - (1) If it has been less than 100 hours since the last NDI, proceed to para 9.a..
  - (2) If it has been more than 100 hours since the last NDI, proceed to para 9.b..

**9. Correction Procedures.**

- a. If it has been less than 100 hours since the last NDI:
  - (1) Reschedule the next recurring inspection required IAW TB 1-1520-237-20-215 for NLT 100 hours since the last inspection.

**NOTE**

ULLS-A units will use this TB as authority to reduce the frequency from 200 hours to 100 hours on the original “800” inspection number used for this inspection.

- (2) The next scheduled inspection will be accomplished using either the Eddy Current or FPI procedures. The NDI procedures are specified in TB 1-1520-237-20-212 and TB 1-1520-237-20-215.

**NOTE**

It is possible to accomplish the FPI by only removing the damper bracket. Removing the main rotor blade and spindle assembly can provide better access for integrity of the FPI.

(3) Subsequent recurring 100 hour inspections may be accomplished using either the eddy current or FPI procedures.

(4) Annotate the DA Form 2808-5-1 for the main rotor hub and change the recurring inspection interval on the DA Form 2408-18 to accomplish the required NDI at an interval not to exceed 100 hours.

(5) Proceed to paragraph 9.c..

b. If it has been more than 100 hours since the last NDI, or if the hub has more 100 hours TSN and an NDI has not been accomplished on the hub:

**NOTE**

Hubs with less than 100 hours TSN will be scheduled for the initial NDI inspection to be completed on or before 100 hours TSN with a recurring inspection scheduled each 100 hours thereafter.

(1) Accomplish the NDI inspection IAW TB 1-1520-237-20-215, before the next flight but NLT 7 September 2001.

(2) The next scheduled inspection will be accomplished using either the eddy current or FPI procedures. The NDI inspection procedures are specified in TB 1-1520-237-20-212, and TB 1-1520-237-20-215.

(3) Subsequent recurring 100 hour inspections may be accomplished using either the eddy current or FPI procedures.

(4) Annotate the DA Form 2408-5-1 for the main rotor hub and change the recurring inspection interval on the DA Form 2408-18 to accomplish the required NDI at an interval not to exceed 100 hours.

(5) Proceed to paragraph 9.c..

c. Prior to the first flight of each day, perform a visual inspection as follows:

(1) Upon receipt of this TB, make the following entry on the DA Form 2408-13-1. Enter a red horizontal dash / / - / / status symbol with the following statement: "Inspect the M/R hub prior to first flight of the day with a 10X magnifier IAW TB 1-1520-237-20-235."

(2) Using a 10X magnifier, conduct a visual inspection of the hub in the external/exposed area of the 11 O'Clock bolthole. Inspect the flat surface above the 11 O'Clock bolthole in the main rotor damper attachment area. No cracks allowed.

d. When all required procedures IAW paragraph 8 and 9 have been completed, the original red horizontal dash / / - / / will be cleared.

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

a. Parts required. Items cited in paragraph 6 may be required to replace defective items.

b. Requisitioning instructions. Requisition replacement parts using normal supply procedures. All requisitions shall use project code (CC 57-59) "X0Z" (X-ray Zero Zulu).

**NOTE**

Project code "X0Z" is required to track and establish a data base of stock fund expenditures incurred by the field as a result of message actions.

c. Bulk and Consumable Materials: Same as TB 1-1520-237-20-215.

d. Disposition. Hold any discrepant part/component pending disposition instructions from the logistical point of contact in paragraph 16.b..

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

**11. Special Tools, and Fixtures Required.**

Eddy Current Kit, model 19ELL, manufactured by Staveley Corp.  
 EDDY Current Probe Kit, P/N SPCK-107A.

**12. Application.**

- a. Category of Maintenance. AVUM/AVIM. Aircraft downtime will be charged to AVUM/AVIM . Eddy current inspection is only authorized at AVIM level.
- b. Estimated Time Required. Same as TB 1-1520-237-20-215.
- c. Estimated Cost Impact of Stock Fund Items to the field.

NOMENCLATURE	PART NO./NSN	QTY.	COST EA.	TOTAL
Hub, Rotor Assembly	70103-08112-041 1615-01-096-5427	1	\$11,301.53	\$11,301.53

Total Cost per Aircraft = \$1348.88

- 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. N/A

**13. References.**

- a. DA PAM 738-751, 15 March 1999.
- b. TM 1-1520-237-23.
- c. TM 1-1520-250-23.
- d. TM 1-1500-328-23.
- e. TM 1-1500-335-23.
- f. TB 1-1520-237-20-211.
- g. TB 1-1520-237-20-215.
- h. TB 1-1520-250-20-6.
- i. TM 1-1520-265-23

**14. Recording and Reporting Requirements.**

- a. Aircraft:

(1) TAMMS Reporting Compliance Suspense. Upon entering requirements of this TB on DA Form 2408-13-1 for all effected aircraft, Commanders will forward a priority message, datafax or email to Commander, AMCOM, ATTN: AMSAM-SF-A (SOF Compliance Officer), Redstone Arsenal, AL 35898-5000, IAW AR 95-1, NLT date specified in Paragraph 3. Datafax number is DSN 897-2111 or commercial (256) 313-2111. Email address is "safeadm@redstone.army.mil". The report will cite the TB number, date of entry in DA Form 2408-13-1, the aircraft mission design series and serial numbers of aircraft in numerical order.

