

ROUTINE

*TB 1-1520-237-20-222

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

MAINTENANCE MANDATORY, RCS CSGLD-1-1860(R1), ALL H-60 SERIES AIRCRAFT, REMOVAL OF INPUT MODULE GEAR BOX ASSEMBLIES WITH POTENTIALLY CRACKED BEVEL GEARS

Headquarters, Department of the Army, Washington, D. C.
4 September 2000

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

1. **Priority Classification. ROUTINE**

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 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 input module gearbox assembly IAW TB 1-1520-237-20-222 prior to the next flight but NLT 16 August 2000." Clear the Red Horizontal Dash //--// entry when the procedures IAW para 8 and 9 are completed. The records inspection will be completed prior to the next flight but not later than 16 August 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. Same as paragraph 1a.

c. Aircraft Undergoing Maintenance. Same as paragraph 1a.

d. Aircraft in Transit.

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

(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.

*This TB supersedes USAAMCOM Aviation Safety of Flight Message UH-60-00-02, DTG 022200Z Aug 00.

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. Upon receipt of this TB, Depot and Material Activity Commanders will ensure the material condition tags of all items in all condition codes listed in paragraph 6 are annotated to read "TB 1-1520-237-20-222, Inspection of the Input Module Gearbox Assembly Not Complied With".

(1) Wholesale Stock. Report receipt of this TB IAW Paragraph 14c(1). Upon receipt of this TB, Depot and Material Activity Commanders will ensure all serviceable items (Condition Code //A//, //B//, //C//, //D//, and //E// listed in paragraph 6 are placed in condition code //J// and tagged with a Suspended Tag/Label, Material, DD Form 1575/DD Form 1575-1. Do not remove original condition tags.

(2) Retail Stock. Report receipt of this TB IAW paragraph 14c(2). 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. Report compliance with this message IAW paragraph 14d(2).

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 16 August 2000 and report IAW para 14b.

3. **Reporting Compliance Suspense Date.** Report compliance IAW para 14a NLT 23 August 2000.

4. **Summary of the Problem.**

a. There have been three failures of input module accessory drive bevel gears on H-60 aircraft. Failure can cause loss of transmission lubricant, loss of NR signal, and accessory and input chiplights. Investigations have shown that each of the failures were caused by a gear removal tool used during repair of the input modules at CCAD which resulted in fatigue crack propagation from a static crack in a gear tooth root. Although the gear removal tool was not used on all input modules, its use was not documented. Therefore, all input modules repaired at CCAD are considered suspect. Past failure data reveals minimal probability of failure for input modules with more than 130 flight hours since last installed.

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

c. The purpose of this TB is to:

(1) Identify and remove from service all suspected input modules with less than 30.0 flight hours time since last repaired.

(2) Provide flight restrictions to allow operation of input modules identified with 30.1 to 250.0 hours time since last repaired.

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

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

NOMENCLATURE	PART NUMBER	NSN
Input Module Assy	70351-08001-045	1615-01-168-2984
Input Module Assy	70351-08001-046	1615-01-230-6218
Input Module Assy	70351-08001-049	1615-01-353-3825

7. **Parts to be Inspected.** NA

8. **Inspection Procedures..**

NOTE

The following inspection must be performed separately for each input module

a. For each input module, inspect the Helicopter Historical Records (DA Form 2408-16) to determine the time since last installed.

b. For each input module that has 250.0 hours or less time since last installed, check the Equipment Modification Record (DA Form 2408-5-1) to determine if the input module is in compliance with AMCOM Engineering Directive (AED) T2881.

(1) For each input module that is in compliance with AED T2881, the inspection is complete and the red horizontal dash //--// entry will be cleared.

(2) If time since last installed is equal to or less than 250.0 hours, and compliance with AED T2881 can not be confirmed contact the 2410 Hotline to determine if the input module had been repaired at CCAD. If repaired at CCAD:

(a) Determine the total time on the input module at the time of repair.

(b) Determine if the accessory drive bevel gear was replaced at the time of repair. A list of input module serial numbers has been provided to the 2410 Hotline that reflects which input module had new accessory drive bevel gears installed during repair.

(3) If the bevel gear was not replaced with a new gear during repair of the input module at CCAD, and the time since repair is equal to or less than 30.0 hours, proceed with the corrective action procedures IAW paragraph 9a.

(4) If the bevel gear was not replaced with a new gear during repair of the input module at CCAD, and the time since repair is equal to or greater than 30.1 but less than 250.0 hours proceed to paragraph 9b.

