

URGENT

TB 1-1520-240-20-122

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

MANDATORY INSPECTION OF HORIZONTAL HINGE PIN ON ALL CH-47D, MH-47D AND MH-47E AIRCRAFT

Headquarters, Department of the Army, Washington, D. C.
28 July 2000

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

NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.

1. **Priority Classification.** Urgent

NOTE

In accordance with AR 95-1, paragraph 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 Technical Bulletin, make the following entry on the DA Form 2408-13-1. Enter a red horizontal dash //--// status symbol with the following statement: "Inspect the rotor head DA Form 2408-16's for the horizontal hinge pins in accordance with CH-47-00-ASAM-04 (TB 1-1520-240-20-122) within the next 10 flight hours, but no later than 9 AUG 00." Clear the red horizontal dash //--// entry when the procedures in accordance with paragraph 8 and 9 are completed. The affected aircraft shall be inspected as soon as practical but no later than 9 AUG 00. Commanders who are unable to comply with the requirements of this Technical Bulletin 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 Technical Bulletin.

c. Aircraft Undergoing Maintenance. Commanders and Facility Managers will not issue aircraft until they are in compliance with this Technical Bulletin.

d. Aircraft in Transit.

(1) Surface/Air Shipment. Within 10 flight hours or 14 days of arrival.

This TB supersedes USAAMCOM Message 261318Z JUL 00 CH-47-00-ASAM-04.

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(2) Ferry Status.

(a) Inspect at final destination within 10 flight hours or 14 days of arrival.

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

e. Maintenance Trainers (Category A and B). Comply within 120 days of receipt of this Technical Bulletin.

f. Component/Parts in Stock at All Levels (Depot and Others) including War Reserves. Upon receipt of this Technical Bulletin Depot and Materiel Activity Commanders will ensure the material condition tags of all items in all condition codes listed in paragraphs 6 and 7 shall be annotated to read "CH-47-00-ASAM-04 (TB 1-1520-240-20-122) Horizontal Hinge Pin Records Check Not Complied With".

(1) Wholesale Stock – Upon receipt of this message, Depot and Materiel Activity Commanders will ensure all serviceable items (condition codes //A//, //B//, //C//, //D//, and //E//) listed in paragraphs 6 and 7 are placed in condition code //J// and tagged with a suspended tag/label – Materiel, DD Form 1575/DD Form 1575-1. Do not remove original condition tags. Report compliance with this Technical Bulletin in accordance with paragraph 14D (1).

(2) Retail Stock – Upon receipt of this Technical Bulletin, Commanders and Facility Managers maintaining retail stock at Installation level and below shall contact the supported aviation unit to perform the procedures required in accordance with paragraphs 8 and 9 on suspect materiel. Dispose of discrepant materiel in accordance with paragraph 10. Report compliance with this Technical Bulletin in accordance with paragraph 14D. (2).

2. Task/Inspection Suspense Date. Complete the inspection in accordance with paragraph 8 within the next 10 flight hours but no later than 9 AUG 00 and report in accordance with paragraph 14B.

3. Reporting Compliance Suspense Date. Report compliance in accordance with paragraph 14A no later than 16 AUG 00.

4. Summary of the Problem.

a. A horizontal hinge pin failed hardness and tensile strength tests during a routine quality assurance destructive test. It has been determined that some horizontal hinge pins with serial numbers UW2407 and prior may not have been properly heat treated. Horizontal hinge pins with these serial numbers are required to be hardness tested at the next overhaul or no later than 4800 flight hours total time since new (TTSN). The hardness test will be conducted by the overhaul facility. Horizontal hinge pins that pass the hardness test will be re-identified with a suffix "A" vibro engraved after the serial number.

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

c. The purpose of this Technical Bulletin is to require a records check of all horizontal hinge pins. This check is required to ensure that all horizontal hinge pins with serial numbers UW2407 and prior are sent in for hardness checks before they reach a TTSN of 4800 flight hours.

5. End Items to be inspected. All H-47 series aircraft.

6. Assembly Components to be Inspected.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
HEAD,ROTARY WING, FWD	145R2003-1	1615-01-118-5634
HEAD,ROTARY WING, FWD	145R2003-3	1615-01-198-7555
HEAD,ROTARY WING, FWD	145R2003-4	1615-01-184-3875
HEAD,ROTARY WING, FWD	145R2003-5	1615-01-345-0477
HEAD,ROTARY WING, FWD	145R2003-6	1615-01-296-9503

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
HEAD,ROTARY WING, FWD	145R2003-9	1615-01-314-8863
HEAD,ROTARY WING, FWD	145R2003-10	1615-01-391-4398
HEAD, ROTARY WING, AFT	145R2004-2	1615-01-115-3607
HEAD, ROTARY WING, AFT	145R2004-6	1615-01-199-1814
HEAD, ROTARY WING, AFT	145R2004-8	1615-01-184-3874
HEAD, ROTARY WING, AFT	145R2004-10	1615-01-312-6833
HEAD, ROTARY WING, AFT	145R2004-12	1615-01-298-0763
HEAD, ROTARY WING, AFT	145R2004-18	1615-01-315-3972
HEAD, ROTARY WING, AFT	145R2004-20	1615-01-391-4399

