

URGENT

*** TB 1-1520-240-20-160**

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

**MANDATORY MAINTENANCE FOR ALL
AFT TRANSMISSION RETAINER ON ALL
CH-47D, CH-47F, MH-47D AND MH-47E AIRCRAFT**

Headquarters, Department of the Army, Washington, D.C.
25 August 2005

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

NOTE

This message is effective until rescinded or superseded.

NOTE

This message is issued IAW AR 95-1 and has not been transmitted to units subordinate to addressees. Addressees will immediately retransmit this message to all subordinate units, activities or elements affected or concerned. MACOMS will immediately verify this transmission to the AMCOM SOF Compliance Officer (AMSAM-SF-A, safeadm@redstone.army.mil).

NOTE

MACOM commanders may authorize temporary exception from message requirements IAW AR 95-1, Chapter 6. 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.

NOTE

Commanders unable to comply with the requirements of this message within the time frame specified will change the affected aircraft status symbol to a Red //X//.

1. SUMMARY.

a. Background - An unknown number of H-47 AFT transmissions have been assembled omitting the Liner (PN 145D2304-4) or with the ball bearing outer race retention key mechanically removed from the liner. The Liner is a subcomponent of the Seal Retainer Assembly (PN 145D2304-9). Installation of the Seal Retainer Assembly is identified in DMWR 55-1615-324 with a Warning to be an Installation Critical, Critical Safety Item but is not included in the TM.

b. Message Purpose:

(1) Ensure proper assembly of the AFT Transmission to prevent unnecessary wear from bearing race spinning, bearing spalling, and premature transmission failure.

(2) Emphasize to the fleet proper installation of the Seal Retainer Assembly.

* This TB supersedes, MSG DTG 281630Z July 2005.

TB 1-1520-240-20-160

- (3) Require one-time visual inspection of the Seal Retainer Assembly for proper installation of the Liner.
- (4) Revise the TMs to identify the assembly as installation critical.

2. END ITEMS AFFECTED. All H-47 Series Aircraft.

3. ASSEMBLIES/COMPONENTS/PARTS AFFECTED.

a. Suspect/Discrepant Assemblies/Components/Parts:

NOMENCLATURE	PN	NSN
Seal Retainer Assembly	145D2304-9	5330-01-356-6164

b. Additional Assemblies/Components/Parts to be inspected:

NOMENCLATURE	PN	NSN
Transmission, Mechanical	145D2300-7	1615-01-315-4071
Transmission, Mechanical	145D2300-6	1615-01-327-1297
Transmission, Mechanical	145D2300-5	1615-01-296-3091
Transmission, Mechanical	145D2300-4	1615-01-307-4842

NOTE

When complying with the requirements of this message, complete forms and records entries IAW DA PAM 738-751. ULLS-A units will use appropriate "E" forms.

4. INITIAL TAMMS (THE ARMY MAINTENANCE MANAGEMENT SYSTEM) COMPLIANCE REQUIREMENTS.

- a.** 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: "Comply with requirements of CH-47-05-ASAM-04 during next phase but NLT 31 Jul 07."

NOTE

The TAMMS compliance reporting form is available at "www.redstone.army.mil/sof/tamms.xls" (use lower case letters only) or may be obtained from the units servicing LAR. Alternate forms may be approved by the AMCOM SOF Compliance Officer.

NOTE

The TAMMS Compliance Report only confirms the unit has made the initial logbook entry for assigned aircraft. TAMMS Compliance Reports will include aircraft serial numbers (in numerical order), date of entry on DA Form 2408-13-1, unit address, local POC name and phone number.

- b.** TAMMS Compliance Report - Submit TAMMS Compliance Report via priority email to "safeadm@redstone.army.mil" NLT 4 AUG 05 IAW AR 95-1. If email is not available, the report may be faxed to: SOF Compliance Officer at DSN 897-2111 or (256) 313-2111.

