

URGENT

TB 1-1520-240-20-132

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

MANDATORY ONE TIME INSPECTION OF ROTOR HEAD ASSEMBLY DROOP STOP BOLTS FOR PROPER LENGTH, ON ALL CH-47D, MH-47D AND MH-47E AIRCRAFT

Headquarters, Department of the Army, Washington, D. C.
19 December 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THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.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 droop stop bolts in accordance with CH-47-01-ASAM-05 (TB 1-1520-240-20-132) within the next 10 flight hours, but no later than 29 DEC 00." Clear the red horizontal dash // - // entry when the procedures in accordance with paragraphs 8 and 9 are completed. The affected aircraft shall be inspected as soon as practical but no later than 29 DEC 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 - Same as paragraph 1a.

d. Aircraft in Transit -

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

(2) Ferry Status.

This TB supersedes USAAMCOM Message 141451Z DEC 00 CH-47-01-ASAM-05.

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- (a) Within 10 flight hours/14 days of arrival.
- (b) Boeing, Philadelphia will inspect CH-47F aircraft prior to first flight.
- e. Maintenance Trainers (Category A and B). Comply no later than 30 March 2001.
- 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 materiel condition tags of all items in all condition codes listed in paragraph 6 is annotated to read "CH-47-01-ASAM-05 (TB 1-1520-240-20-132), Inspection of Rotor Head Assembly Droop Stop Bolts for Proper Length Not Complied With".

2. Task/Inspection Suspense Date. Complete the inspection in accordance with paragraph 8 within the next 10 flight hours but no later than 29 DEC 00 and report in accordance with paragraph 14b.

3. Reporting Compliance Suspense Date. Report compliance in accordance with paragraph 14a no later than 8 January 2001.

4. Summary of the Problem.

a. An accident occurred during shutdown of a CH-47D. Investigation was conducted and findings indicated that 2 incorrect bolts were installed in the droop stop on the red blade of the aft rotor head assembly. A shorter bolt P/N NAS624H5 was installed instead of the correct bolt P/N NAS624H7 (1/8 inch difference). It appears the excessive force on the threads along with loads seen during droop stop contact caused the threads on the bolts to fail.

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

c. The purpose of this Technical Bulletin is to require –

- (1) A one time inspection of droop stop bolts on all H-47 rotor head assemblies for proper length.
- (2) To inspect retail stockage and storage of bolts to insure proper identification.

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

6. Assembly Components to be Inspected.

NOMENCLATURE	PART NUMBER
Forward Rotor Head Assembly	145R2003-ALL
Aft Rotor Head Assembly	145R2004-ALL

7. Parts to be Inspected.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Bolt Assembly	NAS624H7	5306-00-862-8202
Droop Stop, FWD	114R2063-7	1615-00-967-9759
Droop Stop, AFT	114R2087-3	1615-01-199-1785

8. Inspection Procedures.

a. Retail Stock Inspection –

- (1) Inspect bolts in retail/bench stock in accordance with paragraph 8b (3) below.
- (2) Inspect retail/bench stock storage bins to ensure that bolts are sorted and labeled correctly.

b. Aircraft Inspection –

NOTE

This message authorizes the reuse of the droop stop bolt after performing a serviceability check. The requirement in the manual for installing only new bolts is removed for this one time inspection only following serviceability check of bolt.