7. Parts to be Inspected.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
PIN, HORIZONTAL HINGE	114R2196-2	5315-00-871-7302
PIN, HORIZONTAL HINGE	114R2197-1	5315-00-185-8295
PIN, HORIZONTAL HINGE	114R2197-5	5315-01-259-5943
PIN, HORIZONTAL HINGE	114R2197-7	5315-01-295-7008

8. Inspection Procedures.

- a. Inspect rotor head DA Form 2408-16 to determine the TTSN of all horizontal hinge pins with serial numbers UW2407 and prior.
- b. Horizontal hinge pins with serial numbers UW2408 and higher, or serial numbers that start with a prefix other than "UW", are not suspect and the red horizontal //--// may be cleared.

9. Correction Procedures.

- a. If the TTSN is equal to or exceeds 4800 flight hours, remove the suspect horizontal hinge pin and replace it. Return the suspect pin for overhaul through the supply system. The overhaul facility will perform the required hardness tests.
- b. If the TTSN is less than 4800 flight hours, annotate the rotor head DA Form 2408-16 to ensure that the suspect horizontal hinge pin is removed and sent in for overhaul prior to exceeding TTSN 4800 flight hours.

10. Supply/Parts and Disposition.

NOTE

HQDA-ODCSOPS will prioritize units and repair parts distribution in a separate, follow on message.

- a. Parts Required. Items cited in paragraph 7 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) "XD9", "X-RAY-DELTA-9".

NOTE

Project code "XD9", X-RAY-DELTA-9" 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.

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d. Disposition. Dispose of removed parts/components using normal supply procedures. All turn-in documents must include project code (CC 57-59) "XD9", "X-RAY-DELTA-9".

e. Disposition of Hazardous Material. N/A.

11. Special Tools and Fixtures Required. As required.

12. Application.

a. Category of Maintenance. AVUM. Aircraft downtime will be charged to AVUM.

b. Estimated Time Required-

(1) For Inspection

(a) Total of 0.5 man-hours using 1 persons

(b) total of 0 hours downtime for one end item.

(2) For Replacement

(a) Total of 16 man-hours using 4 persons (per pin).

(b) Total of 4 hours downtime per pin (6 pins total, 24 hours downtime maximum).

c. Estimated Cost Impact to the Field.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER	COST EACH
PIN, HORIZONTAL HINGE	114R2196-2	5315-00-871-7302	\$5120.00

TOTAL COST PER AIRCRAFT = \$30,720.00 (if all 6 horizontal hinge pins require replacement)

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 – The following publications shall be changed to reflect this Technical Bulletin. A copy of this Technical Bulletin shall be inserted in the appropriate TM as authority to implement the change until the printed change is received.

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

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

(3) DMWR 55-1615-296, Depot Maintenance Work Requirement for Forward and Aft Rotary Wing Head Assemblies.

13. References.

a. DA PAM 738-751, 15 MAR 99.

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

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

d. DMWR 55-1615-296, Depot maintenance Work Requirement for Forward and Aft Rotary wing Head Assemblies.

14. Recording and Reporting Requirements.

a. Reporting Compliance Suspense Date (Aircraft). Upon entering requirements of this Technical Bulletin on DA Form 2408-13-1 on all subject MDS aircraft, forward a priority message, datafax or E-Mail to Com-

mander, AMCOM, ATTN: AMSAM-SF-A (SOF Compliance Officer), Redstone Arsenal, AL 35898-5000, in accordance with 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 Technical Bulletin 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). No special report of the results of this inspection is required.

c. Reporting Message Receipt (SPARES). N/A.

d. Task/Inspection Reporting Suspense Date (SPARES).

(1) Materiel in Wholesale Depot Storage – Report compliance with this Technical Bulletin to the Wholesale Materiel point of contact (SPARES) listed in paragraph 16C within 7 days of the date of this Technical Bulletin on DD Form 1225. Provide the cost of compliance with this Technical Bulletin to include an estimate of the cost reimbursable funding required to move serviceable items on hand listed in paragraphs 6 and 7 to a work area, unpack the materiel, repack the materiel after inspection by inspectors and to return the materiel to storage, as appropriate. Report by original serviceable condition code, the quantity of materiel placed in condition code //J//. Report by e-mail or datafax and provide local point of contact.

(2) Materiel in Retail Storage – Report compliance with this Technical Bulletin to the logistical point of contact in paragraph 16B within 14 days of the date of this Technical Bulletin. 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 (Horizontal Hinge Pin).

(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 (Rotar Heads).

(6) DA Form 2410, Component Removal and Repair/Overhaul Record. (Only if hinge pin is removed/replaced)

(7) DD Form 1574/DD Form 1574-1, Serviceable Tag/Label – Materiel (color yellow). Annotate remarks block with "Inspected serviceable in accordance with CH-47-00-ASAM-04 (TB 1-1520-240-20-122)."