5. TASK/INSPECTION COMPLIANCE REPORTING REQUIREMENTS.**NOTE**

The Task/Inspection Reporting Form is available at "www.redstone.army.mil/sof/log.xls" (use lower case letters only) or may be obtained from the units servicing LAR. This report will cite the message number, date of inspection, aircraft serial number, aircraft hours, component serial number, component hours, and results of the inspection.

- a. Aircraft - Submit Task/Inspection Compliance Report for this message to Log POC NLT 3 Aug 07.
- b. Retail Stock (Installation level and below) - N/A.
- c. Wholesale Stock (Including Depot stock, Depot Maintenance and Single Stock Fund) - N/A.

6. SPECIAL PROVISIONS TO MESSAGE REQUIREMENTS (AIRCRAFT).

- a. Aircraft in AVIM or Depot level Maintenance - Commanders, Facility Managers and contractors will not issue aircraft until they are in compliance with this message.
- b. Aircraft at Contractor Facility - Boeing will ensure DD 250 aircraft are in compliance with this message prior to departure.

7. TECHNICAL PROCEDURES/INSTRUCTIONS. Complete the following during next phase but NLT 31 Jul 07.**WARNING****CRITICAL SAFETY ITEM**

Seal Retainer Assembly (PN 145D2304-9) is installation Critical. Any AFT transmission that is known to have been installed without a 145D2304-4 liner or that had the liner either removed or the locking tab machined should be subject to the repair procedure identified in para 7 of this ASAM as soon as possible to preclude having to replace the transmission due to damage from bearing rotation progressing until the phase inspection.

- a. Inspect for the installation of the liner (PN 145D2304-4) and the liner locking key feature as follows. For item depictions, refer to TM 55-1520-240-23P (CH-47), fig 191, items 143/144 or TM 1-1520-252-23P (MH-47), fig 06-9, item 154.

(1) Lower AFT Transmission IAW TM 55-1520-240-23-5, Task 6-92 (through step 31 only) or TM 1-1520-252-23-6, Task 6-110 (through step 37 only).

(2) Remove Seal Retainer IAW TM 55-1520-240-23-5, Task 6-90, steps 2 and 3 or TM 1-1520-252-23-6, Task 6-108, steps 2 and 3.

(3) Inspect for the installation of the liner (PN 145D2304-4) and the liner locking key feature.

(a) If either the liner or locking key feature are not installed, proceed to para 7.b.

(b) If the liner and locking key feature are installed, reinstall seal retainer on rotor shaft IAW TM 55-1520-240-23-5, Task 6-91, steps 7 through "Follow on Maintenance" or TM 1-1520-252-23-6, Task 6-109, steps 7 through "Follow on Maintenance". Proceed to para 7.e.

TB 1-1520-240-20-160

b. Inspect transmission for damage resulting from bearing rotation.

(1) Using a depth gage or a dial caliper, measure from the top machined surface of the top cover (PN 145D2301-3) to the top surface of the bearing (PN 145DS200-2). (Do not measure to the bottom of the key-slot). If this dimension exceeds 0.500 inch, the AFT transmission will be considered unserviceable and will require return to overhaul.

(2) Conduct inspection of the surface of the seal retainer housing (PN 145D2304-8) (360 degrees inspection) where the liner (PN 145D2304-4) should have been installed. The transmission is considered unserviceable if the wear on the liner mounting surface of the seal retainer is equal to or greater than 0.010 inch.

c. If the transmission is unserviceable, make the following entry on the DA Form 2408-13-1. Enter a Red //X// status symbol with the following statement: "AFT transmission unserviceable IAW CH-47-05-ASAM-04, para ###." Insert appropriate para number for the unserviceable condition.

d. If the transmission passes the inspections above, install new seal retainer on rotor shaft IAW TM 55-1520-240-23-5, Task 6-91, steps 7 through "Follow on Maintenance" or TM 1-1520-252-23-6, Task 6-109, steps 7 through "Follow On Maintenance".

e. Clear the initial entry from para 4.a. and note compliance on DA Form 2408-5-1 (AFT Transmission).

8. PROCEDURES/INSTRUCTIONS FOR ASSEMBLIES/COMPONENTS/PARTS IN WORK OR IN STOCK (AT ALL LEVELS INCLUDING WAR RESERVES). N/A.

