

URGENT

TB 1-1520-240-20-142

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

MANDATORY INSPECTION OF TUNNEL COVER STRUT ASSEMBLIES ON ALL CH-47D, MH-47D AND MH-47E AIRCRAFT

Headquarters, Department of the Army, Washington, D. C.
11 October 2001

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THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.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 strut assemblies in accordance with CH-47-02-ASAM-01 (TB 1-1520-240-20-142) within the next 10 flight hours, but no later than 18 October 2001." 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 18 October 2001. 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 Maintenance Facility -

(1) Aircraft in AVUM, AVIM, or Depot - same as paragraph 1a.

(2) Aircraft at Contractor Facility - Boeing will inspect DD250 aircraft prior to those aircraft departing for ferry to final destination.

c. Aircraft in Transit -

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

(2) Ferry Status - same as paragraph 1a.

This TB supersedes USAAMCOM Message 041600z OCT 01 CH-47-02-ASAM-01.

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d. Maintenance Trainers (Category A and B) - same as paragraph 1a.

e. 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 paragraphs 6 and 7 are annotated to read: "CH-47-02-ASAM-01 (TB 1-1520-240-20-142), inspection of the tunnel cover strut assembly not complied with."

(1) Wholesale Stock - upon receipt of this Technical Bulletin, Depot and Materiel Activity Commanders will ensure all items in 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.

(2) Retail Stock - Upon receipt of this message, 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 10d.

f. Components/Parts in Work (Depot Level and Others) - Depot and other Maintenance Activity Commanders will ensure items listed in paragraphs 6 and 7 are not issued until they are in compliance with this Technical Bulletin.

2. Task/Inspection Suspense Date. Complete the inspection in accordance with paragraph 8 within the next 10 flight hours but no later than 18 October 2001.

3. TAMMS Reporting Compliance Suspense Date. Report compliance in accordance with paragraph 14a (1) no later than 26 October 2001.

4. Summary of the Problem.

a. A report has been received from the field documenting that the pin in a tunnel cover strut assembly was not staked. If the pin becomes dislodged from the strut assembly, the strut halves and/or the pin can cause damage to the hydraulic lines and sync shafts.

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

c. The purpose of this Technical Bulletin is to -

(1) Remove from service all strut assemblies manufactured by Precision Standard.

(2) Perform a one time inspection of all strut assemblies manufactured by NORCO.

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

6. Assembly Components to be Inspected.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
TUNNEL COVER ASSY	114S2915-70	1560-00-150-2708
TUNNEL COVER ASSY	114S2915-72	1560-00-150-2710

7. Parts to be Inspected.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
STRUT ASSEMBLY	A297-1	1560-00-168-5725
STRUT ASSEMBLY	114S2915-61	N/A

8. Inspection Procedures.

NOTE

Supplemental information for this Technical Bulletin can be viewed at
(use lower case letters only)

"www.redstone.army.mil/sof/suppl/c47a0201.pdf".

- a. Prepare aircraft for safe ground maintenance.

NOTE

As the "staked pin" is commonly referred to as the "elbow pin" by the field, the term "elbow pin" will be used for the remainder of this Technical Bulletin.

- b. Inspect the strut to determine if they are manufactured by Precision Standard or NORCO. Reference Figure 58, items 13 and 69, TM 55-1520-240-23P (CH/MH-47D), or Figure 2-42, item 67, TM 1-1520-252-23P (MH-47E). Use the following criteria to determine origin of manufacture.

- (1) Elbow Pin -

- (a) NORCO - bucked/staked on both sides, round or protruding head.
(b) Precision Standard - flush or nearly flush with outer edge of elbow clevis.

- (2) Upper strut half front rivets (facing observer in installed position) -

- (a) NORCO - Standard round head rivets, bucked/staked on one (1) side.
(b) Precision Standard - flush rivets (2), countersunk on both sides.

- (3) Strut side opposite pull ring -

- (a) NORCO - countersunk bucked/staked rivets, slight protrusion from surface.
(b) Precision Standard - countersunk flush rivets.

