

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

**THREE PART INSPECTION PROCEDURE
FOR ALL H-60 (EXCEPT MH-60) AIRCRAFT
TAIL ROTOR GEARBOXES AND
TAIL ROTOR GEARBOX OUTPUT SHAFTS**

Headquarters, Department of the Army, Washington, D. C.
31 December 1994

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NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL 31 DECEMBER 1995 UNLESS SOONER RESCINDED OR SUPERSEDED.

1. Priority Classification. Routine

a. Aircraft in Use. Upon receipt of this Technical Bulletin (TB) the condition status symbol of the cited aircraft will be changed to a red horizontal dash "-". The red horizontal dash "-" may be cleared when the inspection of paragraph 8 below is completed. The affected aircraft shall be corrected as soon as practical but no later than the task/inspection suspense date. Failure to comply with the requirements of this TB within the applicable time frame will cause the status symbol to be upgraded to a red "X".

b. Aircraft in Depot Maintenance. The affected aircraft shall be inspected as soon as practical but no later than the task/inspection suspense date. Aircraft will not be issued until compliance with this TB has been completed and tail rotor gearboxes with suspect shafts are replaced.

c. Aircraft Undergoing Maintenance. The affected aircraft shall be inspected as soon as practical but no later than the task/inspection suspense date. Aircraft will not be released until compliance with records check of paragraph 8 of this TB has been completed.

d. Aircraft in Transit.

(1) Surface/Air Shipment. Comply within 10 hours or 14 days of arrival.

(2) Ferry Status. Comply with inspection at final destination.

e. Maintenance Trainers (Category A, B, and C). Comply within 14 days of receipt of this TB or within 14 days of receipt of superseded message UH-60-95-SOF-01, whichever is received first.

f. Component/Parts in Stock Including War Reserves at All Levels (Depot and Others). Upon receipt of this TB, all items listed in paragraph 6 and 7 below shall be placed in condition code "J" and retagged with

*This TB supersedes USAATCOM Message 052315Z December 1994 (UH-60-95-SOF-01)

a materiel condition tag/label Suspended (Brown Tag) DD Form 1575 or Label DD Form 1575-1. The remarks block must reference inspection required per this TB. Upon completion of the required inspection, items will be retagged either serviceable (Yellow Tag) DD Form 1574 or unserviceable/reparable (Green Tag) DD Form 1577-2, dependent upon the results of the inspection.

NOTE

Depots that do not have the capability to inspect the subject assemblies in accordance with this TB, contact the logistical point of contact. Do not issue until this TB has been complied with and you have been notified which assemblies are serviceable.

2. Task/inspection Suspense Date.

- a. Component Records Inspection (Paragraph 8). Within 10 hours/14 days from receipt of superseded message UH-60-95-SOF-01 or receipt of this TB, whichever is received first.
- b. Ultrasonic Inspection (Paragraph 9.a). No later than 31 March 1995.
- c. Tail Rotor Gearbox Replacement (Paragraph 9.b). No later than 31 December 1995.

3. Reporting Compliance Suspense Date. No later than 16 December 1994 per paragraph 14.a. of this TB.

4. Summary of the Problem.

a. This TB rescinds UH-60-94-ASAM-05 (TB 1-1520-237-20-152). Message UH-60-95-SOF-01 (TB 1-1520-237-20-162) has been issued as a SOF rather than an ASAM to ensure the appropriate level of command attention in completing the required actions expeditiously. Tail gearboxes with output shafts, P/N 70358-06620-101, are being removed from fielded aircraft to allow rework of the output shaft. UH-60-94-ASAM-05 initiated a program which removed tail gearboxes based on the output shaft usage time. This program was scheduled to take approximately four years to complete. This program has been revised to allow for a one-time inspection to insure tail gearboxes are removed from service if required, and to allow for timely replacement of tail gearboxes (with gearboxes being provided at no charge to the unit) by contractor teams. The new plan requires: (1) Record inspection (Paragraph 8).

(2) Performance of a one-time ultrasonic inspection of all P/N 70358-06620-101 output shafts by contractor teams no later than 31 March 1995 (Paragraph 9.a).

(3) Mandatory replacement of all tail gearboxes containing -101 output shafts by contractor/Army teams by 31 December 1995 (Paragraph 9.b).