9. SPECIAL TOOLS AND FIXTURES REQUIRED. N/A.

10. SUPPLY/PARTS (REQUISITION/DISPOSITION).

a. Parts required:

NOMENCLATURE	PN/NSN	QTY	COST EA.	TOTAL \$
Transmission, Mech.	145D2300-7	1	\$482473.00	\$482473.00
	1615-01-315-4071			
Nut, Self-Locking	MS21042-4	10	\$12.29(HD)	\$12.29
	5310-00-807-1468			
Nut, Self-Locking	BACN10TR18	4	\$86.72	\$346.88
	5310-00-177-1095			
O-Ring	M83248/1-278	1	\$2.74	\$2.74
	5331-01-005-0525			
O-Ring	M83248/1-277	1	\$2.89	\$2.89
	5331-01-005-0524			
Seal Retainer	145D2304-9	1	\$1877.00	\$1877.00
	5330-01-356-6164			

Total cost per aircraft w/o transmission = \$2241.80

If Transmission requires replacement = \$484714.80

b. Bulk and consumable materials - N/A.

c. Requisitioning instructions - Requisition replacement parts using normal supply procedures. All requisitions shall use Project Code (CC 57-59) "X3E" (X-ray-Three-Echo).

NOTE

Project Code "X3E" is required to track and establish a data base of stock fund expenditures incurred by the field as a result of message actions.

d. Disposition of discrepant parts/components - Unit will submit a CAT 1 QDR. Hold pending disposition instructions from Technical POC. If instructed to dispose of using normal supply procedures, all turn-in documents must include Project Code (CC 57-59) "X3E" (X-ray-Three-Echo).

11. MAINTENANCE APPLICATION.

a. Category of maintenance - AVUM.

b. Estimated time required:

(1) Time to complete inspection - Total of 20 man-hours using 5 persons with 4 hours "Not Mission Capable Maintenance" (NMCM) time per end item.

NOTE

The time stated below does not include time for Maintenance Operational Checks or Maintenance Test Flights, if required.

(2) Time for repair/replacement - Total of 160 man-hours using 5 persons with 32 hours "Not Mission Capable Maintenance" (NMCM) time per end item.

12. PUBLICATION REQUIREMENTS.

a. References:

(1) AR 95-1.

(2) DA PAM 738-751.

(3) TM 55-1520-240-23, Aviation Unit and Aviation Intermediate Maintenance Manual, CH-47D Helicopter.

(4) TM 1-1520-252-23, Aviation Unit and Aviation Intermediate Maintenance Manual, MH-47E Helicopter.

b. Publication changes - TM 55-1520-240-23-5 and TM 1-1520-252-23-6 shall be changed to reflect this message. A copy of this message will be used as authority to implement the change until the official change is received.

(1) TM 55-1520-240-23-5, Task 6-62, prior to step 7 insert:

WARNING

CRITICAL SAFETY ITEM

Seal Retainer Assembly (15) is installation Critical. Only an unmodified 145D2304-9 Seal Retainer Assembly is to be installed.

(2) TM 55-1520-240-23-5, Task 6-91, prior to step 10 insert:

WARNING

CRITICAL SAFETY ITEM

Seal Retainer Assembly (1) is installation Critical. Only an unmodified 145D2304-9 Seal Retainer Assembly is to be installed.

- (3) TM 55-1520-240-23-5, Task 6-97, prior to step 5 insert:

WARNING

CRITICAL SAFETY ITEM

Seal Retainer Assembly (4) is installation Critical. Only an unmodified 145D2304-9 Seal Retainer Assembly is to be installed.

- (4) TM 1-1520-252-23-6, Task 6-73, prior to step 4 insert:

WARNING

CRITICAL SAFETY ITEM

Seal Retainer Assembly (15) is installation Critical. Only an unmodified 145D2304-9 Seal Retainer Assembly is to be installed.