(5) If the time since repair for the input module is equal to or greater than 250.0 hours the inspection is complete and the Red Horizontal Dash //--// entry will be cleared.

(6) If it is determined the accessory drive bevel gear was replaced with a new gear during repair of the input module at CCAD, the inspection is complete and the Red Horizontal Dash //--// entry will be cleared.

(7) If the input module was repaired at CCAD after 30 June 2000, the inspection is complete and the Red Horizontal Dash //--// entry will be cleared.

(8) If the input module was repaired at a facility other than CCAD, the inspection is complete and the Red Horizontal Dash //--// entry will be cleared.

9. Correction Procedures.

NOTE

The correction procedures must be performed separately for each input module.

NOTE

The NR sensor is installed on both input modules on the UH-60L, and on the right input module on the UH-60A. In the event of a right input module failure on the UH-60A, the crew can expect loss of NR signal.

a. For input modules which did not have the accessory drive bevel gear replaced with a new gear when repaired by CCAD, are not in compliance with AED T2881, and have equal to or less than 30.0 hours time since repair. Replace the input module prior to the next flight.

b. If an aircraft has two input modules installed which did not have the accessory drive bevel gear replaced with a new gear when repaired at CCAD, are not in compliance with AED T2881, and have 30.1 to 250.0 hours time since repair. One of the suspect modules will be replaced prior to the next flight.

c. If an aircraft has one input module installed which does not have the accessory drive bevel replaced with a new gear when repaired at CCAD, is not in compliance with AED T2881, and had 30.1 to 250.0 hours time since repair, prior to the next flight make the following entry on the DA Form 2408-13-1. Enter a Circled Red //X// status symbol with the following statement: "Aircraft operations restricted IAW TB 1-1520-237-20-222." The following flight restrictions will apply:**33**

- (1) VFR Flight Only.
- (2) No flights over water which do not allow the aircraft to land as soon as possible to a suitable landing site.
- (3) When time since repair meets or exceeds 250 hours the Circled Red //X// entry will be cleared.
- d. When the inspections and corrective actions for both input modules are complete, the Red Horizontal Dash //--// entry may be cleared.

10. Supply/Parts and Disposition.

NOTE

HQDA-ODCSOPS will prioritize units and repair parts distribution.

- a. Parts required. Items cited in paragraph 6 may be required to replace defective items.
- b. Requisitioning Instructions. Requisition replacement parts and turn-in unserviceable parts using normal supply procedures. AMCOM will provide 100% credit to retail SMA and National Guard activities. Retail SMA will provide 100% credit to supported units. All requisitions and turn-ins shall use Project Code (CC 57-59) "'X02" (Xray-Zero-Two)".

NOTE

Project Code "X02" 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. Contact the logistic POC in paragraph 16b for disposition instructions.
- 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 for inspection, removal, and reinstallation of the input module. Depot for repair of the input module.
- b. Estimated Time Required.
 - (1) Paragraph 8 Inspection: Total of 1 man-hour using 1 person.
 - (2) Paragraph 9 replacement (If Required):
 - (a) Total of 48 man-hours using 2 persons.
 - (b) Total of 24 hours downtime for one end item.
- c. Estimated cost impact to the field:

Nomenclature	Part No./NSN	Qty	Cost Each	Total Cost
Input Module Assy	70351-08001-049	2	\$51,656.00	\$103,312.00
	1615-01-353-3825			

Total cost per aircraft = \$103,312.00

- 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. N/A

13. References.

- a. DA PAM 738-751, 15 Mar 99.
- b. TM 1-1520-237-23.
- c. TM 1-1520-250-23.
- d. TM 1-1520-237-10.
- e. TM 1-1520-250-10.
- f. TM 1-1520-253-10.
- g. TM 1-1520-269.10.
- h. TM 1-1520-269-23.
- i. AED T2881.

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 TB 1-1520-237-20-222, 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: Commander, AMCOM, ATTN: AMSAM-DSA-UH-L (DSN645-7898 or (245) 955-7898, datafax is DSN 897-3778 or (256) 313-3778. E-mail is "joe.hoover@uh.redstone.army.mil"), Redstone Arsenal, AL 35898-5000. The report will cite TB 1-1520-237-20-222, date of inspection, aircraft serial number, aircraft hours, and results of the inspection. Inspection and reports will be completed NLT 23 August 2000.

- c. Reporting Message Receipt (Spares).