Tail gearboxes are not to be removed in accordance with UH-60-94-ASAM-05 (TB 1-1520-237-20-152). If a valid requisition has been submitted per the ASAM, and the gearbox has not, repeat, not been turned into supply, it should be canceled by the requesting unit immediately. A gearbox must be in the possession of the unit to execute a one-for-one exchange. If the requisition is not canceled, it will be filled as soon as assets are available and the unit will be required to pay for the item. If a gearbox has been turned into supply, do not cancel the requisition. It will be filled as soon as assets are available and the unit will be required to pay for the item.

- b. Manpower/Downtime and Funding Impacts. See paragraph 12.
- c. The purpose of this TB is to: (1) Perform a records check (Paragraph 8).
 - (2) Perform a one-time ultrasonic inspection of all P/N 70358-06620-101 output shafts by 31 March

1995 (Paragraph 9.a).

(3) Remove tail gearboxes containing -101 output shafts by 31 December 1995 (Paragraph 9.b).

5. End Items to be Inspected. All H-60 Black Hawk Aircraft, except MH-60K. Aircraft serial numbers 94-26555 and subsequent will be inspected/corrected by contractor during production and therefore records for aircraft serial numbers 94-26555 and subsequent will not require identification of this action.

6. Assembly Components to be Inspected.

NOMENCLATURE	PART NO.	NSN
TAIL GEARBOX	70358-06600-041	1615-01-074-1222
TAIL GEARBOX	70358-06600-042	1615-01-102-6052
TAIL GEARBOX	70358-06600-043	1615-01-105-1510
TAIL GEARBOX	70358-06600-044	1615-01-280-4444
TAIL GEARBOX	70358-06600-046	1615-01-376-5089

7. Parts to be Inspected.

NOMENCLATURE	PART NO.	NSN
TAIL GEARBOX OUTPUT SHAFT	70358-06620-101	3020-01-090-3423

8. Inspection Procedures.

a. Review the tail gearbox component historical record (DA Form 2408-16) to determine the part number and serial number of the tail gearbox output shaft.

b. If the tail gearbox output shaft is P/N 70358-06620-102 or P/N 70358-06620-101 A, the inspection is complete.

c. Some P/N 70358-06620-101 output shafts have been reworked but only the serial number has been updated to identify the action. If the final character of the P/N 70358-06620-101 tail gearbox output shaft serial number is an "A", e.g., XXXX-XXXXXA, the shaft has already been reworked and the inspection is complete.

d. If the tail gearbox output shaft is P/N 70358-06620-101, and the shaft serial number does not end with an "A", contact the logistical point of contact (paragraph 16.b) by fax or E-Mail to schedule performance of a one-time ultrasonic inspection and replacement of the tail gearbox. Replacement tail gearboxes will be provided at no cost to the unit provided the currently installed tail gearbox is removed per this TB. Other support parts/hardware required to accomplish tail rotor gearbox replacement shall be provided by the unit. If the removed gearbox is determined to be unserviceable for reasons other than the requirements of this TB, the unit will be required to provide a funded requisition for the replacement gearbox.

9. Correction Procedures.

a. One-Time Ultrasonic Inspection. Scheduling of the inspection will be controlled by the logistical point of contact. Units will be notified of the date when the inspection is scheduled for their aircraft. Inspections will be conducted by contractor teams. Units will be required to prepare the aircraft/tail gearbox for the inspection and return the aircraft to serviceable condition, including maintenance test flight. The aircraft must be prepared for ultrasonic inspection in continuing quantities to allow the inspector to work on a continuous 3 aircraft per hour schedule. A high level of emphasis is required to schedule and prepare aircraft to allow all gearboxes to receive ultrasonic inspection by the suspense date. The unit shall be required to provide mechanics, technical inspector (TI), maintenance test pilot, pilot and crew chief. The total time to prepare the aircraft, conduct the inspection and return the aircraft to an airworthy status is estimated to be 8 hours. The basic procedure for preparing the aircraft for ultrasonic inspection is as follows:

- (1) Ready aircraft for safe maintenance.
- (2) Remove tail rotor servo/pitch change shaft assembly from tail gearbox per reference 13.
- (3) Clean inside diameter of the output shaft using a low lint cloth dipped in approved cleaning fluid. Do not allow the cleaning fluid to drip into the gearbox. Wipe shaft dry after cleaning.
- (4) Protect the tail gearbox until the contractor inspection team conducts the ultrasonic inspection.
- (5) Provide the logistical point of contact with the ultrasonic inspection results in accordance with paragraph 14.c. If the tail gearbox fails the inspection, remove the tail gearbox per reference 13. Replacement gearboxes will be provided through the logistical point of contact on a one-for-one basis at no charge to the unit. **DO NOT-REPEAT-DO NOT** turn in gearboxes which fail the ultrasonic inspection until authorized by the logistical point of contact. Other support parts/hardware required to accomplish replacement of the tail rotor gearbox shall be provided by the unit. Tail gearboxes which pass the inspection must be removed within 200 flight hours of the time the inspection is performed or 31 December 1995, whichever comes first.
 - (6) If applicable, install a tail gearbox with a P/N 70358-06620-101A or -102 output shaft.
 - (7) Ensure area is free of foreign objects.
 - (8) Install the tail rotor servo/pitch change shaft assembly into the tail gearbox per reference 13.
 - (9) Service tail gearbox per reference 13.
 - (10) Perform MOC/test flight as required.

b. Replacement of Tail Gearboxes. Scheduling for replacement of tail gearboxes containing -101 output shafts will be controlled by the logistical point of contact. Schedules shall be based on the results of the onetime inspection (reference paragraph 9.a), by operational/mission considerations and by logistical considerations. Units will be notified of the date when the replacement is scheduled for their aircraft. Units will be required to have those aircraft scheduled for tail gearbox removal at the designated site at the appropriate time. Once at the site, contractor teams will remove the tail gearbox and replace it with a gearbox having a -101A or -102 output shaft installed. Replacement gearboxes will be provided through the logistical point of contact on a one-for-one basis at no charge to the unit, unless the removed gearbox is determined to be unserviceable for reasons other than the requirements of this TB. If the gearbox is already turned in or a serviceable gearbox is not available for exchange, the unit will have to provide a funded requisition. Other support parts/hardware required to accomplish replacement of the tail rotor gearbox shall be provided by the unit. The unit shall be required to provide maintenance personnel, TI, maintenance test pilot, pilot and crew chief. Total time required for the tail gearbox replacement, including both contractor team and unit activities is estimated to be 3 days.

10. Supply/Parts and Disposition.

- a. Parts Required. Tail gearboxes required shall be provided through the logistical point of contact. Other support parts/hardware required to accomplish replacement of the tail rotor gearbox shall be provided by the unit and should be ordered through normal supply channels.
- b. Requisitioning Instructions. N/A.
- c. Bulk and Consumable Materials. N/A.
- d. Disposition. Disposition of parts removed per this TB shall be provided by the logistical point of contact.
- e. Disposition of Hazardous Material. N/A.

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

12. Application.

- a. Category of Maintenance AVUM. Aircraft downtime for both the one-time ultrasonic inspection and for tail gearbox replacement activities will be charged to AVUM Maintenance.
- b. Estimated Time Required (Minus Maintenance Test Flight).

- (1) Total of 0.5 manhours using 1 person for the logbook inspection.
- (2) Total of 16 manhours (2 persons for 8 hours) to prepare the aircraft/tail gearbox for the onetime ultrasonic inspection and return it to an airworthy status.
- (3) Total of 32 manhours (2 persons for 16 hours) to remove and replace the tail rotor gearbox.
- c. Estimated Cost Impact of Stock Fund Items to the Field. N/A.
- d. TBs/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. TM 1-1520-237-23 Series Technical Manuals, Aviation Unit and Intermediate Maintenance for Army UH-60A/EH-60A/UH-60L Helicopters, dated 31 August 1994.