- (1) Prepare aircraft for safe ground maintenance.
- (2) Remove droop stop bolts (12 total) in accordance with TM 55-1520-240-23, Task 5-48 (CH-47D) and TM 1-1520-252-23, Task 5-59 (MH-47E).
- (3) Inspect bolt for proper length. The NAS624H7 bolt shall be .912 +/- .015 inches (measured from under head of bolt to end of threads).
- (4) If length is correct, inspect bolt for serviceability by checking for corrosion, damaged threads, and inspecting thread roots for cracks with a 10X magnifying glass. If bolt is cracked, contact technical point of contact in paragraph 16a.
- (5) If bolt is the proper length and is serviceable, reinstall per TM 55-1520-240-23, Task 5-48 (CH-47D) and TM 1-1520-252-23, Task 5-59 (MH-47E). The inspection is complete. If the bolt is the wrong length, contact logistical point of contact in paragraph 16b.
- (6) If bolt is improper length or does not pass serviceability check, inspect threads of droop stop for serviceability by checking for corrosion or damaged threads. If no damage or corrosion is found, attempt to screw in a new bolt by hand through at least four threads of the droop stop. If bolt does not screw in properly using hand pressure, the droop stop is unserviceable. Proceed to paragraph 9.

9. Correction Procedures. If the bolts were unserviceable due to damage, corrosion or improper length, perform the following corrective actions:

WARNING

Measure new bolt to the above dimensions to ensure correct bolt length.

- a. If droop stop is serviceable, reinstall with new bolts in accordance with TM 55-1520-240-23, Task 5-48 (CH-47D) and TM 1-1520-252-23, Task 5-59 (MH-47E).
- b. If droop stop is unserviceable, replace droop stop and reinstall with new bolts in accordance with TM 55-1520-240-23, Task 5-48 (CH-47D) and TM 1-1520-252-23, Task 5-59 (MH-47E).

10. Supply/Parts and Disposition.

- a. Parts Required.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Bolt	NAS624H7	5306-00-862-8202
Droop Stop, AFT	114R2087-3	1615-01-199-1785
Droop Stop, FWD	114R2063-7	1615-00-967-9759

- b. Requisitioning Instructions. Requisition replacement parts using normal supply procedures. All requisitions shall use project code (CC 57-59) "X0F", "X-RAY-ZERO-FOXTROT".

NOTE

Project code "X0F", "X-RAY-ZERO-FOXTROT" is required to track and establish a data base of stock fund expenditures incurred by the field as a result of SOF actions.

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c. Bulk and Consumable Materials.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Lockwire	MS20995NC20	9525-00-618-0257

d. Disposition - Dispose of removed parts/components using normal supply procedures. (If crack is detected in bolt contact technical point of contact in paragraph 16a for disposition instructions).

e. Disposition of Hazardous Material - N/A.

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

12. Application.

a. Category of Maintenance - Aircraft downtime will be charged to AVUM. Report aircraft non-mission capable maintenance (NMCM) while undergoing inspection and correction in accordance with this Technical Bulletin.

b. Estimated Time Required-

(1) Total of 18 man-hours using 3 persons.

(2) Total of 6 hours downtime for one end item.

c. Estimated Cost Impact to the Field-

NOMENCLATURE	PN/NSN	QUANTITY	COST EACH	TOTAL
BOLT	NAS624H7/ 5306-00-862-8202	12	\$7.50	\$90.00
DROOP STOP, AFT	114R2087-3/ 1615-01-199-1785	3	\$134.12	\$402.36
DROOP STOP, FWD	114R2063-7/ 1615-00-967-9759	3	\$27.95	\$83.85

TOTAL COST IF ANY ONE AIRCRAFT REQUIRED REPLACEMENT OF ALL BOLTS AND DROOP STOPS: \$576.12

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 as noted below 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 55-1520-240-23P-1, Figure 176, Item 94. Add second item 94, 114R2087-3 droop stop U/O P/N 145R2004-20.

(2) TM 1-1520-252-23P-2 -

(a) Figure 5-4 item 94 change U/O P/N 114R2003-10

(b) Figure 5-5 item 94 current item 94 change to U/O P/N 145R2004-20.

(3) TM 55-1520-240-23-4, Task 5-48 page 5-168 add note before step 9 to read as follows: Note: Prior to installation measure new bolt to insure bolt is proper length 0.912 +/- 0.015 inches (measured from under head of bolt to end of threads).