(2) Task/Inspection Reporting Suspense Date . Upon completion of inspection, Commanders will forward a priority message to the Logistical Point of Contact listed in para 16.b. The report will cite this TB number, date of inspection, aircraft serial number, aircraft hours, component serial number, component hours, results of the inspection and if applicable, Hub assembly requisition /document number. Inspection and reports will be completed NLT date specified in paragraph 2..

- b. Wholesale Spare Parts/Assemblies.

(1) Reporting Message Receipt. N/A.

c. Retail Spare Parts/Assemblies.

(1) Commanders and facility managers will report receipt of this TB by email or datafax to the Logistical Point of Contact listed in paragraph 16.b. NLT date specified in paragraph 1.e.(2). if receipt of the Safety of Flight message has not already been reported. Provide local point of contact.

(2) Task/Inspection Reporting Suspense - Commanders and facility managers will report compliance with paragraph 1.e.(2). to the Logistical Point of Contact in paragraph 16.b. NLT date specified in paragraph 1.e.(2). Report the quantity on hand by stock number, part number, serial number and time since new. Report by email or datafax and provide local point of contact.

d. 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 (Main Rotor Hub).

(2) DA Form 2408-13, Aircraft Status Information Record.

(3) DA Form 2408-13-1, Aircraft Inspection and Maintenance Record.

(4) DA Form 2408-16, Aircraft Component Historical Record.

(5) DA Form 2408-18, Equipment Inspection List. ULLS-A users will use the 800 inspection number for the inspections.

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

**16. Points of Contact.**

a. Technical POC is Mr. Roger Clark, AMSAM-RD-AE-I-D-U, DSN 897-5199, Commercial (256) 313-5199/2413. Datafax is 897-6053 or Commercial (256)313-6053, email is "roger.clark@uh.redstone.army.mil".

b. Logistical POC is Mr. Joe Hoover, AMSAM-DSA-UH-L, DSN 645-7898 or (256) 955-7898, datafax is DSN 897-3778 or (256)313-3778. Email is "joe.hoover@uh.redstone.army.mil"

c. Wholesale materiel point of contact (Spares) is Ms. Julia Moore, AMSAM-MMC-VS-UA, DSN 897-2012 or (256) 313-2012, datafax is DSN 746-4591. Email is "julia.moore@redstone.army.mil".

d. Forms and records point of contact is Ms. Ann Waldeck, AMSAM-MMC-MA-NM, DSN 746-5564 or (256) 876-5564, Datafax is DSN 746-4904. Email is "ann.waldeck@redstone.army.mil".

e. Safety points of contact are:

(1) Primary - Mr. Harry Trumbull, (SAIC), AMSAM-SF-A, DSN 897-2095 or commercial (256) 313-2095, Datafax is DSN 897-2111 or (256) 313-2111. E-mail is "harry.trumbull@redstone.army.mil".

(2) Alternate - Mr. Ron Price, AMSAM-SF-A, DSN 788-8636 or (256) 842-8636, datafax is DSN 897-2111 or (256) 313-2111. Email is "ron.price@redstone.army.mil".

f. Foreign Military Sales recipients requiring clarification of action advised by this TB should contact

(1) Primary: Mr. Ronnie W. Sammons, AMSAM-SA-CS-NF, DSN 897-6856 or (256) 313-6856. Datafax is DSN 897-6630 or (256) 313-6630. Email "ronnie.sammons@redstone.army.mil".

(2) Alternate: MR. Paul W. Tarr, AMSAM-SA-CS-NF, DSN 897-6861 or (256) 313-6861. Datafax is DSN 897-6630 or (256) 313-6630. Email "paul.tarr@redstone.army.mil".

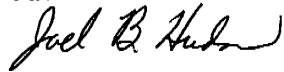
g. After hours contact AMCOM Command Operations Center (COC) DSN 897-2066/7 or (256) 313-2066/7.

**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) directly to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5000. You may also submit your recommended changes by E-mail directly to 2028@redstone.army.mil. A reply will be furnished directly to you.

By Order of the Secretary of the Army

ERIC K. SHINSEKI  
*General, United States Army*  
*Chief of Staff*

Official:



JOEL B. HUDSON  
*Administrative Assistant to the*  
*Secretary of the Army*  
0124103

DISTRIBUTION:

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TB 1-1520-237-20-235

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.