- (5) TM 1-1520-252-23-6, Task 6-109, prior to step 11 insert:

WARNING

CRITICAL SAFETY ITEM

Seal Retainer Assembly (1) is installation Critical. Only an unmodified 145D2304-9 Seal Retainer Assembly is to be installed.

- (6) TM 1-1520-252-23-6, Task 6-116, prior to step 5 insert:

WARNING

CRITICAL SAFETY ITEM

Seal Retainer Assembly (4) is installation Critical. Only an unmodified 145D2304-9 Seal Retainer Assembly is to be installed.

13. POINTS OF CONTACT.

- a. Technical POCs are:

(1) Primary - Mr. Keith Clancy, AMSRD-AMR-AE-C, DSN 897- 3382 or (256) 313-3375. Fax is 897-4726 or (256) 313-4726. Email is "Keith.Clancy@us.army.mil".

(2) Alternate - Mr. Tim Rickmeyer, AMSRD-AMR-AE-C, DSN 645- 6485 or (256) 955-6485. Fax is 897-4726 or (256) 313-4726. Email is "Timothy.Rickmeyer@us.army.mil".

b. Logistical POCs are:

(1) Primary -Mr. Bill Olson, SFAE-AV-CH, DSN 897-0721 or (256) 313-0721. Fax is 897-4726 or (256) 313-4726. Email is "William.Olson@peoavn.redstone.army.mil".

(2) Alternate -Mr. Mark Samuelson, SFAE-AV-CH, DSN 897-0726 or (256) 313-0726. Fax is 897-4726 or (256) 313-4726. Email is "Mark.Samuelson1@us.army.mil".

c. Wholesale Materiel POC (spares) is Mr. Robert King, AMSAM-MMC-AV-CA, DSN 897-3363 or (256) 313-3363. Fax is DSN 645-6453. Email is "Robert.King@redstone.army.mil".

d. Forms and records POCs are:

(1) Primary -Ms. Ann Waldeck, AMSAM-MMC-MA-NM, DSN 746-5564 or (256) 876-5564. Fax is DSN 746-4904 or (256) 876-4904. Email is "Ann.Waldeck@redstone.army.mil".

(2) Alternate -Ms. Sibyl Johnson, AMSAM-MMC-MA-NM, DSN 788-6696 or (256) 842-6696. Fax is DSN 746-4904 or (256) 876-4904. Email is "Sibyl.Johnson@redstone.army.mil".

e. Safety POCs are:

NOTE

A listing of published safety messages can be viewed at "<https://ams14.redstone.army.mil/safety/sof/index.html>". This is a secured website which requires an Army Knowledge Online (AKO) ("www.us.army.mil") ID and password.

(1) Primary -Mr. Randall Rushing (SAIC), AMSAM-SF-A, DSN 897-2092 or (256) 313-2092. Fax is DSN 897-2111 or (256) 313-2111. Email is "Randall.Rushing@redstone.army.mil".

(2) Alternate-Mr. Russell Peusch, AMSAM-SF-A, DSN 788-8632 or (256) 842-8632. Fax is DSN 897-2111 or (256) 313-2111. Email is "Russell.Peusch@redstone.army.mil".

f. Foreign Military Sales POC is Mr. Ronnie W. Sammons, AMSAM-SA-AS-UT, DSN 897-0875 or (256) 3130875. Fax is DSN 897-0411 or (256) 313-0411. Email is "Ronnie.Sammons@redstone.army.mil".


g. After hours, contact the AMCOM Operations Center (AOC) DSN 897-2066/7 or (256) 313-2066/7.

14. REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS.

You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, U.S. 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 or by fax (256) 842-6546/DSN 788-6546. A reply will be furnished directly to you. Instructions for sending an electronic 2028 may be found at the back of this publication.

By Order of the Secretary of the Army:

Official:


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*Administrative Assistant to the
Secretary of the Army*
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Chief of Staff*

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From: "Whoever" <whoever @ wherever. army. mil>
To: 2028@redstone.army.mil

Subject: DA Form 2028

1. **From:** Joe Smith
2. **Unit:** home
3. **Address:** 4300Park
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.