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 mission design series (MDS) aircraft, forward a priority message, datafax or E-Mail to Commander, ATCOM, ATTN: AMSAT-R-X (SOF Compliance Officer), per AR 95-3. Datafax number is DSN 693-2064 or commercial (314) 263-2064. E-Mail address is "amsatrxs@st-louis-emhr.army.mil". The report will cite this TB number, date of entry in DA Form 2408-13-1, the aircraft MDS and serial numbers of aircraft in numerical order.

b. Task/Inspection Reporting Suspense Date for the Records Inspection (Aircraft). Upon completion of the records inspection in accordance with paragraph 8, the unit will forward a priority message, fax or E-Mail to the logistical point of contact, paragraph 16.b. The message will cite this TB number; date of inspection; aircraft serial number and hours; tail gearbox part number, serial number and hours; tail gearbox output shaft part number, serial number, and hours; results of the records inspection; a point of contact with commercial and DSN phone numbers; and a return fax or E-Mail address. The message will be completed and forwarded no later than 10 days after the task/inspection suspense date.

c. Task/Inspection Reporting Suspense Date for the Ultrasonic Inspection (Aircraft). Upon completion of the ultrasonic inspection in accordance with paragraph 9.a, the unit will forward a priority message to the logistical point of contact. The message will cite this TB number; date of inspection; aircraft serial number and hours; tail gearbox part number, serial number and hours; tail gearbox output shaft part number, serial number, and hours; results of the ultrasonic inspection; a point of contact with commercial and DSN phone numbers; and a return fax or E-Mail address. The message will be completed and forwarded no later than 5 days after completion of the inspection.

d. Reporting Compliance Suspense Date (Spares). N/A.

e. Task/Inspection Reporting Suspense Date (Spares). Upon completion of the records inspection, depot commanders and others holding stock shall forward a priority message, fax or E-Mail report of results to logistical point of contact below no later than 10 days after receipt of this TB. The report shall include quantity on hand, quantity which passed inspection, quantity which failed inspection, a point of contact with commercial and DSN phone numbers and a return fax or E-Mail address.

f. The following forms are applicable and are to be completed in accordance with DA PAM 738-751, 15 JUN 92: (1) DA Form 2408-5-1, Equipment Modification Record (Tail Rotor Gearbox).

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

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

(4) DA Form 2408-13-2, Related Maintenance Actions.

(5) DA Form 2408-16, Aircraft Component Historical Record (Tail Rotor Gearbox). If tail gearbox output shaft passes the one-time ultrasonic inspection per paragraph 9.a above, indicate the tail gearbox requires removal. Change block 6k to new replacement due time.

(6) DA Form 2408-16, Aircraft Component Historical Record (Aircraft). Complete if the tail rotor gearbox is removed.

(7) DA Form 2410, Component Removal and Repair/Overhaul Record. Complete if tail gearbox is removed.

(8) DD Form 1574 (Yellow Tag) for in stock items that are determined to be serviceable. (Mark inspected serviceable in accordance with this TB.)

(9) DD Form 1575 (Brown Tag) for in stock items in suspended status awaiting inspection. (Mark suspended in accordance with this TB.)

(10) DD Form 1577-2 (Green Tag) unserviceable (reparable) for in stock items that are determined to be reparable. (Mark unserviceable in accordance with this TB.)

15. Weight and Balance. N/A.

16. Points of Contact.

a. Technical point of contact for this TB is Mr. Mark J. Jeude, AMSAT-R-EPD, DSN 693-1597 or commercial 314/263-1597, E-Mail "mjeude%adas@st-louis-emh7.army.mil" or Mr. Curtis Stevens, AMSATR-ECU, DSN 693-1687 or commercial 314/263-1687.

b. Logistical point of contact for this TB is Mr. Joe Hoover, SFAE-AV-BH-L, DSN 693-0484 or commercial 314/263-0484, E-Mail "jhoover@st-louis-peo3.army.mil", datafax DSN 693-1898 or commercial 314/263-1898.

c. Forms and records point of contact for this TB is Ms. Ann Waldeck, AMSAT-I-MDM, DSN 693-1821/1758 or commercial 314/263-1821/1758.

d. Safety point of contact for this TB is Mr. David Scott, AMSAT-R-X, DSN 693-2045 or commercial 314/263-2045.

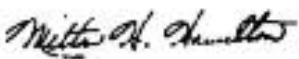
e. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this TB should contact CW5 Jay Nance/Mr. Ron Van Rees, AMSAT-I-IAF, DSN 693-3826/3659 or commercial 314/263-3826/3659.

f. After hours contact ATCOM Command Operations Center (COC) DSN 693-2066/7 or commercial 314/263-2066/7.

17. Reporting of Errors and Recommending Improvements.

You can help 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) direct to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished to you.

By Order of the Secretary of the Army:

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