(4) TM 1-1520-252-23-5, Task 5-59 page 3 add note before step 9 to read as follows: Note: Prior to installation measure new bolt to insure bolt is proper length 0.912 +/- 0.015 inches (measured from under head of bolt to end of threads).

13. References.

- a. DA PAM 738-751, 15 MAR 99.
- b. TM 55-1520-240-23.
- c. TM 1-1520-252-23.

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, 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, 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 message and 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). Upon completion of inspection, Commanders will forward a priority message to: logistics point of contact in paragraph 16b. The report will cite this message Technical Bulletin number, date of inspection, aircraft serial number, aircraft and rotor head hours, and results of the inspection. Inspection and reports will be completed no later than 30 January 2001.

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

d. Task/Inspection Reporting Suspense Date (SPARES) - N/A.

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 (FWD/AFT Mani Rotor Head).

(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) DD Form 1574/DD Form 1574-1, Serviceable (condemned) Tag/Label-Materiel (color yellow). Annotate remarks block with "CH-47-01-ASAM-05 (TB 1-1520-240-20-132) not complied with".

(6) DD Form 1577/DD Form 1577-1, Unserviceable (condemned) Tag/Label - Materiel (color red). Annotate remarks block with "Condemned in accordance with CH-47-01-ASAM-05 (TB 1-1520-240-20-132) and mutilated in accordance with TM 1-1500-328-23."

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".

b. Logistical point of contact for this TB is Mr. William Olson, SFAE-AV-CH-L, DSN 897-3379 or commercial (256) 313-3379, datafax is 897-4348. E-mail is "william.olson@peoavn.redstone.army.mil".

c. Wholesale materiel point of contact (SPARES) is - N/A.

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 "ann.waldeck@redstone.army.mil".

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e. Safety points of contact are -

(1) Primary - Mr. Frank Rosebery (SAIC), AMSAM-SF-A, DSN 788-8631 or (256) 842-8631, datafax is DSN 897-2111 or (256) 313-2111. E-mail is "frank.rosebery@redstone.army.mil".

(2) Alternate - Mr. Russell Peusch, AMSAM-SF-A, DSN 788-8632 or (256) 842-8632, datafax is DSN 897-2111 or (256) 3113-2111. E-mail is "russell.peusch@redstone.army.mil".

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

(1) CW5 Joseph L. Wittstrom, Security Assistance Management, AMSAM-SA, DSN 897-0410 or commercial (256) 313-0410. E-mail is "wittstromjl@redstone.army.mil".

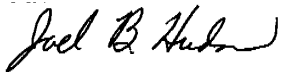
(2) Mr. Ronnie W. Sammons, AMSAM-SA-CS-NF, DSN 897-0408 or commercial (256) 313-0408, datafax is DSN 897-0411 or commercial (256) 313-0411. E-mail is "sammonsrw@redstone.army.mil".

g. After hours contact the AMCOM COMMAND OPERATIONS CENTER (COC) DSN 897-2066/7 or commercial (256) 313-2066/7. Huntsville, AL is GMT minus 6 hours.

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
0035417

DISTRIBUTION:

To be distributed in accordance with Initial Distribution Number (IDN) 313959, requirements for TB 1-1520-240-20-132.

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

WEIGHT MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
 1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
 1 Kilogram = 1000 Grams = 2.2 lb.
 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches
 1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet
 1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles

CUBIC MEASURE

1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches
 1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

TEMPERATURE

$5/9(^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
 212° Fahrenheit is equivalent to 100° Celsius
 90° Fahrenheit is equivalent to 32.2° Celsius
 32° Fahrenheit is equivalent to 0° Celsius
 $9/5^{\circ}\text{C} + 32 = ^{\circ}\text{F}$

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
its	Liters	0.473
arts	Liters	0.946
allons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
ers	Gallons	0.264
ms	Ounces	0.035
ograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pounds-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
ometers per Liter	Miles per Gallon	2.354
ometers per Hour	Miles per Hour	0.621



PIN: 078735-000