- (4) Part Marking -

(a) NORCO - if the nonmetallic shields (item 12 or 68, TM 55-1520-240-23P (CH/MH-47D), or item 66, TM 1-1520-252-23P (MH-47E) are not installed on the strut assembly and the strut has not been painted, the strut assembly part marking will be visible. The marking includes the manufacturer name (NORCO, Inc), the manufacturer code, the part number (A297-1), and the NSN.

(b) Precision Standard - if the nonmetallic shields are not installed, the part marking (114S2915-61) will be visible..

NOTE

If the elbow pin is not installed, make a thorough search of the entire tunnel area for the elbow pin and any other debris.

- c. If a Precision Standard strut assembly is installed, proceed to paragraph 9.

- d. If a NORCO strut assembly is installed, inspect the whole strut assembly for overhaul hardware integrity -

(1) For any strut assembly without a "bucked" or "staked" elbow pin and/or rivets, or if the ends of the elbow pin are flush or nearly flush with outer edge of the elbow clevis, proceed to paragraph 9.

(2) If all strut assembly elbow pins and rivets are properly installed, and there is no other damage to the assembly, the inspection is complete, proceed to paragraph 9c.

9. Correction Procedures.

CAUTION

WIND TURBULENCE, BOTH NATURALLY OCCURRING AND FROM NEARBY AIRCRAFT, CAN CAUSE DAMAGE TO THE ACCESS COVER (S) IF NOT SECURED.

- a. Remove the strut assembly from the aircraft (items 2,3,4,5 and 7 and/or item 63, TM 55-1520-240-23P (CH/MH-47D), or item 61, TM 1-1520-252-23P (MH-47E) and replace with an inspected NORCO strut assembly if -

- (1) A Precision Standard strut assembly is installed.

(2) A NORCO strut assembly is installed and the elbow pin or a rivet is either not properly installed or is missing, or the strut assembly is defective in any way other than the absence of the nonmetallic strut shields.

NOTE

Figure 58, TM 55-1520-240-23P (CH/MH-47D), and Figure 2-42, TM 1-1520-252-23P (MH-47E), do not include the fastener hardware for attachment of the tunnel cover (item 62 for CH/MH-47D, item 60 for MH-47E) strut assemblies (item 63 for CH/MH-47D, item 61 for MH-47E) to the aircraft. For removal and reinstallation of each strut assembly, remove and reinstall the following hardware as needed -

NOMENCLATURE	PART NUMBER
PIN, COTTER	MS24665-153
BOLT, MACHINE	AN3-7
WASHER, FLAT	AN960-10 (CH/MH-47D only)
WASHER, FLAT	NAS1149F0363P (MH-47E only)
NUT, PLAIN	AN310-3

b. After inspection and replacement as require -

(1) The red horizontal dash // - // will be cleared only if a serviceable strut is installed at each location.

(2) If a replacement strut is not available, serviceable struts should be relocated, if possible, to ensure that at least one (1) serviceable strut is located on each tunnel cover. Clear the red horizontal dash // - // entry and place the following red diagonal \ / \ entry on the DA Form 2408-13-1: "Tunnel cover strut assembly (enter strut location here) removed and requires replacement in accordance with CH-47-02-ASAM-01 (TB 1-1520-240-20-142)." A separate entry is required for each strut assembly removed to include the appropriate tunnel cover number and either the aft or forward strut to properly identify the assembly removed.

c. When all strut assemblies have been replaced as required, the red diagonal \ / \ status symbol will be cleared.

10. Supply/ Parts and Disposition.

a. Parts Required. Items cited in paragraphs 6 and 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) "X14" (XRAY-ONE- FOUR).

NOTE

Project code "X14" 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.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
PIN, COTTER	MS24665-153	5315-00-185-0037
BOLT, MACHINE	AN3-7	5306-00-144-3648
WASHER, FLAT	AN960-10	5310-00-167-0818
WASHER, FLAT	NAS1149F0363P	5310-00-167-0818
NUT, PLAIN	AN310-3	5310-00-167-1284

d. Disposition. Demilitarize/mutilate in accordance with TM 1-1500-328-23 any part/component which does not meet inspection criteria.

e. Disposition of Hazardous Material. N/A.