(1) Material in wholesale depot storage. Depot and Material Activity Commanders will report receipt of this message by E-mail or datafax to the Wholesale Material (Spares) Point of Contact listed in paragraph 16c NLT 7 August 2000. Provide local point of contact.

(2) Material in retail storage. Commanders and Facility Managers will report receipt of this message by E-mail or datafax to the logistical point of contact listed in paragraph 16b NLT 9 August 2000. Provide local point of contact.

- d. Task/Inspection Reporting Suspense Date (Spares).

(1) Material in wholesale depot storage. N/A.

(2) Material in retail storage. Commanders and Facility Managers will report compliance with this message to the logistical point of contact in paragraph 16b NLT 16 August 2000. Report the quantity inspected by condition code and the resulting condition code. Report by E-mail or datafax and provide local point of contact.

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 (Input Module).
- (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.
- (6) DA Form 2410, Component Removal and Repair/Overhaul Record. (Only if input module is removed/replaced.)
- (7) DD Form 1574/DD Form 1574-1, Serviceable Tag/Label, Material (Color Yellow). Annotate remarks block with "Inspected Serviceable IAW TB 1-1520-237-20-222."
- (8) DD Form 1575/DD Form 1575-1, Suspended Tag/Label, Material (Color Brown). Annotate remarks block with "Suspended IAW TB 1-1520-237-20-222".
- (9) DD Form 1577-2/DD Form 1577-3, Unserviceable (Repairable) Tag/Label, Material (Color Green). Annotate remarks block with "Unserviceable IAW TB 1-1520-237-20-222".

15. Weight and Balance. N/A.

16. Points of Contact.

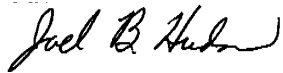
- a. Technical point of contact for this TB is Mr. Darrell Hutson, AMSAM-RD-AE-I-D-U, DSN 897-5213 or 897-5198 or (256) 313-5213, datafax is DSN 897-3844 or 897-5206 or commercial (256) 313-3844 or (256) 313-5206. E-mail is "darrell.hutson@redstone.army.mil<mailto:darrell.hutson@redstone.army.mil>".
- b. Logistical point of contact for this TB is Mr. Joe Hoover, AMSAM-DSA-UH-L, DSN 645-7898 or (256) 955-7898, datafax is DSN 897-3778 or (256) 313-3778. E-mail is "joe.hoover@uh.redstone.army.mil<mailto:joe.hoover@redstone.army.mil>".
- c. Wholesale materiel point of contact (Spares) is Mr. James Keener, AMSAM-MMC-VS-UB, DSN 897-1184 or (256) 313-1184, datafax is DSN 897-4769. E-mail is "keener-je@redstone.army.mil<mailto:keener-je@redstone.army.mil>".
- d. Forms and records point of contact for this TB is Ms. Ann Waldelk, AMSAM-MMC-RE-FF, DSN 746-5564 or (256) 876-5564, Datafax is DSN 746-4904. E-mail is "waldeck-ab@redstone.army.mil<mailto:waldeck-ab@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<mailto:harry.trumbull@redstone.army.mil>".
 - (2) Alternate - Mr. Ron Price, AMSAM-SF-A, DSN 788-8636 or commercial (256) 842-8636, Datafax is (256) 313-2111. E-mail is "ron.price@redstone.army.mil<mailto:ron.price@redstone.army.mil>".
- f. Foreign Military Sales recipients requiring clarification of action advised by this TB should contact: CW5 Joseph L. Wittstrom, Security Assistance Management, AMSAM-SA, DSN 897-0410 or (256) 313-0410. E-mail is "wittstrom-jl@redstone.army.mil<mailto:wittstromjl@redstone.army.mil> or Mr. Ronnie W. Sammons, AMSAM-SA-CS-NF, DSN 897-0408 or (256) 313-0408. Datafax is DSN 897-0411 or (256) 313-0411. E-mail "sammonssrw@redstone.army.mil<mailto:sammonsrw@redstone.army.mil>". Huntsville, Alabama is GMT minus 6 hours.
- 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 you letter or DA form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-LS-LP, Redstone Arsenal, AL 35898-5000. You may also submit your recommended changes by E-mail directly to ls-lp@redstone.army.mil. A reply will be furnished directly to you.

By Order of the Secretary of the Army:

Official:

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



JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0022001

DISTRIBUTION:

To be distributed in accordance with Initial Distribution No. (IDN) 313923, requirements for TB 1-1520-237-20-222.

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: ls-lp@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.