(8) DD Form 1575/DD Form 1575-1, Suspended Tag/Label – Materiel (color brown). Annotate remarks block with "Suspended in accordance with CH-47-00-ASAM-04 (TB 1-1520-240-20-122)."

(9) DD Form 1577/DD Form 1577-1, Unserviceable (Condemned) Tag/Label – Materiel (color red). Annotate remarks block with "Condemned in accordance with CH-47-00-ASAM-04 (TB 1-1520-240-20-120) and mutilated in accordance with TM 1-1500-328-23."

(10) DD Form 1577-2/DD Form 1577-3, Unserviceable (repairable) Tag/Label – Materiel (color green). Annotate remarks block with "Unserviceable in accordance with CH-47-00-ASAM-04 (TB 1-1520-240-20-122)."

15. Weight and Balance. N/A.

16. Points of Contact.

a. Technical point of contact for this TB is Mr. Larry Wieschhaus, AMSAM-RD-AE-I-P-C, DSN 897-3341 or commercial (256) 313-3341, datafax is DSN 897-4348 or commercial (256) 313-4348. e-mail is "larry.wieschhaus@redstone.army.mil".

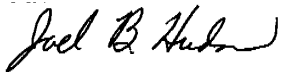
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- b. Logistical point of contact for this TB is Mr. Bill Olson, SFAE-AV-CH-L, DSN 897-3379 or commercial (256) 313-3379, datafax is (256) 313-4348. E-mail is "william.olson@peoavn.redstone.army.mil".
- c. Wholesale Materiel point of contact (SPARES) is Mr. Lorenzo Thomas, AMSAM-MMC-VS-UC, DSN 897-1511 or commercial (256) 313-1511, datafax is DSN 897-1106. E-mail is "thomas-lo@redstone.army.mil".
- d. Forms and Records point of contact for this TB is Ms. Ann Waldeck, AMSAM-MMC-RE-FF, DSN 746-5564 or commercial (256) 876-5564, datafax is DSN 746-4904. E-mail is "waldeck-ab@redstone.army.mil".
- e. Safety points of contact for this TB are –
 - (1) Primary – Mr. Frank Roseberry (SAIC), AMSAM-SF-A, DSN 788-8631 or commercial (256) 842-8631, datafax is DSN 897-2111 or commercial (256) 313-2111. E-mail is "frank.roseberry@redstone.army.mil".
 - (2) Alternate – Mr. Russel Peusch, AMSAM-SF-A, DSN 788-8632 or commercial (256) 842-8632, datafax is DSN 897-2111 or commercial (256) 313-8632. E-mail is "russel.peusch@redstone.army.mil".
- f. Foreign Military Sales recipients requiring clarification of action advised by this Technical Bulletin should contact CW5 Joseph L. Wittstrom, Security Assistance Management, AMSAM-SA, DSN 897-0410 or commercial (256) 313-0410. E-mail is "wittstromjl@redstone.army.mil" or Mr. Ronnie Sammons, AMSAM-SA-CS-NF, DSN 897-0408 or commercial (256) 313-0408, datafax is DSN 897-0411 or commercial (256) 313-0411. E-mail is "sammonsrw@redstone.army.mil". Huntsville, AL is GMT minus 5 hours.
- g. After hours contact the AMCOM COMMAND OPERATIONS CENTER (COC) DSN 897-2066/7 or commercial (256) 313-2066/7.

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
0021001

DISTRIBUTION:

To be distributed in accordance with Initial Distribution Number (IDN) 313925, requirements for TB 1-1520-240-20-122.

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.

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN...JOT DOWN THE
DOPE ABOUT IT ON THIS FORM.
CAREFULLY TEAR IT OUT, FOLD IT
AND DROP IT IN THE MAIL.

SOMETHING WRONG WITH PUBLICATION

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER

PUBLICATION DATE

PUBLICATION TITLE

BE EXACT PIN-POINT WHERE IT IS

PAGE
NO.

PARA-
GRAPH

FIGURE
NO.

TABLE
NO.

IN THIS SPACE, TELL WHAT IS WRONG
AND WHAT SHOULD BE DONE ABOUT IT.

TEAR ALONG PERFORATED LINE

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
 1 decimeter = 10 centimeters = 3.94 inches
 1 meter = 10 decimeters = 39.37 inches
 1 dekameter = 10 meters = 32.8 feet
 1 hectometer = 10 dekameters = 328.08 feet
 1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
 1 decigram = 10 centigrams = 1.54 grains
 1 gram = 10 decigrams = .035 ounce
 1 dekagram = 10 grams = .35 ounce
 1 hectogram = 10 dekagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
 1 deciliter = 10 centiliters = 3.38 fl. ounces
 1 liter = 10 deciliters = 33.81 fl. ounces
 1 dekaliter = 10 liters = 2.64 gallons
 1 hectoliter = 10 dekaliters = 26.42 gallons
 1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	To	Multiply by	To change	To	Multiply by
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11296			

Temperature (Exact)

°F Fahrenheit temperature 5/9 (after subtracting 32) Celsius temperature °C

PIN: 078341-000