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

12. Application.

a. Category of Maintenance. AVUM. Report aircraft non-mission capable maintenance (NMCM) while undergoing inspection and correction in accordance with this message.

b. Estimated Time Required-

(1) Total of 2 man-hours using 1 persons.

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

c. Estimated Cost Impact to the Field.

NOMENCLATURE	PART NO./ NSN	QUANTITY	COST EACH	TOTAL
STRUT ASSEMBLY	A297-1 1560-00-168-5725	5	\$477.42	\$2387.10

TOTAL COST PER AIRCRAFT = \$2387.10

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 55-1520-240-23.

c. TM 1-1520-252-23.

d. TM 55-1520-240-23P.

e. TM 1-1520-252-23P.

f. TM 1-1500-328-23.

14. Recording and Reporting Requirements.

a. Aircraft -

(1) TAMMS Reporting Compliance Suspense - Upon entering requirements of this Technical Bulletin on DA Form 2408-13-1 for all effected 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, no later than date specified in paragraph 3. Datafax is DSN 897-2111 or commercial (256) 313-2111. E-Mail address is "safeadm@redstone.army.mil". The report will cite this message and TB number, date of entry in DA Form 2408-13-1, the aircraft mission design series and serial numbers of aircraft in numerical order.

(2) Task/Inspection Reporting Suspense - N/A.

b. Wholesale Spare Parts/Assemblies - N/A.

c. Retail Spare Parts/Assemblies - N/A.

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d. 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 2408-13, Aircraft Status Information Record.

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

(3) DA Form 2408-15, Historical Record For Aircraft.

(4) DD Form 1574/DD Form 1574-1, Serviceable Tag/Label - Materiel (color yellow). Annotate remarks block with "Inspected serviceable in accordance with CH-47-02-ASAM-01 (TB 1-1520-240-20-142)."

(5) DD Form 1575/DD Form 1575-1, Suspended Tag/Label - Materiel (color brown). Annotate remarks block with "Suspended in accordance with CH-47-02-ASAM-01 (TB 1-1520-240-20-142)."

(6) DD Form 1577/DD Form 1577-1, Unserviceable (Condemned) Tag/Label - Materiel (color red). Annotate remarks block with "Condemned in accordance with CH-47-02-ASAM-01 (TB 1-1520-240-20-142) 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 is Mr. Mike Moore, AMSAM-RD-AE-I-P-C, DSN 897-3359 or commercial (256) 313-3359, datafax is DSN 897-4348 or commercial (256) 313-4348 . E-mail is "michael.b.moore@redstone.army.mil".

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

c. Forms and Records point of contact 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".

d. 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 895-2111 or commercial (256) 313-2111. E-mail is "harry.trumbull@redstone.army.mil".

(2) Alternate - Mr. Russ Peusch, AMSAM-SF-A, DSN 788-8632 or commercial (256) 842-8632, datafax is DSN 897-2111 or commercial (256) 313-2111. E-mail is "russel.peusch@redstone.army.mil".

e. Foreign Military Sales recipients requiring clarification of action advised by this Technical Bulletin should contact -

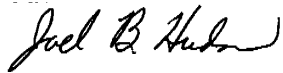
(1) Primary - Mr. Ronnie W. Sammons, AMSAM-SA-CS-NF, DSN 897-6856 or commercial (256) 313-6856, datafax is DSN 897-6630 or commercial (256) 313-6630. E-mail is "ronnie.sammons@redstone.army.mil".

(2) Alternate - Mr. Paul W. Tarr, AMSAM-SA-CS-NF, DSN 897-6861 or commercial (256) 313-6861. Datafax is DSN 897-6630 or commercial (256) 313-6630. E-mail is "tarrpw@redstone.army.mil".

f. 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:



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Chief of Staff

DISTRIBUTION:

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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: <2028-@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: 079337-000